
***SUBSEQUENT ENVIRONMENTAL IMPACT REPORT
AND SPECIFIC PLAN FOR THE TIOGA INN PROJECT***

DRAFT SUBSEQUENT EIR

SCH #199012113

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**TIOGA WORKFORCE HOUSING
DRAFT SUBSEQUENT EIR**



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ACRONYMS & ABBREVIATIONS

A

AAQS	Ambient Air Quality Standards
ADA	Americans with Disabilities Act
ADC	Alternative Daily Cover (for landfills)
ADT	Average Daily Traffic
AF/AFY	Acre-feet; acre-feet per year
ALS	Advance Life Support
ALUC	Airport Land Use Commission
ALUP	Airport Land Use Plan
AQMP	Air Quality Management Plan
ARB	California Air Resources Board (also referred to as 'CARB')
ARP	California Accidental Release Program
AST	Above-Ground Storage Tanks
ATP	Active Transportation Program

B

BACM	Best Available Control Measures
Basin Plan	<i>Water Quality Control Plan</i> prepared by the Calif. Water Quality Control Board
BFE	Base Flood Elevation
BGS	Below Ground Surface
Bi-State DPS	Bi-State Distinct Population Unit of the Greater Sage Grouse
BLM	Bureau of Land Management
BLS	Basic Life Support
BMP	Best Management Practices
BOD	Biological Oxygen Demand
BOP	Battery, Oil and Paint (a waste recycling term)
BTA	Bicycle Transportation Account
BTP	Bicycle Transportation Plan

C

CAA	Clean Air Act
CalEPA	California Environmental Protection Agency
CalARP/RMP	California Accidental Release Prevention and Risk Management
CALFIRE	California Dept. of Forestry and Fire Protection
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAO	Cleanup and Abatement Order
CASP	California Aviation System Plan
CBSC	California Building Standards Code (also referred to as 'CBC')
CCPI	Cooperative Conservation Partnership Initiative
CCR	California Code of Regulations
CC&R	Homeowner Covenants, Conditions and Restrictions
CDD	Community Development Department (Mono County)
CDF	California Department of Forestry

CDFA	California Department of Food and Agriculture
CDFW	California Department of Fish and Wildlife (formerly Fish and Game)
CDO	Cease and Desist Order
CDOC	California Department of Conservation
CDP	Census Designated Place
CEC	California Energy Commission
CEPEC	California Earthquake Prediction Evaluation Council
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
cfs	Cubic feet per second
CFR	Code of Federal Regulations
CGC	California Government Code
CGS	California Geological Survey
CHP	California Highway Patrol
CHRIS	California Historical Resources Information System
CIWMA	California Integrated Waste Management Act
CIWMB	California Integrated Waste Management Board
CNDDDB	California Natural Diversity Data Base
CNPS	California Native Plant Society
CO	Carbon Monoxide
COD	Chemical Oxygen Demand
CO₂e	Carbon dioxide equivalent
COG	Council of Governments
CPH	Chains per hour, a measure of the rate of fire spread (1 chain is equal to 66 feet)
CRHR	California Register of Historic Places
CRV	California Redemption Value
CS	Service Commercial, a land use designation
CSA	Community Service Area
CSP	Conservation Stewardship Program
CTC	California Transportation Commission
CTR	California Toxics Rule
CUP	Conditional Use Permit
CUPA	Certified Unified Program Agency
CURES	Coalition for Unified Recreation in the Eastern Sierra
CWA	Clean Water Act of 1972
CWPP	Mono County Community Wildfire Protection Plan

D

DBH	Diameter at breast height (tree diameter)
DFG	California Department of Fish and Game
DHS	California Department of Health Services
DMG	California Division of Mines and Geology
DOF	California Department of Finance
DOT	U. S. Department of Transportation
DPH	Mono County Department of Public Health
DPS/DPU	Distinct Population Segment/Distinct Population Unit
DTSC	California Department of Toxic Substances Control

E

ECSZ	Eastern California Shear Zone
ECTPP	Eastern California Transportation Planning Partnership
EIR	Environmental Impact Report
EIS	Environmental Impact Statement, prepared under the National Environmental Policy Act
EMS	Emergency Medical Services
EMT	Emergency Medical Technician

EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPA	United States Environmental Protection Agency
EQUIP	Environmental Quality Incentives Program
ESA	Endangered Species Act
ESLT	Eastern Sierra Land Trust
ESRFSC	Eastern Sierra Regional Fire Safe Council
ESTA	Eastern Sierra Transit Authority

F

FAA/FAR	Federal Aviation Administration; Federal Aviation Regulations
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHSZ	Fire hazard severity zone
FHWA	Federal Highway Administration
FLPMA	Federal Land Policy and Management Act
FPD	Fire Protection District
FPPA	Farmland Protection Policy Act
Fps	Feet per second
FRA	Federal Railroad Administration
FRI	Fire return interval
FRAP	Forest Resource Assessment Program
FRPP	Farm and Ranch Lands Protection Program
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program

G

'g'	Gravitational acceleration rate
GBVAB	Great Basin Valleys Air Basin ('Great Basin')
GBUAPCD	Great Basin Unified Air Pollution Control District
GPD	Gallons per day
GPLUE	General Plan Land Use Element
GRP	Grazing Reserve Program
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan

H

HA	Hydrologic Area, used in the LRWQCB <i>Basin Plan</i>
HCP	Habitat Conservation Plan
HHWE	Household Waste Element
HOA	Homeowners' Association
HSC	Health and Safety Code of California
HU	Hydrologic Unit, used in the LRWQCB <i>Basin Plan</i>
HWME	Hazardous Waste Management Element

I

ICLEI	Local governments for sustainability
IIP	Caltrans' Interregional Improvement Program
INF	Inyo National Forest
IPM	Integrated Pest Management
ISO	Insurance Service Office (insurance credit rating)
IRWMP	Integrated Regional Water Management Plan
ITIP	Interregional Transportation Improvement Program
IWMP	Integrated Waste Management Plan

J

JESD	Round Valley Joint Elementary School District
JLCAC	June Lake Citizens Advisory Committee

L

LADWP	Los Angeles Department of Water and Power
LAFCO	Local Agency Formation Commission
LCMMP	Land Cover Mapping and Monitoring Project
LED	Light Emitting Diode
LEED	Leadership in Energy and Environmental Design
LFG	Landfill Gas
LGOP	Local Government Operations Protocol
LID	Low Impact Development
LOS	Level of Service
LRA	Local Responsible Area
LRWQCB	California Water Quality Control Board-Lahontan Region
LTC	Local Transportation Commission

M

MAD	Mosquito Abatement District
MAP-21	Moving Ahead for Progress in the 21 st Century
MCL	Maximum Contaminant Levels
MCMWTC	Marine Corps Mountain Warfare Training Center (in Sonora Pass)
MEA	Master Environmental Assessment
MPO	Metropolitan Planning Organization
MRZ	Mineral Resource Zone (formerly 'MRA' – Mineral Resource Area)
MSL	Mean Sea Level
MTCO ₂ e	Metric tons of carbon equivalent emissions
µg/m ³	Micrograms per cubic meter of air

N

NAAQS	National Ambient Air Quality Standards
NDFE	Non-Disposal Facility Element
NIMS	National Incident Management System
NFIP	National Flood Insurance Program
NFWF	National Fish and Wildlife Foundation
NOP	Notice of EIR Preparation
NOx	Nitrogen Oxides
NHP	Natural Habitat Protection, a land use designation
NPDES	National Pollution Discharge Elimination System
NRCS	Natural Resources Conservation Service
NTR	National Toxics Rule
NVUM	National Visitor Use Monitoring

O

OES	Office of Emergency Services
OHV	Off-Highway Vehicles
OHWM	Ordinary High Water Mark
OPR	California Governor's Office of Planning and Research
OSHA	Occupational Safety and Health Act

P

PCB	Polychlorinated biphenyls
PFPD	Paradise Fire Protection District

PM	Particulate Matter; PM ₁₀ is particulates no more than 10 microns in diameter, and PM _{2.5} , is very fine particulates measuring no more than 2.5 microns in diameter
POU	Publicly-owned Utility
PPM	Parts per Million
PRC	Public Resources Code
PUC	Public Utilities Commission, Public Utilities Code
PUD	Public Utilities District

R

RCD	Resource Conservation District
RCRA	Resource Conservation and Recovery Act of 1976
RE	Resource Extraction, a land use designation
REP	Resource Efficiency Plan
RFA	Recreation Facility Analysis
RMH	Rural Mobile home, a land use designation
RPAC	Regional Planning Advisory Committee
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board-Lahontan

S

SAFETEA-LU	Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users
SARA	Superfund Amendments and Reauthorization Act of 1986
SCE	Southern California Edison
SCS	Sustainable Communities Strategy
SDC	Seismic Design Criteria set by Caltrans
SDWA	Safe Drinking Water Act
Semi-clustered	Sort of clustered
SEMS	Standard Emergency Management System
SFHA	Special Flood Hazard Areas
SGMA	Sustainable Groundwater Management Act of 2014
SHMP	State Multi-Hazard Mitigation Plan
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SJVAPCD	San Joaquin Valley Air Pollution Control District
SMARA	Surface Mining and Reclamation Act
SMGB	State Mining and Geology Board
SNC	Sierra Nevada Conservancy
SNARL	Sierra Nevada Aquatic Research Laboratory
SOx	Sulfur oxides
SOP	Standard Operating Procedure
SR	State Route
SRA	State Responsibility Area (a high fire hazard zone)
SRRE	Source Reduction and Recycling Act
SRTP	Short Range Transit Plan
SSRE	Solid Waste Recover Element
STIP	State Transportation Improvement Program
SWE	Snow Water Equivalent
SWL	Static Water Level
SWQCB	California Water Quality Control Board
SWPPP	Stormwater Pollution Prevention Plan

T

T	A measure of soil transmissivity
TCP	Timber Conversion Permit
TDA	California Transportation Development Act
TDM	Transportation Demand Management

TDS	Total Dissolved Solids
THP	Timber Harvest Plan
TMDL	Total Maximum Daily Load
TOC	Total Organic Carbon
TOML	Town of Mammoth Lakes
TPZ	Timberland Production Zones
TRI	Toxic Release Inventory
TSCA	Toxic Substances Control Act
TSD	Commercial Treatment Storage Disposal

U

UCCE	University of California Cooperative Extension
USACE	U.S. Army Corps of Engineers
USDA	United States Department of Agriculture
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGCRP	U.S. Global Change Research Program
USGS	United States Geological Survey
UST	Underground Storage Tank
UWMP	Urban Water Management Plan

V

VHFSZ	Very high fire hazard severity zones
VMT	Vehicle Miles Travelled
VOC	Volatile organic compounds

W

WDR	Waste Discharge Requirements
WHIP	Wildlife Habitat Incentives Program
WRP	Wetland Reserve Program
WUI	Wildland Urban Interface
WWTP	Wastewater Treatment Plant

Y

YARTS	Yosemite Area Regional Transit System
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Z

ZOB	Zone of Benefit, a LAFCO designation for areas served by a county service district.
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TIOGA WORKFORCE HOUSING PROJECT DRAFT SUBSEQUENT EIR



SECTION 1.0 INTRODUCTION

1.1 BASIS FOR AND PURPOSES OF THE SPECIFIC PLAN AND SUBSEQUENT EIR

The County of Mono, as Lead Agency, has determined that proposed amendments to the 1993 Tioga Inn Specific Plan constitute a 'project' subject to CEQA as defined in the CEQA Guidelines §15060, and require the preparation of a Subsequent EIR consistent with the requirements of CEQA §15162. CEQA §15162 states that '(a) When an EIR has been certified...for a project, no subsequent EIR shall be prepared...unless the lead agency determines...one or more of the following: (1) substantial changes are proposed in the project which will require major revisions of the previous EIR...due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; (2) Substantial changes [occur regarding project circumstances] which will require major revisions of the previous EIR...due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or (3) New information of substantial importance, which was not known and could not have been known...at the time of the previous EIR...shows...(A) one or more significant effects not discussed in the previous EIR..., (B) significant effects previously examined will be substantially more severe than shown in the previous EIR; (C) mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the...measure or alternative, or (D) mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the project proponents decline to adopt the...measure or alternative; (b) If changes to a project or its circumstances or new information becomes available...the lead agency shall prepare a subsequent EIR if required under subdivision (a). Otherwise, the lead agency shall determine whether to prepare a subsequent Negative Declaration, an addendum, or no further documentation. (c) Once a project has been approved, the lead agency's role in project approval is completed unless further discretionary approval on that project is required... (d) A subsequent EIR...shall be given the same notice and public review [as a Draft EIR]...."

In compliance with CEQA, this Draft Subsequent EIR focuses on (1) substantial changes in the proposed project that may involve new significant effects or substantially more severe environmental effects than were previously analyzed, (2) changes in the project circumstances that may involve new significant effects or substantially more severe environmental effects than were previously analyzed, (3) new information that was not and could not have been known in 1993 that shows one or more new significant environmental effects, or effects that are substantially more severe, or feasible alternatives and mitigations that were previously judged infeasible, or feasible alternatives and mitigations that would substantially reduce one or more significant effects. This Subsequent EIR does not consider or analyze previously approved project elements (including the 120-room hotel and the full-service promontory restaurant) that have not changed since the 1993 approvals were granted. A detailed description of the scope of the current Subsequent EIR is provided in EIR §3.0 (Project Description).

1.2 CEQA REVIEW PROCESS

1.2.1 Where to obtain a copy of the Draft EIR

Public review and comment is an essential part of the CEQA process. Lead Agencies are encouraged to provide opportunities for public involvement, and required to make environmental information available for public review and comment (CEQA §15201). This Draft Subsequent EIR is being circulated for review and comment to the public and other interested parties, agencies, and organizations for a 60-day review and comment period, which is the maximum time

allowed by law. To afford the widest possible review, the Draft Subsequent EIR has been made available for review in a number of locations:

- A copy of the Draft SEIR (with all attachments and exhibits) is electronically available on the Mono County website:
<https://www.monocounty.ca.gov/planning/page/tioga-inn-specific-plan-seir>
- A printed copy of the Draft SEIR will be kept on file for public review at the Mono County Community Development offices in Mammoth Lakes (437 Old Mammoth Rd., Suite P, Minaret Village Mall, Mammoth Lakes) and another printed copy will be available in Bridgeport (74 School St, Bridgeport, CA 93517).
- Printed copies of the Draft SEIR will be available at the June Lake and Lee Vining public libraries.
- Printed copies may be purchased at Mono County offices in Mammoth & Bridgeport for the cost of reproduction.

1.2.2 Draft EIR Review Period Dates

The 60-day EIR review period began on Friday, 14 June 2019 and ends on Tuesday, 13 August 2019. Due to the timeframe for completing the CEQA review process, the County cannot accept comments that are received after the closing date.

→ **PLEASE ensure that your comments are received no later than 5:00 p.m. on 13 August 2019**

1.2.3 Where to Submit Comments on the Draft EIR

The County invites and encourages your comments on this Draft EIR. Comments may be submitted by email, U.S. mail, hand delivery or fax to the following:

<p><u>TO SUBMIT COMMENTS BY MAIL:</u> Mono County Community Development Department PO Box 347 Mammoth Lakes, CA 93546</p> <p><u>TO HAND-DELIVER COMMENTS:</u> Mono County Community Development Department 437 Old Mammoth Rd. Minaret Village Mall, Suite P, Mammoth Lakes</p> <p><u>TO SEND COMMENTS VIA EMAIL:</u> Michael Draper (mdraper@mono.ca.gov) 760-924-1805</p> <p><u>TO SEND COMMENTS VIA FAX:</u> Mono County Community Development Dept. 760-924-1801</p>

1.2.4 Public Meeting during the Draft SEIR Review Period

A public workshop and meeting to discuss this project will be held on 20 June 2019, during the Mono County Planning Commission Meeting. The Planning Commission meeting will start at 10:00 am, and will be held in the Town/County Conference Room at 437 Old Mammoth Road, Suite 220, in Mammoth Lakes. Please check for additional meeting details on the County's website at:

<https://www.monocounty.ca.gov/planning/page/tioga-inn-specific-plan-seir>

1.2.5 Response to Comments

The Draft EIR public and agency review and comment period has a number of specific goals and purposes. As stated in CEQA §15200, the public review period enables reviewing agencies and citizens to:

- Share expertise and information
- Disclose responsible and trustee agency analyses
- Detect omissions of relevant information
- Discover public concerns and
- Solicit counter proposals and alternatives
- Check for the accuracy of data and conclusions

The public review and comment period for this *Draft Subsequent EIR on the Proposed Tioga Workforce Housing Project* is intended to achieve all of the above purposes. In reviewing the draft EIR, CEQA §15204(a) advises agencies and individuals to focus on the sufficiency of the EIR in identifying and analyzing possible impacts and ways in which significant effects might be avoided or mitigated. Comments are most helpful when they suggest additional specific alternatives or mitigation measures that are feasible and could better avoid or mitigate adverse effects. Whenever possible, reviewers are asked to provide data and reference materials and to explain the basis for their comments.

At the close of the 60-day public review period, the County will compile the Final Subsequent EIR. The Final EIR will consist of a copy of all comments received, a list of all persons and organizations and agencies that submitted comments, a copy of the Draft Subsequent EIR, and responses prepared by the County to address all significant environmental issues raised in the review and comment process. The Final EIR may include other information added by the Lead Agency.

The Final EIR will first be submitted for review by the Planning Commission, which will formulate recommendations for consideration by the Mono County Board of Supervisors. The Final EIR will then be forwarded for consideration by the Board of Supervisors. The Board of Supervisors will determine whether to certify the Final Subsequent EIR as adequate, based on several key elements:

- Determination whether the Final SEIR has been completed in compliance with CEQA,
- Verification that Board members have fully reviewed and considered information contained in the Final SEIR,
- Affirmation that the Final EIR reflects the independent judgment and analysis of the County.

Following EIR certification, the Board of Supervisors will consider whether to approve the project. If the EIR has identified one or more significant and unavoidable adverse impacts, the Board shall be required to make one or more written findings for each of the significant effects. The written findings will indicate, for each significant effect, whether: a) changes have been incorporated into the project to substantially lessen the adverse effect; b) such changes are the responsibility and jurisdiction of another public agency; or c) the changes are infeasible due to specific economic, legal, social, technological or other considerations; substantial evidence will be provided in support of each finding. At the same time, the Board will adopt a program for reporting on and monitoring the changes incorporated for the purpose of minimizing environmental effects, and will specify the location and custodian of the documents and other materials that constitute the record of proceedings upon which their decision is based.

If significant effects have been identified but not avoided or substantially lessened, the Board of Supervisors shall consider whether the project benefits outweigh the adverse environmental effects. The reasons supporting the Board's decision shall be specified in writing as a 'Statement of Overriding Considerations' that will be included with the record of project approval. At this point, the Board may determine whether to approve the proposed Tioga Inn Workforce Housing Project.

1.3 REGULATORY SETTING

Each EIR section contains a discussion of regulations at the federal, state and local level that may have a bearing on issues addressed in that section. Note that some of the programs discussed are not truly regulatory, but also include legislative and programmatic actions that may pertain to issues addressed in the section.

1.4 CEQA GUIDELINES AND DETERMINATION OF IMPACT SIGNIFICANCE

CEQA requires that environmental documents identify and focus on the *potentially significant* effects of a project proposal. A significant effect is one that may or will cause "a substantial or potentially substantial adverse change in any of the physical conditions within the area affected" by a project (CEQA Guidelines §15382). The determination of

whether an impact is significant is based on a number of factors, including 1) criteria offered by the Lead Agency, responsible agencies or other entities, 2) criteria provided in the CEQA guidelines, and 3) evidence provided by factual materials and expert opinion (Guidelines §15064).

Where a lead agency provides thresholds of significance, CEQA requires that such thresholds be adopted by ordinance, resolution, rule or regulation, and developed through a public review process, and supported by substantial evidence (CEQA §15064.7). Mono County has not formally adopted thresholds of significance (some examples of thresholds are, however, listed in the Mono County General Plan). This EIR relies on thresholds established by the State Clearinghouse and provided in the Environmental Checklist Form¹ to reflect issues of concern identified through the Notice of EIR Preparation and public scoping meeting. Each section of the environmental analysis specifies the thresholds used to determine the significance of potential impacts.

During preparation of the Draft Subsequent EIR, the CEQA Statutes and Guidelines were updated by the California legislature; the updated statutes and guidelines became effective on 28 December 2018. Impact analyses contained in this Tioga Inn Workforce Housing Draft SEIR have been updated to reflect the new guidelines. In some instances, the updated Guidelines topics have relocated the sections within which topics are addressed; this DSEIR retains the original locations, with referrals where needed to point to the location of impact analyses.

Potential environmental impacts refer to issues identified in the NOP as well as issues raised by the County, the public, responsible and trustee agencies, and other entities. In this Draft SEIR, the focus is on potential adverse effects that are clearly produced by the proposed project and may cause a substantial change in environmental conditions in the project study area. The proposed amendment to the Tioga Inn Specific Plan does not meet the CEQA criteria for projects of Statewide, Regional or Areawide Significance, but will be transmitted to the State Clearinghouse as part of the *Draft Subsequent EIR* public review process.

1.5 MITIGATION MONITORING AND REPORTING

All impacts and recommended mitigation measures are summarized in the Executive Summary (please see Table 2.1), and presented in detail as part of the Mitigation Monitoring and Reporting Program provided in EIR §10.

In addition to the mitigation measures contained in this EIR, the project would be subject to a wide range of California Building Standards, Code requirements, and standard conditions of approval required by the County or other agencies (for example, energy conservation measures required in Title 24, etc.). These mandatory requirements do not conform to the strict definition of a mitigation measure. Standard conditions and requirements are not generally incorporated as specific mitigation measures into this EIR.

1.6 AFFORDABLE HOUSING COMPLIANCE

The project is broadly compliant with the County's goal to plan for adequate sites and facilities to support future housing needs, and with all applicable² supporting policies as summarized below:

Policy 1. Facilitate the provision of housing in unincorporated communities to meet local housing demand: The project aims to provide affordable and proximate housing for all onsite employees (if desired), and for employees in other areas of the county if units remain available after the needs of onsite employees are met.

Policy 2. Ensure that adequate infrastructure exists or will be provided to support future housing development: Infrastructure for water, sanitation and power will be provided onsite sufficient to fully meet residents' needs.

¹ 2004 CEQA Statutes & Guidelines, Appendix G, Environmental Checklist Form.

² Note that 3 of the policies are not applicable to this project: #3-Identify sites including seasonal housing units on public lands, agency employee housing and under-utilized sites; #4-Seek adequate sites through coordination with other public agencies, private concerns, nonprofit entities and tribal governments; and #6-Utilize a Regional Housing Authority or similar entity to develop, implement and manage housing programs in Mono County and the Eastern Sierra.

Policy 5. Plan for adequate sites and facilities to be available for housing all segments of the population: Project housing will benefit seasonal workers and other potentially underserved individuals including large families, single-parent families, and lower-income families).

Policy 7. Designate adequate sites for a variety of residential development in each community to help establish self-sufficient communities that balance job locations with housing; i.e., develop a sufficient year-round residential population in communities to support local schools, commercial services, and other services: Although many existing and future uses may be closed during winter months (the deli and convenience store, the future hotel and full-service restaurant), the workforce housing village will remain open year-round and available for year-round occupancy by onsite employees and will include facilities (playground, space for indoor and outdoor day care services, laundry, storage, etc.) designed to facilitate a year-round residential population.

1.7 NOTICE OF EIR PREPARATION

A Notice of Preparation (NOP) was prepared and distributed to the State Clearinghouse, trustee agencies, responsible agencies, the Lee Vining Regional Planning Advisory Committee and other interested parties on 17 October 2016. Distribution of the NOP initiated a 5-week period for agencies and the public to identify environmental issues that should be addressed in this Draft Subsequent EIR. During the NOP review period, a public scoping meeting was held at the Lee Vining Community Center inviting interested agencies, individuals, and organizations to discuss the range of issues, alternatives, and potential mitigation measures to be addressed in this Draft Subsequent EIR.

At the time of the public hearing and NOP release, the applicant was seeking approval of several project elements that were subsequently deleted from the application. Table 1-1 identifies project elements as they were approved in 1993, as they were described in the 2016 NOP, and as now proposed and analyzed in this Draft Subsequent EIR. Unless otherwise noted in the discussion below, all Specific Plan approvals (the 1993 Specific Plan, the Plan amendments of 1995 and 1997, and the Director Review of 2012) remain consistent with the earlier approvals. Most of the changes incorporated since 2016 were made in response to comments on the NOP and at the scoping meeting.

Table 1-1. TIOGA INN SPECIFIC PLAN, PROPOSED MODIFICATIONS AND CHANGES SINCE 2016 NOP

LAND USE	LAND USES APPROVED IN 1993 SPECIFIC PLAN	SPECIFIC PLAN CHANGES PROPOSED IN OCTOBER 2016	SPECIFIC PLAN CHANGES AS NOW PROPOSED
HOTEL	120-room TWO-STORY hotel with varied guest services, and parking.	120-room THREE-STORY hotel with varied guest services and parking.	Changes to the hotel are NO LONGER PART of the application; existing Specific Plan provisions will remain in effect.
PROMONTORY RESTAURANT	Full-service restaurant with up to 5,000 square feet of interior dining area. ³	Full-service restaurant with 200 seats and up to 5,000 square feet of interior dining area.	Changes to the full-service promontory restaurant are NO LONGER PART of the application; existing Specific Plan provisions will remain in effect.
WORKFORCE HOUSING	The 1993 Specific Plan included 10 hilltop residential housing units (of which only 8 were built). Six additional residential cabins were subsequently constructed about 300 feet south of the flagpole; no formal approvals were granted for the 6 cabins.	The 2016 application included up to 80 new workforce housing units to be located in an area currently designated as Open Space-Preserve. The 6 existing cabins would be demolished and replaced by the proposed workforce units.	The amended application includes up to 100 workforce housing units, with daycare, in an area currently designated as Open Space-Preserve; the Open Space-Preserve acreage would be expanded; the Open Space-Facilities and Open Space-Support acreage would be reduced. The 6 existing workforce cabins would be demolished and replaced by the workforce units.

³ The 1993 Specific Plan implementation measures discuss restaurant size only in terms of the interior dining area (max 5,000 sf) with provision for an exterior sit-down dining area on the observation deck and an interior and exterior cocktail lounge. Reference to 100 restaurant seats is found only in the discussion of environmental impacts pertaining to traffic (1993 SP, p. 59). The 1993 Specific Plan goals, policies and implementation measures make no reference to 100 seats, but the 100-seat provision is considered to be a specific plan limit, and has been added to the proposed Specific Plan Amendment #3.

GAS STATION & MINI-MART; DELI	2 gas pump islands, each with 1 underground storage tank and an overhead canopy with lighting	▪ 1 new Gas Pump Island with 1 new underground storage tank, and an overhead canopy with lighting (for a total of 3 islands)	▪ As proposed in the 2016 NOP (i.e., a total of 3 gas pump islands).
MINI-MART; DELI	▪ 4,800 sf mini-mart with picnic area, restrooms and accessory facilities. ▪ Delicatessen ⁴	No Changes Proposed	No Changes Proposed
WATER STORAGE	300,000-gallon potable water storage tank near the hilltop residential units.	Demolition of the existing 300,000-gallons water storage tank, and construction of a new 300,000-gallon potable water storage tank in the same general location.	As proposed in the 2016 NOP (i.e., demolition of the existing tank and replacement with a new tank of the same size in the same general location.
PROPANE	Unspecified number of above-ground propane tanks.	▪ Addition of one new 30,000 gallon propane tank and continued use of the existing propane tanks.	As proposed in the 2016 NOP (i.e., 1 new 30,000 gallon propane tank and continued use of the existing propane tanks).
SANITATION	Standard septic tank/leach field systems for each land use per Mono County Health & LRWQCB standards, with a 100% expansion field area for all onsite facilities.	The 2016 NOP proposal was for replacement of the existing onsite septic system with an onsite wastewater treatment plant to treat wastes before discharge to a designated leach field.	The amended application still includes an onsite wastewater treatment plant to provide subsurface treated water for landscape irrigation and habitat restoration, along with expansion of the existing septic system and leach field (still with a 100% expansion field).
TOTAL PROPOSED ACRES 67.83 (reduced from 73.7 acres in 1993)			

The October 2016 NOP is provided in Appendix A1 of this SEIR, and comments on the NOP are provided in Appendix A2. Table 1-2 below summarizes key points raised in the NOP comment letters. The NOP comments are also summarized in the applicable EIR section as a basis for the scope of issues addressed. To be clear: the NOP discussed changes to the previously-approved hotel and full-service restaurant that were later dropped from the project proposal in response to comments on the NOP.

TABLE 1-2. Comments Received on the October 2016 Notice of EIR Preparation	
COMMENT SOURCE	SUMMARY OF COMMENTS
Janet Carle & numerous others from Lee Vining, Bridgeport, Walker, Mono City, Hilton Ck., June Lake, San Francisco, Mammoth Lakes)	<ul style="list-style-type: none"> • GENERAL: The project is critically important for Mono Basin, Mono County and the Eastern Sierra, not only as the eastern Yosemite gateway but also as gateway to the Mono Lake Basin – a crossroads with thousands of visitors each summer. As such, it offers an opportunity for a groundbreaking project that is climate-friendly and renewable, and sets an example for the region as a whole. • ENERGY: The project scope suggests a major increase in energy use. Energy facilities must be wholly comprised of passive solar, designed for net zero energy use, platinum LEED certified and exceeding requirements of Title 24 (energy code). • WATER: The proposed use of groundwater supply, a limited resource, calls for innovative graywater reuse and overall conservation. Consider a cutting-edge black-water dispersal system and exclusive use of native drought-tolerant landscaping. • WORKFORCE HOUSING: The proposed 80 units would roughly double available housing in Lee Vining, potentially impacting a range of services in Lee Vining such as schools. Small cabin design is inefficient in a mountain climate; 2 or 3 apartment-style buildings may be more efficient, with good southern exposure and state-of-the-art insulation. • COMMUNITY IMPACTS: The project will impact Lee Vining. Impacts have the potential to benefit the community, but add more intensity, more traffic and more visitors. Please reach out to the community to

⁴ The delicatessen was not a part of the 1993 approvals. This use was retroactively approved through a 2012 Mono County Community Development Department Director Review.

	identify and integrate town needs with project needs, including joint use of meeting spaces, sponsoring local events, and ensuring aesthetic design that complements the site.
Caltrans	<p>RESPONSIBLE AGENCY (Table 2): Caltrans is a Responsible Agency for the project, and must issue an encroachment permit for any driveway intersection improvements in the State Right of Way (ROW). Suggests EIR include consultation with Yosemite Area Rapid Transit System (YARTS).</p> <p>TRAFFIC:</p> <ul style="list-style-type: none"> For the intersections of SR 120/US 395 and the Tioga Inn entry at SR 120, estimate impacts from turn movements and queuing, and identify needed improvements (e.g., addition/alteration of turn- and/or acceleration-lanes). A 2-lane exit from the site may work, but a 2-lane entry may exacerbate weaving at the hotel/gas station junction. Areas south and north of the driveway must be included in the analysis. To the south is the YARTS bus stop/parking area; to the north is the dirt pullout area, which has expanded and experiences improper parking that limits sight distances. The County and Caltrans may want to consider parking restrictions in the vicinity. Ensure that pedestrians and bicycles are accommodated in the project. SR 120 ROW improvements must meet Caltrans standards as stated in the Encroachment Permit process. Caltrans commends the proposal provide substantial additional parking for guests, for park and ride, and for YARTS buses. <p>AESTHETICS: Ensure that the visual analysis considers the designation of US 395 as a State Scenic Highway, and the eligibility of SR 120 for such designation.</p> <p>HYDROLOGY: Ensure that no added drainage is directed onto Caltrans' ROW.</p> <p>ROW ENCROACHMENTS: Much of the picnic/landscaped area is in the SR 120 ROW. Caltrans plans to issue a Notice of Encroachment, and further interaction is required for resolution.</p> <p>DRIVEWAY LOCATION: The legal SR 120 access to this site was altered during 1994 from the 30 linear feet of access rights granted by Caltrans. The current paved driveway exceeds the 30' limit by 6' and the proposed access may be even wider. Interact with Caltrans to address driveway width.</p>
Allison Brooker	<p>HOTEL: A 3-story hotel would be out of proportion to the environment and local businesses.</p> <p>WORKFORCE HOUSING: The 80-unit workforce housing structure would be out of proportion to the area, and would likely remain underutilized during off months.</p> <p>AESTHETICS: Visuals are needed to assess aesthetic impacts of the Workforce Housing.</p> <p>RESTAURANT: A 200-seat restaurant would grant Tioga Inn an unfair advantage over local businesses; 100 seats are enough.</p> <p>CAR RENTAL: It does not make sense to provide car rental facilities at this location.</p> <p>GAS ISLANDS: The 2 existing gas pump islands are large; there is no need for a third island.</p> <p>ELECTRIC CAR CHARGING: The commenter supports this component.</p> <p>OVERALL CONCEPT: The commenter supports the concept of meeting facilities, jobs and employee housing if coupled with noteworthy architecture, but believes that the Visitor Center already provides facilities sufficient to meet area needs.</p>
Lynn Boulton 11-1-16	<p>MONO LAKE: Mono Lake levels are extremely low and the lake is at risk. The SEIR must demonstrate that project groundwater pumping will not adversely impact Mono Lake.</p> <p>LOCAL SPRINGS: There are many freshwater springs around Mono Lake; they provide a water source for local and migrating wildlife, contribute to tufa formation, and support area visitation. The SEIR must prove that project will not impact these springs.</p> <p>LEE VINING CREEK: Ensure that project-related groundwater pumping will not undercut DWP settlement agreement provisions that are designed to mimic natural hydrologic flows.</p> <p>NEIGHBORING permit: Nearby private wells (including one across US 395) predate the existing Tioga Inn well, including one directly across the highway. Drought continues to exacerbate town reliance on these wells. The SEIR must assess whether project water demands will place an added burden on these nearby wells; a bond should be posted to compensate owners of nearby wells for losses.</p> <p>SURFACE VEGETATION: The reduction in recharge water from Tioga Inn may impact surface vegetation in the Mono Basin. A baseline assessment should be made, and the vegetation monitored.</p> <p>ADJUDICATION: The SEIR should list and characterize each neighboring well in preparation for future adjudication of groundwater rights. The SEIR should also determine the size and age of the underlying aquifer. The data will facilitate resolution of future water resource conflicts as well as adjudication.</p> <p>GENERAL: The SEIR should set a cap on project groundwater use and ensure the equitable use and availability of water supplies to all users in Mono Basin. A hotel swimming pool is discouraged.</p>

Lynn Boulton 11-8-16	<u>HYDROLOGY TESTS:</u> Raises concern that the planned hydrology tests will only on the adequacy of supplies to serve the project, and not consider impacts on the Mono Basin environment. Asks whether the tests will determine (a) age of the project aquifer supply, (b) age of springs entering Mono Lake, (c) age and size of the southern basin's aquifer, (d) impacts to neighboring wells and local springs that flow into Mono Lake, and (e) impacts to flows in Lee Vining Creek.
Lynn Boulton 11-10-16	<p><u>HOTEL:</u> Would like to see project scaled down to mitigate viewshed impacts and more closely adhere to the dark sky policy. Supports a 2-story hotel (not 3-stories) and recommends the restaurant be inside the hotel and not at the flagpole. Consider a partial 3-story design, or placing the 1993 coffee shop at an elevation lower than the Gas Mart to retain views of Mono Lake. To avoid a 'wall-like' hotel appearance, consider designing the hotel front with varied setbacks, or tiering, or a design with 2- and 3-story elements. Mitigation in the 1993 FEIR required an alpine design; this may not fit well with the sagebrush vegetation character around Lee Vining. Consider a unique exterior design, tasteful, rustic and perhaps similar to the Visitor Center. If a chain hotel is selected, it should feature unique and local design elements. Another option would be to convert the sagebrush dominated acreage north of the hotel to a Jeffrey/aspen tree forest to hide buildings and block lights (provided greywater is used for irrigation). To minimize pavement, consider placing the hotel parking underground.</p> <p><u>GAS PUMP:</u> The sodium lights of the existing gas pumps are very bright and visible from town and highway. Consider using dimmer lights for the existing and proposed islands.</p> <p><u>FLAGPOLE RESTAURANT:</u> Disagrees with 1993 FEIR finding that the flagpole restaurant conforms to dark sky and other county requirements. Raises concern that this location will be highly visible, with little screening vegetation. Consider minimizing impacts by prohibiting all of the following: 24-hour restaurant operation, use of neon signing, lighted trademark signing after closing time, and trademark signing that can be seen from Mono Basin. Suggests the site be used as windbreak with outdoor benches in lieu of a restaurant. If a restaurant, would prefer something unique, and something other than Applebee's or similar.</p> <p><u>EMPLOYEE HOUSING:</u> Employee housing may benefit Lee Vining, but the planned 80-bedroom design is too dense and too visible. Consider reducing the number by half, and ensure that each unit has a bathroom so the units appeal to a wider demographic. Consider providing heat to each unit through design features instead of built-in heat sources. Consider lowering the pad elevation to reduce the profile and retain the natural ridgeline of the moraine.</p> <p><u>WATER TANK:</u> Consider use of pinyon pines to effectively screen the second water tank.</p> <p><u>LANDSCAPING:</u> Require that landscaping be of drought-resistant native materials.</p> <p><u>WILDLIFE:</u> To protect wildlife, prohibit use of pesticides. Provide discussion of a wildlife movement corridor that crosses the eastern end of the property, crosses SR 120, and passes a private home on SCE property. This project may require wildlife to circle behind the development to travel up Lee Vining Cyn or go around town to lower Lee Vining Ck. The long-term shift to a drier climate would increase traffic and wildlife collisions; a wildlife underpass is needed in this area. Provide updated information about the Casa Diablo herd, including impacts of Tioga Mart development to date. Provide bear-roof dumpsters and trashcans to address reduced bear hibernation patterns.</p> <p><u>TOWN IMPACTS:</u> Encourage cross-pollination between town guests and Tioga Inn guests, perhaps with a connecting footbridge and nature trail.</p>
Lynn Boulton 11-15-16	<u>HYDROLOGY TESTS:</u> Recommends two well stress tests including one at peak runoff in June, and one at the lowest runoff in October or November to assess recharge is adequate to support hotel uses. The 1992 tests were conducted only during June.
Malcolm & Ellen Mosher	<p><u>WATER:</u> The SEIR must demonstrate that anticipated project water demands can be sustainably met given ongoing drought conditions.</p> <p><u>TRAFFIC:</u></p> <ul style="list-style-type: none"> • Yosemite traffic has increased significantly since the 1993 EIR, resulting in sometimes unsafe conditions at the 120/395 junction. This project will further increase area traffic volumes. • Drivers often ignore the 30 mph speed limit through Lee Vining, despite pedestrian activity. Routine policing is needed. This project will further increase traffic and possibly unsafe speeding through Lee Vining. • The hotel and restaurants will add to parking demands in Lee Vining, which is already underparked. Solutions are needed to resolve this problem. • Traffic in the area of Lee Vining High School routinely speeds, often reaching 50-60 mph despite the posted 30 mph limit. The Tioga Inn project will likely add to traffic and speeding in this area, increasing the need for policing or perhaps a traffic signal. <p><u>AESTHETICS:</u></p> <ul style="list-style-type: none"> • The proposal to increase the hotel from 2 to 3 stories will increase visibility. The EIR must clearly identify height

	<p>and appurtenances, and assess how the hotel will impact water, traffic and aesthetic values. Erect story-poles so that residents can see how big the hotel will be.</p> <ul style="list-style-type: none"> • Hotel lighting (parking, restaurant, rooms) will impact dark sky viewing over a large area around the project. • The commenter strongly opposes the request to increase restaurant seating from 150 in 1993 to 400 in the current proposal. <p>PARCEL 2:</p> <ul style="list-style-type: none"> • Regarding the 80-bedroom workforce housing proposal, provide details including unit sizes, number of units, building heights, number of stories and bedrooms per unit and number of garages, to accurately gauge future impacts on water use, sewage, dark sky impacts, wildlife and other issues. Indicate how the project will impact employment, and characterize the seasonal nature of the employment opportunities. • The EIR must assess whether the one- and two-bedroom units may generate school-age children and require construction of new school facilities. <p>CLOSING REMARKS:</p> <ul style="list-style-type: none"> • Uses on the site should be held to the 1993 approvals. • As a whole, the project will adversely impact many other businesses in town including motels, food services, retail and souvenir shops, and gas stations. • The commenter proposes that the third schematic rendering be taken from Test Station Road along the shoreline of Mono Lake, and provided a photo show views from the suggested site.
Larry & Carol Holt	<p>PROJECT SIZE: The project has potential to place a heavy burden on Lee Vining Services. Please analyze the impact on town population and local schools.</p> <p>WATER: Lee Vining has recently experienced significant water use restrictions and Mono Lake is receding; how will this project impact water availability and Mono Lake levels?</p> <p>SEWAGE: It appears that the leach field flow could end up in Lee Vining Creek and thereon to Mono Lake. Are there studies indicating impacts on fish populations in Lee Vining Creek?</p> <p>FIRE: The Lee Vining Fire Department does not own equipment capable of fighting a 3-story fire, and the firehouse is too small to park such equipment.</p> <p>AESTHETICS: The 3-story hotel may be a visual blight on the Mono Lake National Forest Scenic Area. Are setbacks adequate to ensure buildings are not visible from the Scenic Area?</p> <p>OVERALL: As now proposed, the project is too large and too great a burden on Lee Vining.</p>
Dept. of Fish & Wildlife (CDFW)	<p>TRUSTEE & RESPONSIBLE AGENCY: CDFW is a Trustee Agency for fish and wildlife resources, and a Responsible Agency for any discretionary actions (e.g., Lake or Streambed Alteration Agreement, Permit for Incidental Take of Endangered, Threatened and/or Candidate species).</p> <p>HABITAT: Assess habitat types in the project with a map identifying each. CDFW recommends use of <i>The Manual of California Vegetation</i> for this purpose. Include adjoining habitats for potentially impacted offsite areas.</p> <p>INVENTORY: Include an inventory of fish, amphibian, reptile, bird and mammal species that are or may be present (referring to listed sources); CBDDb forms should be completed and submitted to document results.</p> <p>LISTED SPECIES: Provide a complete and recent inventory of rare, threatened, endangered and other sensitive species in the impact area.</p> <p>PLANTS: Provide a thorough and recent assessment of special status plants and natural communities using recommended protocols.</p> <p>REGIONAL SETTING: Characterize the regional setting, emphasizing rare and unique resources.</p> <p>BROAD REVIEW: Consider project impacts from lighting, noise, human activity, wildlife-human interactions, exotic and invasive species, and drainage impacts including changed drainage patterns and water quality in, upstream and downstream of the project site.</p> <p>INDIRECT EFFECTS: Discuss such indirect project impacts on nearby public lands, open space, adjacent natural habitats, riparian areas, wildlife corridors and any designated or proposed reserve or mitigation lands.</p> <p>SHORT & LONG-TERM EFFECTS: Consider impacts of construction and long-term operation and maintenance.</p> <p>CUMULATIVE EFFECTS: Assess cumulative effects including potential direct and indirect impacts to riparian areas, wetlands, vernal pools, alluvial fan habitats, wildlife corridors, aquatic habitats, sensitive species and habitats, open lands, open space and adjacent natural habitats based on general and specific plans in the area and past, present and anticipated future projects.</p> <p>MITIGATION-SENSITIVE PLANT COMMUNITIES: Seek to fully avoid or protect communities with a statewide ranking of S-1, S-2, S-3 and S-4, all of which are considered sensitive and declining.</p> <p>MITIGATION-SPECIES OF SPECIAL CONCERN (SSC): Consider SSC during the review.</p>

	<p><u>MITIGATION:</u> Impacts to sensitive species and habitats are considered significant; mitigation should emphasize avoidance and impact reduction; where unavoidable, consider onsite restoration and/or enhancement, or offsite mitigation through habitat creation or preservation in perpetuity. Address access restrictions, land dedications, ongoing monitoring & management, illegal dumping controls, water pollution, increased human interaction, etc.</p> <p><u>RESTORATION PLANS:</u> These should be prepared by qualified individuals. Assumptions should be stated and plans should include location, species/sizes/seeding rates/sources, mapping, a local seed/cuttings/planting schedule, a description of irrigation methods, measures to control exotic species, specific success criteria, monitoring (of sufficient duration to ensure success), contingency measures, and identification of responsible parties. CDFW recommends use of local propagules, with timely seed collection to ensure adequate supply and appropriate restoration goals and plant palettes. Restoration plans should be specific to project components, and objectives should include protection of habitat elements or their re-creation in affected areas.</p> <p><u>NESTING BIRDS & MIGRATORY BIRD TREATY ACT:</u> The project must comply with all applicable laws relating to nesting birds and birds of prey as well as migratory non-game native bird species protected under the Migratory Bird Treaty Act. The Fish and Game Code also affords protections including §3503 (unlawful to take, possess or needlessly destroy bird nests or eggs), §3505.3 (unlawful to take, possess or destroy birds of prey or their nests or eggs), and §3515 (unlawful to take or possess any migratory nongame bird). Avian surveys are recommended, as are avoidance and minimization measures (e.g., phasing, monitoring, sound walls, and buffers) to ensure impacts do not occur.</p>
Paul Ashby	<p><u>DESIGN:</u> Overall the structures appear disproportional to the region, landscape and ecosystem.</p> <p><u>AESTHETICS:</u> It appears that the hotel will be visible from US 395 and SR 120, significantly changing the landscape of this area.</p> <p><u>SEASONALITY:</u> Describe how project elements would be sustained during off-season months.</p> <p><u>ECONOMIC IMPACTS:</u> Analyze impacts to existing businesses during the peak season. Consider effects on tourism if the project forces some existing businesses to close, and impacts on population if the project draws large numbers of new visitors.</p> <p><u>WATER:</u> Closely analyze impacts of leach field flows on the watershed and water quality given area geologic characteristics. Describe contingency plans in the event of treatment system failures. Consider whether seismic effects could cause system failure.</p>
Ilene Mandlebaum	<p><u>ALTERNATIVES:</u> The 1993 EIR identified alternatives to reduce significant impacts on visual quality and area growth. The alternatives (all of which were rejected due to infeasibility, associated new impacts and/or noncompliance with project objectives) should now be revisited with a focus on options that reduce size, scale and intent. Disclose the applicant intent to lease or sell the hotel site to an outside developer with pre-set goals (size, design and uses) that may be at odds with community aesthetic values.</p> <p><u>ECONOMIC ANALYSIS:</u> An updated Economic Analysis is needed to assess impacts on local businesses.</p> <p><u>DESIGN:</u> A Design Review Permit should be required. Articulate plans and required standards and restrictions for siting, scope, design, signage, roads, water and energy use and conservation, transportation, emission controls, and pedestrian linkage to town.</p> <p><u>LAND USE PLANNING:</u> Describe how the plan will comply with Mono Basin Community Plan goals and objectives and require mitigation as needed.</p> <p><u>SAFETY:</u> Analyze increased demands on safety services including police, fire and paramedics.</p> <p><u>FIRE:</u> Lee Vining Fire Department (LVFD) has neither equipment nor staff to protect this project; please analyze.</p> <p><u>AIRPORT:</u> Assess how the project would impact Lee Vining Airport, including potential growth inducements and secondary impacts thereof.</p> <p><u>AESTHETICS:</u> It may not be feasible to reduce to less than significant levels the visual impacts of the promontory restaurant and housing. Assess whether a 3-story hotel is appropriate in this sagebrush environment, and consider night light pollution.</p> <p><u>BIOLOGY:</u> Consider whether this project undermines the 1993 deer impact mitigation of leaving open space areas. New mitigation should consider funding for bitterbrush plantings in the Azalea Fire area.</p> <p><u>TOURISM:</u> Assess the impacts of increased tourism on the Lee Vining Creek drainage and wildlife.</p> <p><u>WATER:</u> Identify the recharge source for groundwater aquifers around the project wells, and potential impacts of increased pumping. Consider whether approval would set a precedent for future projects.</p> <p><u>SANITATION:</u> Describe how the wastewater management plan will reduce water consumption as stated.</p> <p><u>PARKING:</u> Parking should be no more than required to park each vehicle in one location; do not double count for guests using the hotel and restaurant. Use porous surfaces to minimize runoff and increase infiltration.</p> <p><u>LANDSCAPING:</u> Require pesticide/herbicide-free landscape maintenance for future and existing uses.</p>

	<p><u>WORKFORCE HOUSING:</u> Consider whether workforce housing responds to employee needs in terms of cost, size & facilities. Assess whether size & appearance can be mitigated, and surrounding views maintained.</p> <p><u>DESIGN:</u> Consider a scaled-down project design and partnership with a hotel/restaurant developer who understands and values the Lee Vining area and community.</p>
Ann Howald	<p><u>CONSERVATION:</u> Require use of feasible conservation technologies throughout the project.</p> <p><u>SIGNIFICANCE THRESHOLDS:</u> Requests that EIR clearly define 'significant impact' for each EIR section, along with specific mitigation to reduce significant impacts to less than significant levels.</p> <p><u>WATER:</u> Thoroughly identify the full range of impacts associated with increased water consumption; ensure that the project incorporates all feasible water conservation materials and technologies (graywater recycling, low-flush/flow toilets and showers, on-demand heaters, conservation signage, native landscaping, etc.).</p> <p><u>WATER:</u> Groundwater pumping has the potential to reduce surface flows to Lee Vining Creek and thence to Mono Lake, with increased risk of failure in the Mono Basin ecological system. Potential impacts require thorough evaluation, with mitigation of potentially significant impacts.</p> <p><u>ENERGY:</u> The project should be a net-zero energy user, with a wide range of conservation/LEED features such as solar panels, efficient appliances, and highest R-value insulation. Provision of a walking/bicycle trail to connect Tioga Inn with Lee Vining would reduce GHG emissions, parking demands, and traffic volumes.</p> <p><u>WORKFORCE HOUSING:</u> The workforce units should be grouped in a manner that saves space, reduces heating and optimizes energy efficiency.</p> <p><u>TRAFFIC:</u> Thoroughly analyze impacts to SR 120, US 395, and downtown Lee Vining. To reduce traffic, consider ridesharing, carpooling, increased bus services and a connecting path to town.</p> <p><u>PARKING:</u> Parking should be adequate to accommodate all onsite parking, and guests encouraged to leave vehicles on site through provision of bus-service and a connecting trail to town.</p> <p><u>DARK SKY:</u> Provide visual simulations to show project impacts on dark-sky conditions from several locations and distances. Mitigation should focus on night lighting and hotel window materials.</p> <p><u>BIOLOGY:</u> Provide updated analysis of impacts to deer migration and impacts to Lee Vining Creek and Mono Lake from increased water use.</p> <p><u>FIRE SAFETY:</u> Fire-fighting resources in Lee Vining are inadequate to handle a 3-story fire; there is no ladder truck and no place to store such a vehicle. LVFD resources will require major upgrade to serve the project, protect local residents and protect property values through access to fire insurance.</p> <p><u>POPULATION:</u> The project will increase population, affecting local schools, churches, businesses, services and quality of life in Lee Vining; these impacts must be identified and addressed.</p>
Audenried Family	<p><u>EXISTING BUSINESSES:</u> A project of this scale threatens the viability of small businesses in Lee Vining and beyond, as well as the small-town character of Lee Vining.</p> <p><u>EMPLOYMENT:</u> It is difficult to recruit employees, and workforce housing may not alleviate this problem. The project may attract the few available employees, adding to a lack of employees for town businesses. Will the project recruit employees from out of the area? If so, how will town services accommodate the growth?</p> <p><u>AESTHETICS:</u> A project of this size will alter the aesthetics, appearance and character of Lee Vining, altering ambient light and sound and possibly jeopardizing qualities that draw visitors to the area.</p> <p><u>DESIGN:</u> The project may introduce 'chain' commercial enterprises to Lee Vining; consider this carefully.</p>
Sally Miller	<p><u>LEE VINING CANYON:</u> Many important wildlife inhabit Lee Vining Canyon that could be impacted by increased visitation, dog harassment, proliferation of off-road trails and related uses. Provide measures to mitigate these impacts onsite, with input from with CDFW and the U.S. Forest Service (USFS).</p> <p><u>BIOLOGY:</u> Conduct an updated wildlife study with emphasis on past and potential project-related changes in mule deer use at the base of Lee Vining and Horse Meadow/Gibbs canyons. Consider recent mule deer use of the sagebrush-bitterbrush flats around Lee Vining, and whether seasonal migration may be transitioning to a patterns of year-round use of Lee Vining Canyon and surrounding mountain areas (as evidenced by vehicle-deer collisions, which the project may increase). Also consider whether the project area may be suitable as potential habitat for the bi-state sage grouse given available sagebrush habitat.</p> <p><u>TRAFFIC:</u> The added housing has potential to further increase traffic and congestion on Tioga Road and at the Yosemite Park entry. Identify ways to mitigate traffic into Yosemite: increases in the number and frequency of YARTS shuttles during peak seasons (with at least one YARTS Lee Vining-Yosemite Valley shuttle and multiple Lee Vining-Tioga Pass shuttles, possibly free of charge). Also consider impacts on YARTS parking, including parking for those who plan to use YARTS or other Yosemite transportation. Work with Caltrans to identify locations for YARTS shuttle parking.</p>

	<p><u>GATEWAY DESIGN:</u> Ensure the preservation of visual and scenic qualities as seen from the US 395/SR 120 Yosemite gateway; consider the appropriateness of a 3-story hotel at this location (Mammoth may be the only location in the region with an existing 3+-story structure). Before final plans are developed, appoint a Design Review Committee to provide input on design and landscaping, with community input to consider alternatives and identify a preferred alternative. Provide visual simulations to guide this analysis.</p> <p><u>TRAIL LINKAGE:</u> The walk between Tioga Mart and Lee Vining is dangerous and will become more so with future traffic. Provide a pedestrian link between the project and Lee Vining to increase walkability and public safety, reduce parking demand in town, and enhance the visitor experience. Consider a pedestrian 'skyway' across SR 120 as mitigation (illustration provided), and work with Caltrans and others to identify additional mitigations that would ensure safe pedestrian movement in this area.</p> <p><u>ECONOMIC SYNERGY:</u> The project has potential to benefit the town's economy and foster new businesses, but also has potential to adversely impact town commerce. The County and applicant are encouraged to work with the community to identify ways in which the project could leverage and benefit town businesses. Consider trail linkage and other incentives, possibly via creation of an Economic Development Subcommittee.</p>
Barry McPherson	<p><u>FIRE SAFETY:</u> The project has potential to increase the already-heightened risk of wildlife. Preventive measures must be analyzed and mitigations recommended to enable LVFPD to prevent and fight fires, including more and better equipment & buildings (a hook-and-ladder fire truck and a place to store it).</p> <p><u>LEE VINING PARKING & AIR QUALITY:</u> The EIR must address increased traffic and demand for parking in Lee Vining associated with project guests and residents, as well as the effect of associated emissions on neighborhoods and schools.</p> <p><u>DARK SKY:</u> Project lighting must be designed to protect night sky views in Mono Basin.</p> <p><u>GHG EMISSIONS:</u> To reduce fuel consumption and emissions, require use of fuel-efficient building design, lighting and appliances as well as 'no vehicle idling' requirements, efficient transportation options (including safe trail access between the project and town). Incorporate aggressive measures to minimize GHG emissions.</p> <p><u>WATER:</u> Ensure that the project incorporates state-of-the-art water conservation techniques throughout, including signage for guests and visitors to communicate the conservation features and goals. Consider mitigations that facilitate purchase of water efficient fixtures and appliances in town.</p> <p><u>COMMUNITY SERVICES:</u> Incorporate substantial community input to identify and mitigate impacts on Lee Vining (including equipment and personnel) that may result from project implementation. Consider mitigation that would provide at least one stoplight in Lee Vining. The project meeting rooms should be made available for community use and emergency response activities.</p>
Nora Livingston	<p><u>FIRE SAFETY:</u> LVFD does not have equipment to fight a 3-story fire, or a place to store such equipment, or the funds to obtain either. The project will increase fire-fighting demands.</p> <p><u>TRAFFIC:</u> The intersection of US 395/SR 120 is prone to accidents; project approval may increase traffic and hazards at this location.</p> <p><u>DARK SKY:</u> The impact of project lighting on night-sky views must be addressed. Include special windows and street lighting as part of the project design.</p> <p><u>ENERGY:</u> Ensure use of solar energy and other energy efficient features; consider LEED-certified design.</p> <p><u>SCHOOLS:</u> The workforce housing could generate up to 30 students, which the local schools may be unable to accommodate. Provide school mitigation fees.</p> <p><u>WATER:</u> Assess whether the project may negatively impact area water allocations, and runoff to Mono Lake. Provide for graywater systems and water recycling, including a blackwater system.</p> <p><u>WORKFORCE HOUSING:</u> Ensure that this housing is truly affordable and winterized for year-round living. Set rents to accommodate offsite workers as well as project employees, and keep living costs down with energy and water efficient fixtures.</p>
Gary Nelson & Deborah Lurie	<p><u>WATER:</u> Analyze whether there is sufficient groundwater to support this project as well as the Lee Vining Community and Mono Lake.</p> <p><u>ENERGY:</u> Incorporate resource-efficient features including passive solar, photovoltaic systems, graywater and blackwater recycling and dispersal, and top-grade insulation.</p> <p><u>ECONOMIC:</u> Analyze whether the project is economically feasible in light of limited seasonal demand.</p> <p><u>DESIGN:</u> Ensure that mitigation and design standards are binding on any future uses and site developers (including 'chain' enterprises).</p>
Ryan Carle	<p><u>DESIGN STANDARDS:</u> The project should be approved only if it meets the highest standards of design, efficiency, visual compatibility and community integration.</p>

	<p><u>WORKFORCE HOUSING:</u> The proposed 80 units would increase town population by as much as 30% overall. This would have a potentially major impact on Lee Vining schools and services. Consider capping the number of residences at 40, or studying the number of units actually needed and associated impacts.</p> <p><u>WATER & ENERGY USE:</u> The project has potential to substantially increase use of energy and water resources. To minimize impacts, use the highest possible standards for sustainability.</p> <p><u>GENERAL:</u> Approval should be granted only if project can achieve net zero energy use, platinum LEED standards, Title 24 standards, cutting-edge graywater/blackwater recycling/dispersal, native drought-tolerant vegetation and workforce housing clustered in 2-3 energy-efficient, land-efficient structures.</p>
Don Condon, Vivian Barron	<p><u>SUSTAINABILITY:</u> Ensure that the project is environmentally sound and meets LEED Platinum standards at a minimum.</p>
Yoel Kirschner	<p><u>ALTERNATIVE:</u> As an alternative to the current proposal, consider reducing the size of the workforce housing by at least half, with use of green building principles and a design that minimizes visual impact to the greatest possible extent. As proposed, this element has potential to change the character of Lee Vining with adverse impacts on traffic, accident rates, water consumption and possibly the economic vitality of existing businesses.</p>
Tim & Stephanie Banta	<p><u>EMPLOYMENT:</u> The regional workforce is inadequate to serve the project. Employees would need to come from other areas, would be transient and would not contribute to the local tax base that supports services. Since area unemployment rates are low, the project may draw workers from existing businesses that would harm the local economy and the livelihoods of Mono Basin residents.</p> <p><u>SERVICES:</u> Analyze and identify the social and community services needed to support a development of this size, including teachers, postal workers, daycare, food, internet and emergency services. Lee Vining cannot support a rapid expanse development project that would tax its limited resources.</p> <p><u>FIRE & WATER:</u> Analyze the adequacy of fire and medical services to support the project. LVFD is staffed by volunteers, with inadequate personnel to support fire and medical response for a 3-story hotel and development of this size; equipment and training and personnel upgrades would be needed, along with funding to purchase the necessary ladder truck. Describe how these needs will be met, and indicate whether project water demands account for fire suppression supply and storage. Will dedicated fire suppression water storage be provided? Can the water supply system sustain pressure and delivery requirements during a fire?</p> <p><u>AESTHETICS:</u> The development would degrade the unique aesthetic, environmental and natural heritage of Mono Basin. Consider alternatives that reflect the unique character and resources of the Mono Basin including reduced footprint, green construction and design alternatives, building height reduction, viewscape considerations, and mitigations for noise/traffic/light pollution.</p> <p><u>ALTERNATIVES:</u> Analyze alternatives that respond to the concerns above, including a No Development option. Give special consideration to alternatives addressing (1) socioeconomics and social resource impacts, (2) waste management requirements and impacts, (3) direct and cumulative impacts to groundwater and surface water resources resulting from long-term use of the proposed sanitation system, (4) direct and cumulative impacts to groundwater and surface water resources resulting from increased pumping to meet future project water demands, (5) the pumping stress test must provide long-term reliable estimates of yield, aquifer characteristics and impact (including a design that reflects planned extraction rates over an extended period), and (6) updated evaluation of noise, traffic and light pollution from Tioga Mart events and concerts.</p>
Lahontan Regional Water Quality Control Board (LRWQCB)	<p><u>SEIR SCOPE:</u> LRWQCB recommends consideration of the following:</p> <ul style="list-style-type: none"> • Low Impact Development (LID) strategies to maintain a landscape functionally equivalent to predevelopment conditions, with post-construction stormwater controls that are compatible with LID; • Minimal hydromodification (i.e., alteration of natural water flows) in order to maintain stream channel stability, water quality, natural groundwater recharge, habitat values and pollutant filtration; • Water Quality Standards and Significance Thresholds: Site-specific water quality standards (based on beneficial uses and water quality objectives) must be identified in the SEIR; these standards should be used as the significance thresholds for impacts; • Beneficial Uses and Water Quality Objectives: when identifying site-specific standards, note that the site is in Mono Hydrologic Unit 601.00 and overlies Mono Valley Groundwater Basin No. 6-9; designated beneficial uses are in Chapter 3 of the Basin Plan; • Degradation Analysis: provide a Degradation Analysis that analyzes existing groundwater quality and potential changes associated with the proposed wastewater treatment system; • Onsite Wastewater Treatment: Must not cause pollution; denitrification should be included and the SEIR should document all treatment plant characteristics as listed in the comment letter;

	<ul style="list-style-type: none"> • Jurisdictional Delineation: Several streams traverse the site, all of which are waters of the State and subject to regulation by LRWQCB. A jurisdictional delineation is needed to determine the extent and locations of all surface waters, facilitating identification of applicable regulations; the delineation should be submitted to LRWQCB and the Army Corps of Engineers prior to construction. • Restoration and Revegetation: All temporary impacts to water resources and upland areas should be restored to pre-project conditions. The SEIR should include a mitigation requiring a Restoration and Revegetation Plan with monitoring, a performance schedule, and adaptive management criteria. • Buffer Areas: Include in the SEIR a mitigation requiring buffer areas and exclusion fencing to protect surface waters outside the project areas, and prevent access by unauthorized vehicles/equipment. • Vegetation Clearing: should be kept to a minimum and vegetation mowing practiced where feasible to enhance post-construction reestablishment. • Spill Prevention and Response: Include a mitigation requiring preparation and implementation of a comprehensive Spill Prevention and Response Plan, with monitoring requirements and listing best management practices to prevent, contain and clean-up spills. <p>PERMITTING: A number of activities may require permits from LRWQCB or the State Board:</p> <ul style="list-style-type: none"> • §401 Water Quality Certification or Dredge and Fill Waste Discharge Requirements, required for excavation, discharge to or alteration of surface waters; • §402 Storm Water Permit, required for land disturbance of more than 1 acre; note that the permit includes a NPDES General Construction Storm Water Permit, and individual waste discharge requirements may be established. BMPs should be provided in the EIR with information as outlined in the LRWQCB letter. • NPDES General Industrial Storm Water Permit, required for new industrial operations. • Waste Discharge Requirements, required for disposal from wastewater treatment facilities. • NPDES General Permit-Limited Threat Discharges or General Waste Discharge Requirements for discharges to land with a low threat to water quality, for water diversion & dewatering activities. • Identify the activities that may trigger these permit requirements in the SEIR sections as appropriate.
Rebecca Watkins	<p>GENERAL: The project has potential to impact Lee Vining in many ways: traffic (including the need for safer crosswalks with blinking lights for pedestrians), public schools and student enrollment, parking in Lee Vining, and water supply (the town system needs work; verify that the project will not draw from the town supply).</p> <p>CONSERVATION: Green features should be incorporated wherever possible.</p> <p>TRAIL LINKAGE: A bike path connecting the project to Lee Vining would be appreciated.</p>
Wilma & Bryce Wheeler	<p>LOCATION: The project is in an especially sensitive Yosemite gateway location and must be developed in an environmentally sensitive way that is worthy of the location. Wise and thoughtful planning are required, along with use of the latest solar heating and lighting products.</p> <p>WATER: In light of sustained drought, economical water use is essential. Consider water recycling and gray water landscaping to minimize impact to Mono Lake and other critical habitat.</p> <p>COMMUNITY: Please consult with and listen to environmental groups and citizens to ensure a project that works well for the community and its residents as well as visitors.</p>
Susan DesBaillets	<p>AESTHETICS: The view when descending SR 120 is a largely undisturbed panorama of Mono Lake and the surrounding Scenic Area. The 3-story hotel would increase the vertical profile interfering with that view, as would the 200-seat restaurant on the highest point.</p> <p>WORKFORCE HOUSING: Workforce housing is needed, but perhaps not 80 bedrooms. Indicate whether single units or apartment-style housing is proposed, and consider community needs.</p> <p>WATER: Analyze how project demands will impact the groundwater aquifer. Consider replacing some lawn area with native plants, and irrigating with gray water.</p> <p>TRAIL LINKAGE: Given increased foot traffic, provision for a safe pedestrian corridor between the site and Lee Vining is encouraged, with crosswalks and/or a structure to cross Tioga Pass.</p> <p>INFRASTRUCTURE: Project infrastructure requirements have potential to severely impact Lee Vining and the local economy. The LVFPD may require new equipment, and the volunteer LVFPD staff may be inadequate to respond to the added demand.</p> <p>ALTERNATIVES: Consider a scaled-down design alternative, and allow ample time for community input.</p>
Bartshe Miller	<p>AESTHETICS: The scale of the project has potential for significant new scenic impacts on the iconic Tioga Crest and Mono Lake. A full analysis must include assessment of lighting, building colors, possible solar panel placement and other structures, from multiple vantage points along SR 120, US 395, Panum Crater, South Tufa, Navy Beach and other frequently visited sites. South Tufa is particularly important due to the absence of human intrusion, its high</p>

	<p>scenic integrity and high value for existing (estimated at 300,000 visitors a year) and future tourism, and the fact that it is a treasured resource. The site could be impacted by spill-over lighting, structures and general changed appearance associated with the project.</p> <p>WORKFORCE HOUSING: The proposed 80 new beds represent a significant increase in residential development. If rented at market rate as the applicant stated, they may not conform to the definition of 'workforce housing.' The overall size and number of units have potential to cause considerable economic, social and environmental impacts including a doubling of Lee Vining population. Long-term housing implications and impacts may extend over most Mono County communities by skewing market rentals, housing prices, commuter traffic and habits. If it draws from outside the area, it will not mitigate the existing shortage of local housing and may exacerbate the problem of seasonal squatters on public lands. A population doubling would place significant demands on LVFD, EMS services, the county Sheriff's Department, solid waste disposal, local schools, social services, traffic, parking, and pedestrian movement. Even with added funding, it may not be practical to meet the added demands; all require analysis.</p> <p>ALTERNATIVE: Consider addressing the 80-bed workforce housing proposal as a separate project.</p>
Claire Skinner	<p>STANDARDS: Project approval should be contingent on use of the highest standards for green building, low visual impacts and responsiveness to community needs.</p> <p>WORKFORCE HOUSING: Affordable housing is needed, but the proposed 80 beds could increase Lee Vining population by 54% with a major impact on schools, community services, town businesses, traffic and overall quality of life in Lee Vining. Consider capping the residences at 40 or, at a minimum, provide an analysis of how many units are needed.</p> <p>CONSERVATION: An effort is underway to designate Mono Basin as a 'climate-friendly community.' This would entail use of the highest sustainability standards including: (1) net zero energy use with LEED platinum certification and standards above requirements of Title 24; (2) cutting-edge graywater recycling and blackwater dispersal; (3) native drought-tolerant landscaping; (4) muted, downward-pointing outside lighting to preserve dark skies; (5) 2-3 apartment-style, energy efficient buildings for staff housing with good southern sun exposure, and water efficient graywater/blackwater systems.</p>
Mono Lake Committee	<p>WATER: The SEIR must analyze, for all seasons and anticipating continued drought, water supply sources and impacts to Lee Vining Creek and downgradient spring/aquifer recharge. New pump tests, supplemented with a geologic analysis, are now needed (ideally undertaken together, to understand complex area geology and validate pump test assumptions). Specific quantity details (with monthly maximum, minimum and average amounts) are needed for water pumping, graywater disposal, and septic disposal. Water quality testing is needed in conjunction with the water supply studies (note that Lee Vining is now seeking a second water supply source).</p> <p>GRAYWATER SYSTEM: Actual water needs and landscape requirements must be quantified and compared with anticipated graywater volumes. Discuss the disposition of any excess graywater, and indicate whether a septic tank will be needed. Excess graywater should not be directed to vegetation on adjoining areas. Discuss required graywater system components and how they would be implemented. A detailed landscaping plan should also be included, and LRWQCB contacted to ensure that agency requirements are identified and analyzed. Include discussion of runoff from paved areas, with mitigation measures as needed.</p> <p>AESTHETICS: Mono Basin has many valued scenic qualities and many protections in place, including the Mono Basin National Forest Scenic Area Management Plan. Though the site is adjacent to but not in the Scenic Area, the Management Plan guidelines should be used where possible. Vistas from several key Scenic Area lands may be impacted by the project, and require study in the SEIR including the Visitor Center, the Old Marina, South Tufa, and the Tufa State Natural Reserve boardwalk at Mono Lake County Park. Visual impacts from Lee Vining Canyon, Lee Vining and Mono City should also be analyzed, with visual simulations to depict the appearance of proposed uses. The simulations should include night-time photos to capture lighting impacts and ensure conformance to Night Sky ordinance requirements. The simulations should focus on the proposed change from a 2-story to a 3-story hotel, and the workforce housing complex, which is in a potentially highly visible site. The analysis should identify elements (colors, roofing materials, reflective surfaces, lighting, etc.) that may not be known until a hotel developer is selected; stringent Design Review is needed to ensure compatibility, with a public comment period and approval by the Commission and Board.</p> <p>SCENIC BYWAY: SR 120 and US 395 are both under consideration as scenic byways, which would place the project site in a scenic byway corridor. Steps are needed to protect this potential designation.</p> <p>WILDLIFE: The site is at the lower end of Lee Vining Canyon and within 750' of Lee Vining Creek – areas rich in wildlife. Impacts of the increased population at Tioga Inn on resident and migratory wildlife require updated analysis including study during winter if the hotel may operate year-round. It appears that the project may eliminate the</p>

	<p>open space deer migration route established in the 1993 EIR. New mitigations will be required, developed in coordination with CDFW. Consider reducing the current footprint. Also, consider impacts to the visitor experience of solitude in this canyon. Coordinate with Yosemite and INF in the assessment.</p> <p>LANDSCAPING: Analyze and compare various landscaping options for their effect on the project including an option with exclusively native plants and another with non-native species to shield structures.</p> <p>GROWTH: The project could more than double the population of Lee Vining and the SEIR must study the effects on businesses and economic stability. Use of market rate rental pricing may encourage non-resident renters seeking a second home, or vacation rental programs, placing employees at a disadvantage when seeking housing. The increased population will strain many Lee Vining resources (LVFD, EMS, Sheriff's Dept., schools, traffic, and pedestrian movements). The volunteer LVFD would not be able to respond under existing conditions, and would require new training, staffing, equipment and equipment storage.</p> <p>TRAIL LINKAGE: Connectivity from the site to Lee Vining must be addressed in terms of infrastructure, safety and economics. Pedestrian and bike linkage could reduce parking and traffic, and enhance pedestrian mobility; all require assessment in the SEIR.</p> <p>CLIMATE CHANGE: Update the Specific Plan discussion of federal, state, and local climate change requirements including measures for water conservation and GHG. Use of wood-burning fireplaces as a primary heating source could have a significant adverse impact on air quality.</p> <p>DESIGN: The Design Review should be a public process, occurring before final approval. Consider strong conservation measures including solar panels, orientation for passive solar, low-flow toilets and showerheads, detailing swimming pool water and water discharge requirements. Encourage the proponent to seek a hotel developer that would build a LEED Certified project.</p> <p>MONO BASIN COMMUNITY PLAN: Many points in this plan are directly relevant to the project, as detailed in the Mono Lake Committee letter and briefly noted herein: (a) ambivalence about growth, (b) need for workforce housing, (c) challenges posed by the Lee Vining Main Street area layout, (d) the goal to maintain natural values and rural small town character, and objectives to (a) provide for orderly growth, encourage development that is compatible with scenic attributes, maintain and protect natural, historical and recreational attributes, and promote well-planned and functional community uses (all with supporting policies and actions). These and other goals and policies require analysis in the SEIR, possibly with a table to show changes.</p>
Elin Ljung	<p>STANDARDS: Project approval should be contingent on use of the highest standards for green building, low visual impacts and responsiveness to community needs.</p> <p>WATER: The SEIR must analyze water supply sources and impacts to Lee Vining Creek and downgradient spring/aquifer recharge in all seasons. Future demand projections should consider the possibility of continued and possibly more severe drought, as well as water supply concerns already identified in Lee Vining.</p> <p>AESTHETICS: Analyze day- and nighttime visual impacts, using simulations and focusing on the change from a 2- to 3-story hotel and housing complex. Require a stringent Design Review Process, with opportunities for public comment.</p> <p>WORKFORCE HOUSING: The proposed change from 10 to 80 workforce beds is significant; with market rental rates, it would exacerbate the regional lack of affordable housing; this merits analysis in the SEIR. The increase would also put a strain on Mono County and public services (fire, EMS, sheriff and schools), add to local parking and traffic problems, and increase risks to pedestrians; these issues must be analyzed. The newly adopted Mono Basin Community Plan should guide all aspects of the SEIR process.</p>
Anonymous Letter	<p>AESTHETICS: A key viewshed for protection is the view coming down Tioga Pass with Mono Lake in the background.</p> <p>WORKFORCE HOUSING: The workforce housing component must include permanent deed restrictions to prevent their use for transient rentals.</p> <p>DESIGN: No variance should be granted to allow heights above existing standards and codes.</p>
Anonymous Call	<p>SITE VISIT: Requests that the Planning Commission & Board of Supervisors conduct a site visit during project review.</p> <p>DENSITY: Expresses concern that the number of housing units may impact traffic and deer use patterns.</p>
Bill Jansen	<p>COMMUNITY INPUT: Please involve and consider community input in this project review to ensure adequate mitigation of project impacts.</p> <p>FACILITIES: Onsite facilities (including the pool, restaurant and meeting spaces) should be available to the community as is now the case for Double Eagle in June Lake and other developments.</p>

TIOGA WORKFORCE HOUSING DRAFT SUBSEQUENT EIR



SECTION 2.0

EXECUTIVE SUMMARY

2.1 PURPOSES OF THIS DRAFT SUBSEQUENT EIR

As described in the Introduction (SEIR §1.0), Mono County has determined that the proposed third amendment to the 1993 Tioga Inn Specific Plan will require preparation of a Subsequent EIR to analyze potentially significant effects that were not considered in the certified Final EIR. Consistent with the requirements of CEQA §15162, this Draft Subsequent EIR focuses on (1) substantial changes in the proposed project that may involve new significant effects or substantially more severe environmental effects than were previously analyzed, (2) changes in the project circumstances that may involve new significant effects or substantially more severe environmental effects than were previously analyzed, (3) new information that was not and could not have been known in 1993 that shows one or more new significant environmental effects, or effects that are substantially more severe, or feasible alternatives and mitigations that were previously judged infeasible, or feasible alternatives and mitigations that would substantially reduce one or more significant effects. This Subsequent EIR does not consider or analyze previously approved project elements (including the 120-room hotel and the full-service promontory restaurant) that are not now proposed for modifications. EIR §3.0 (Project Description) offers a detailed description of the scope of the current Subsequent EIR.

2.2 ALTERNATIVES TO THE PROPOSED PROJECT

The CEQA Guidelines require that an EIR describe a reasonable range of alternatives to the project or to the location of the project that would reduce or avoid significant impacts, and that could feasibly accomplish the basic objectives of the proposed project. Five alternatives are considered in Section 6.0 of this EIR. The alternatives were selected with the intent to respond to NOP requests, and to reduce significant project impacts while accomplishing project objectives. The five alternatives are identified below and briefly defined in the paragraphs that follow:

- No Project Alternative
- Alternatives Considered in 1993
- Reduced Development Alternative
- Modified Cluster Design Alternative
- Modified Apartment Design Alternative

Alternative 1: No Project Alternative. Under Alternative 1, the County would not approve the proposed Tioga Inn Specific Plan amendment #3. The No Project Alternative would preclude (a) construction of up to 150 workforce housing bedrooms, (b) a third gas pump island, (c) a new 30,000-gallon propane tank, (d) a replacement water storage tank, (e) construction of a new wastewater treatment system with subsurface irrigation using treated effluent, and an expanded septic system, and (f) modifications to several parcels and open space areas. All existing entitlements would remain in place.

Alternative 2: Alternatives Considered in the 1993 EIR: The 1993 EIR considered 4 alternatives including the No Project Alternative, a residential use alternative, an optional siting alternative, and an alternative with a different mix of uses. In response to an NOP comment letter, the 1993 alternatives are reconsidered in Alternative 2.

Alternative 3: Reduced Development Alternative: This alternative would reduce the number of workforce housing bedrooms by half, resulting in a proposal for up to 75 workforce housing bedrooms. Based on factors set forth in EIR §5.6 (Population and Housing) and EIR §5.8 (Public Services), this would result in about 50 workforce housing units, with a resident population of approximately 150 and a K-12 student population of about 31.

Alternative 4: Modified Cluster Design Alternative: This alternative would configure the workforce housing units in a tighter cluster with additional setback from the promontory restaurant. This layout would reduce the overall footprint, and provide additional separation between the residences and public uses.

Alternative 5: Modified Apartment Design Alternative: This alternative would modify the design layout of the proposed workforce housing units. Rather than the layout as now proposed (which includes a mix of individual structures housing studio, 1-bedroom, 2-bedroom and 3-bedroom units), this alternative would envision one or two apartment-style structures to house all units.

Environmentally Superior Alternative: The 'No Project Alternative' is identified as the environmentally superior alternative. The No Project Alternative has not been proposed for selection because it would not fulfill the main project objective to provide affordable housing for project employees.

The 'Cluster Design Alternative' would also be more effective than the proposed project in terms of achieving overall impact reduction, fulfillment of project objectives, and minimizing significant unavoidable impacts. The Cluster Alternative was not proposed for selection because it would require significantly more grading and preclude the goal to balance cut and fill onsite, without significantly reducing visual effects.

EIR §6.0 provides, in Table 6-3, a comparative analysis of the proposed project and each of the three analyzed project alternatives. The comparison uses a numerical scoring system to assess how each alternative compares to the proposed project in terms of meeting project objectives and avoiding or minimizing potentially significant impacts.

2.3 AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

Several concerns have been raised regarding the safety of area of motorists, cyclists and pedestrians in the vicinity of the US 395/SR 120 intersection. The concerns pertain to the lack of safe passage crossing this intersection as well as the lack of a dedicated easement for non-motor transit between the project site and downtown Lee Vining. Additionally, the US 395/SR 120 intersection has been identified as having an unacceptable Level of Service "F" for motorists traveling east-bound on SR 120 as they approach the US 395 intersection, and the reported 60 collisions at the US 395/SR 120 intersection since 2010 are attributed to high travel speeds on US 395 near the Tioga Road intersection as well as limited visibility and sign distance for vehicles approaching the intersection. All of these concerns fall under the jurisdiction of Caltrans, which has recently initiated a study of 'Traffic Calming' improvements on US 395 through Lee Vining, enhanced safety upgrades at US 395/SR 120, and along the Caltrans apron that surrounds the Vista Point Drive project entry. These plans have potential to alleviate existing safety concerns, but Caltrans' study is in the early phases and the outcome of recommended improvements will not be known during the time of the current Workforce Housing Project Review.

A second area of concern pertains to the scope of proposed project elements. As discussed in §1.9 (Notice of EIR Preparation, see Appendix A1), the project proposal described in the October 2016 NOP included up to 80 new workforce housing units, an additional 100 seats in the full-service restaurant, addition of a third story to the hotel, addition of a third gas pump island, replacement of the water storage tank with a new tank of the same size, an expanded septic system, and a new larger propane tank. In response to comments on the NOP (all of which are provided in Appendix A2 and summarized in Table 1-2), several of the proposed elements were eliminated, and several other elements were revised. Please see additional discussion provided below in §1.8 (Notice of EIR Preparation)

2.4 SUMMARY OF IMPACTS AND MITIGATION MEASURES

This EIR focuses on the significant environmental effects of the proposed Tioga Workforce Housing Project, in accordance with CEQA Guidelines. The CEQA Guidelines defines a significant effect as a substantial adverse change in the physical conditions which exist in the area affected by the proposed project. A less than significant effect is one in which there is no long or short-term significant adverse change in environmental conditions. Table 2-1 summarizes the environmental impacts of the proposed project, the impact level of significance prior to mitigation, mitigation measures proposed to mitigate potential impacts and the impact level of significance after mitigation.

TABLE 2-1: Summary of Tioga Workforce Housing Project Impacts and Mitigation Measures		
ENVIRONMENTAL IMPACT	MITIGATION MEASURES	RESULTING LEVEL OF SIGNIFICANCE
§5.1 GEOLOGY AND SOILS		
5.1(a) Risk of Strong Ground Shaking, Ground Failure or Landslides?	Mitigation GEO 5.1(a-1): Site Specific Soils Report during Structural Design	Less than Significant with Mitigation
	Mitigation GEO 5.1 (a-2): Debris flow mitigation, further study if grading exposes fault traces	Less than Significant with Mitigation
5.1(b) Risk of Soil Erosion or Loss of Topsoil?	Mitigation GEO 5.1(b): Use of Low Impact Development Best Management Practices	Less than Significant with Mitigation
5.1(c) Risk of Liquefaction, Collapse, Landslide, Expansion due to Unstable Soils	Mitigation GEO 5.1(c): Supplemental Geotechnical Studies prior to Grading Permit	Less than Significant with Mitigation
5.1(d) Soils Unable to Support Septic Tanks	No mitigation required	Less than Significant
5.1(e) loss of Mineral Resources	No mitigation required	Less than Significant
5.1(f) Destroy a unique Paleontological Feature?	See discussion in EIR §5.4(a)	Less than Significant
§5.1 HYDROLOGY AND WATER QUALITY		
5.2(a) Violate Water Quality Objectives	Mitigation HYDRO 5.2(a-1): Slope Restoration and Monitoring	Less than Significant with Mitigation
	Mitigation HYDRO 5.2(a-2): Construction Buffer Zone and Exclusion Fencing to protect surface waters	Less than Significant with Mitigation
	Mitigation HYDRO 5.2(a-3): Minimal Vegetation Clearing	Less than Significant with Mitigation
	Mitigation HYDRO 5.2(a-4): Spill Prevention & Response	Less than Significant with Mitigation
	Mitigation HYDRO 5.2(a-5): Onsite Storm Flow Retention	Less than Significant with Mitigation
5.2(b) Violate Waste Treatment or Discharge Requirements	Mitigation HYDRO 5.2(b-1): Proper decommissioning of septic tank and appropriate sizing of new leachfield.	Less than Significant with Mitigation
	Mitigation HYDRO 5.2(b-2): Minimum 40' separation distance between leachfield and underlying groundwater where perc rates exceed 5 MPI.	Less than Significant with Mitigation
	Mitigation HYDRO 5.2(b-3): Package plant treated effluent not to exceed 10 mg/l total nitrogen; all effluent to meet USEPA secondary treatment standards.	Less than Significant with Mitigation
	Mitigation HYDRO 5.2(b-4): Irrigation system operation per DDW-approved Title 22 engineering report, or DDW letter stating project needn't satisfy Title 22.	Less than Significant with Mitigation

5.2(c) Impact Water Supply Availability	Mitigation HYDRO 5.2(c-1): Groundwater Level Monitoring	Less than Significant with Mitigation
	Recommendation HYDRO 5.2(c-2): Monitor Well for Sand Content	Less than Significant with Mitigation
	Recommendation HYDRO 5.2(c-3): Well Pump Video Survey	Less than Significant
5.2(d) Increased Risk of Erosion or Siltation	No mitigation required	Less than Significant
5.2(e) Place Structures in a 100-Year Flood Hazard Zone	No mitigation required	Less than Significant
5.2(f) Expose People or Structures to Dam Failure, Flooding	No mitigation required	Less than Significant
5.2(g) Exposure of people or structures to Seiche, Tsunami or Mudflow	No feasible mitigation available	SIGNIFICANT UNAVOIDABLE DIRECT & CUMULATIVE IMPACT
§5.3 BIOLOGICAL RESOURCES		
5.3(a) Impact Candidate, Sensitive or Special Status Species	Mitigation BIO 5.3(a-1): Shrubland revegetation	Less than Significant with Mitigation
	Mitigation BIO 5.3(a-2): Fencing for rockcress protection	Less than Significant with Mitigation
	Mitigation BIO 5.3(a-3): Pre-disturbance bird survey	Less than Significant with Mitigation
	Mitigation BIO 5.3(a-4): Pre-disturbance badger survey	Less than Significant with Mitigation
	Mitigation BIO 5.3(a-5): Pet fencing, leashing, eviction	Less than Significant with Mitigation
5.3(b) Impacts on Riparian, Sensitive Natural Communities	No mitigation required	Less than Significant
5.3(c) Impacts on Wetland Resources	No mitigation required	Less than Significant
5.3(d) Impacts on Wildlife Movement or Nursery Sites	Mitigation BIO 5.3(d-1): Shielding of night-lighting	Less than Significant with Mitigation
	Mitigation BIO 5.3(d-2): Burn area restoration	Less than Significant with Mitigation
	Mitigation BIO 5.3(d-3): Protected Corridor along US 395, free of barriers, bright signs, most new structures.	Less than Significant with Mitigation
	Mitigation BIO 5.3(d-4): Design of Waste Receptacles to prevent Access by Bears and Ravens	Less than Significant with Mitigation
	Mitigation BIO 5.3(d-5): Grant application for deer passageway	SIGNIFICANT POTENTIALLY UNAVOIDABLE CUMULATIVE IMPACT
5.3(e) Impacts on Local Policies or Ordinances	No mitigation required	Less than Significant
5.3(f) Impacts on Habitat Conservation Plans	No mitigation required	Less than Significant
§5.4 CULTURAL & TRIBAL CULTURAL RESOURCES		
5.4(a) Impacts to Prehistoric or Historic Resources	Mitigation CUL 5.4(a): Construction Plan Statement, Process if Historic Resources are found during Earthwork	Less than Significant with Mitigation
5.4(b) Impacts to Paleontological Resources	Mitigation CUL 5.4(b): Construction Plan Statement, Process if Paleontological Resources found during Earthwork	Less than Significant with Mitigation
5.4(c) Impacts to Human Remains, Sacred Lands, Tribal Cultural Resources	Mitigation CUL 5.4(c): Interested Tribes to be notified prior to earthwork and invited to observe without compensation; work to stop if resources are unearthed, with paid monitoring thereafter; construction plans to	Less than Significant with Mitigation

	contain advisory statement; NAHC protocols to be followed if human remains are found.	
§5.5 LAND USE AND PLANNING		
5.5(a) Physically divide an established community	No mitigation required	Less than Significant
5.5(b) Conflict with a land use plan, policy or regulation	No mitigation required	Less than Significant
5.5(c) Impact recreational facilities or open space	No mitigation required	Less than Significant
5.5(d) Impact open space acreage or function	No mitigation required	Less than Significant
§5.6 POPULATION, HOUSING, EMPLOYMENT		
5.6(a) Induce substantial population growth	No mitigation required	Less than Significant
5.6(b) Displace people or housing	No mitigation required	Less than Significant
§5.7 PUBLIC HEALTH AND SAFETY		
5.7(c) Contribute to a Hazardous Materials Release	No mitigation required	Less than Significant
5.7(b) Be located on a Hazardous Materials Site	No mitigation required	Less than Significant
5.7(c) Expose People to Airport Hazards	Mitigation SFTY 5.7(c): Compliance with FAA and California Dept. of Aeronautics regulations.	Less than Significant
5.7(d) Interfere with Emergency Response	Mitigation SFTY 5.6(d): Public safety site evacuation plan for use in natural disasters.	Less than Significant
5.7(e) Contribute to Wildland Fire Risk	Mitigation SFTY 5.7(e-1): Implementation of Wildland Fire Protection Measures	Less than Significant with Mitigation
	Mitigation SFTY 5.7(e-2): Multiple hydrants to reach all site areas, with breakaway design	Less than Significant with Mitigation
5.7(f) Exposure to Avalanche, Landslide, Vulcanism, Rockfall	No mitigation required	Less than Significant
§5.7 PUBLIC SERVICES, ENERGY AND UTILITIES		
5.8(a) Require New Police, School or Other Services	Mitigation SVCS 5.8(a-1): Grant application for safe pedestrian/cycling access from site to Lee Vining	SIGNIFICANT POTENTIALLY UNAVOIDABLE DIRECT & CUMULATIVE IMPACT
5.8(b) Result in Wasteful, Inefficient Energy Consumption	No mitigation required	Less than Significant
5.8(c) Be served by a Landfill with Insufficient Capacity	No mitigation required	Less than Significant
§5.9 TRAFFIC AND CIRCULATION		
5.9(a) Regulatory Compliance	Recommendation TFFC 5.9(a-1): Free shuttle passes for guests and residents	Less than Significant
	Recommendation TFFC 5.9(a-2): Caltrans consideration of designated Vista Point entry/egress	Less than Significant
	Recommendation TFFC 5.9 (a-3): Caltrans modifications to apron parking	Less than Significant

	Recommendation TFFC 5.9(a-4): Caltrans relocation of YARTS bus stop	Less than Significant
5.9(b) Vehicle Miles Travelled	No mitigation required	Less than Significant
5.9(c) Air Traffic Safety	See discussion in EIR §5.7(c)	Less than Significant
5.9(d) Design Hazards	Mitigation TFFC 5.9(c-1): Caltrans Signalization of the US 395/SR 120 Intersection, OR: Mitigation TFFC 5.9(c-2): Caltrans construction of a Roundabout at the US 395/SR 120 Intersection	SIGNIFICANT POTENTIALLY UNAVOIDABLE DIRECT & CUMULATIVE IMPACT
5.9(e) Emergency Access	See discussion in EIR §5.7(d)	Less than Significant
§5.10 AIR QUALITY AND GREENHOUSE GASES		
5.10 (a-c) Criteria Pollutants, Air Quality Standards, Sensitive Receptors	Recommendation AQ 5.10(a): Additional Emission Control Measures Recommended	Less than Significant
5.10(d) Objectionable Odors	No mitigation required	Less than Significant
5.10 (e,f) Generate GHG Emissions, Violate GHG Standards	No mitigation required	Less than Significant
§5.11 NOISE		
5.11 (a) Expose People to Excessive Noise Levels	No mitigation required	Less than Significant
5.11(b) Expose People to Excessive Airport Noise	No mitigation required	Less than Significant
5.11(c) Expose People to Groundborne Vibration	No mitigation required	Less than Significant
§5.12 AESTHETICS		
5.12(a,b) Impacts to Scenic Resources and Visual Character	Mitigation AES 5.12(a,b): Use of design, landscaping, and materials to screen or minimize offsite views of project.	SIGNIFICANT AND UNAVOIDABLE DIRECT AND CUMULATIVE IMPACT
5.12(c) Light and Glare Impacts	Mitigation AES 5.12(c): Mandatory compliance with Dark Sky Regulations	SIGNIFICANT AND UNAVOIDABLE DIRECT AND CUMULATIVE IMPACT

TIOGA WORKFORCE HOUSING DRAFT SUBSEQUENT EIR



SECTION 3.0 PROJECT DESCRIPTION

3.1 PROJECT LOCATION AND SURROUNDING LAND USES

The proposed Tioga Workforce Housing project is located at 22 Vista Point Road, close to the intersection of SR 120 and US 395 and about ½ mile south of Lee Vining. The project is located in the roughly the geographic center of Mono County, which covers an area of 3,132 square miles on the eastern slopes of the Sierra Nevada mountain range in east central California. Mono County is relatively long (108 miles at the longest point) and narrow (with an average width of only 38 miles). The County seat is located in Bridgeport, and the only incorporated town in Mono County is Mammoth Lakes, home to 57% of the county population. The site is located in the southeast quarter of the northwest quarter, and the southwest quarter of the northeast quarter of Section 14, Township 1 North, Range 26 East (MDBM). Figure 3-1 depicts the regional layout of Mono County.



As a whole, Mono County is dominated by lands owned by the public and managed by various federal, state and local entities. The *General Plan* estimates that 94% of the county land area is publicly owned, 88% of which is managed by federal agencies. The Tioga Workforce Housing project is located about 10 miles west of Yosemite National Park, 25 miles north of Mammoth and 1 mile east of the Mono Lake Tufa State National Reserve and Scenic National Forest (Figure 3-2).

Figures 3-1 (Regional Location, above) and 3-2 (Mono Lake public lands, right)



3.2. PROJECT HISTORY AND PURPOSE

The Tioga Workforce Housing project proposal encompasses multiple elements, many of which were analyzed in a Final EIR and Specific Plan that was certified by the Mono County Board of Supervisors in 1993. The original concept, as reflected in the 1993 documents, was to provide a full range of services and facilities for tourists (visiting Yosemite National Park, the Mono National Scenic Recreation Area, the Lee Vining Chautauqua and the eastern Sierra Nevada generally), as well as meeting facilities, jobs and employee housing opportunities for area residents.

The current proposal retains the goals and concepts developed in 1993, with several newly added elements. Most significantly, the current proposal would provide up to 150 new workforce housing bedrooms in up to 100 new units. The current proposal also provides for a third gas pump island and overhead canopy, adds additional parking (to accommodate onsite guest vehicles as well as a general-use park-and-ride facility and bus parking for Yosemite transit vehicles), incorporates a new package wastewater treatment system (to replace the existing septic system) tied to a new subsurface drip irrigation system, replaces an existing water storage tank with a new tank of the same size in the same area, adds a new 30,000-gallon onsite propane tank (the new tank would eventually replace the existing 5 onsite tanks with a combined 2,500-gallon capacity), modifies the boundaries and acreage of designated open space, and modifies parcel boundaries.

Several of the uses approved in 1993 were constructed and placed into operation during the late 1990s. Construction of the hotel and restaurant elements was postponed due to a general economic downturn and other factors. The purpose of the current project proposal is to support the earlier approved components with modifications and new elements that respond to current conditions in housing, tourism, and employment.

3.3 PROJECT ELEMENTS AND SCOPE

The current proposal embodies concepts developed in 1993 with added elements, goals and refinements. A key task of the current Draft EIR and Specific Plan is to delineate between project elements that are, and those that are not, subject to discretionary action with the current project, as shown in Table 3-1:

TABLE 3-1. Discretionary Status of Project Elements	
CATEGORY	STATUS
Actions approved in 1993 and subsequently constructed	No discretionary actions or approvals required
Actions approved in 1993, never constructed, and now scheduled for implementation consistent with 1993 approvals.	No discretionary actions or approvals required
Actions approved in 1993 for which changes are now proposed	Subject to Discretionary Approval with Current Project Proposal
Newly proposed project elements (never before considered) and proposed modifications to existing project elements	Subject to Discretionary Approval with Current Project Proposal

The project encompasses 4 parcels, all of which are listed in Table 3-2 along with existing and proposed uses. Exhibit 3-3 shows the proposed project layout and parcel boundaries. Table 3-2 outlines approved elements and project elements now subject to discretionary approval. Only the newly proposed elements (shown in the right-most column) are subject to discretionary action as part of the current project.

Table 3-2. TIOGA SPECIFIC PLAN EXISTING, APPROVED & PROPOSED LAND USES AND ACREAGES					
PARCEL	ACRES APPROVED IN 1993	CURRENT PROPOSED ACREAGE	EXISTING LAND USES	LAND USES APPROVED IN 1993	USES NOW PROPOSED & SUBJECT TO DISCRETIONARY ACTION
1	30.3	26.5	<ul style="list-style-type: none"> Open Space Monument Signs (2) 	<ul style="list-style-type: none"> 120-room 2-story hotel with coffee shop, swimming pool, banquet room and gift shop; Parking for onsite uses <ul style="list-style-type: none"> Signage Plan Septic System 	<ul style="list-style-type: none"> Changed parcel boundary & acreage Lane modifications to improve vehicle movement by gas pumps Realignment of road serving the 8 existing hilltop housing units New Package Wastewater Treatment System
2	36.0	32.1	<ul style="list-style-type: none"> Overflow parking Historical Marker 6 cabin units (no formal approvals) Electric supply shed Two Water Wells SCE powerlines Buried Utility Xing septic /leach field 5 propane tanks with a combined capacity of 2,500 gallons 	<ul style="list-style-type: none"> Overflow/oversize vehicle parking <ul style="list-style-type: none"> Full-service Promontory restaurant Restaurant parking Maintenance Building ropane Tanks 	<ul style="list-style-type: none"> Changed parcel boundary & acreage New workforce rental housing with up to 100 units & up to 150 bedrooms Day care facilities for residents' use <ul style="list-style-type: none"> Net 0.7-acre gain in Open Space including 13.0-acre increase in Open Space-Preserve acreage, 0.9-acre decrease in Open Space-Facilities, and 11.4-acre decrease in Open Space-Support 30,000-gallon propane tank Elimination of septic tank; retention of septic leach field Subsurface Irrigation System using

					flows from Package Treatment Plant ▪ Maintenance/residents' storage building
3	2.4	2.4	<ul style="list-style-type: none"> ▪ 2 Gas Islands (8 fuel pumps, canopies, lighting, 2 under-ground storage tanks). ▪ Tioga Gas Mart ▪ Whoa Nellie Deli 	<ul style="list-style-type: none"> ▪ 2 gas islands with 8 fuel pumps & canopies, lighting, 2 underground storage tanks. ▪ Tioga Gas Mart ▪ Delicatessen 	<ul style="list-style-type: none"> ▪ 3rd Gas Pump island with 4 additional fuel pumps, 1 additional underground storage tank, and overhead canopies & lighting
4	5.0	6.8	<ul style="list-style-type: none"> ▪ 8 hilltop housing units ▪ 1 Water Tank ▪ 1 Cell Tower¹ 	<ul style="list-style-type: none"> ▪ 10 Hilltop Housing Units² ▪ 300,000-gallon water storage tank 	<ul style="list-style-type: none"> ▪ Changed parcel boundary & acreage ▪ Demolition of existing water tank, replacement with new tank.
SR 120 Easement	TBD	TBD	<ul style="list-style-type: none"> * 1-ingress & 2-egress lanes to SR-120 * Park & Ride Area' * Caltrans ROW acquisition area (adjacent to deli) 	<ul style="list-style-type: none"> * Access from SR-120 * Park & Ride Area 	<ul style="list-style-type: none"> ▪ One new traffic lane added adjacent to gas station to enhance interior circulation
TOTAL PROPOSED ACRES 67.83 (reduced from 73.7 acres in 1993)					

3.4 PROJECT OBJECTIVES

CEQA Guidelines §15124³ requires an EIR to identify the primary purpose and objectives of a project proposal. This requirement makes explicit the goals that underlie the proposed actions and approvals sought, and also sets the parameters for identifying feasible alternatives.⁴ As stated in the 1993 Final EIR, the project objective was to *"provide central Mono County with an inclusive resort facility that can draw upon north-south traffic traveling through Mono County as well as Yosemite-oriented visitor traffic traveling over Tioga Pass. The facility is to provide a complete range of services for the Mono Basin visitor including accommodations, meals, vehicle fuel, supplies, meeting/banquet rooms, and business center facilities. The resort hotel is designed to serve both the transient traveler and those whose destination includes the Mono Lake Basin or Yosemite National Park. The project is also intended to serve local residents with meeting facilities, a swimming pool that can be used by school swim teams and area swim clubs, and a full-service restaurant. Implementation of the Specific Plan is intended to add to the area's economy through increased employment opportunities, provision of additional needed motel rooms during peak months, and provision of additional rental housing. Visually, the objective of the project is to blend into the natural setting through careful structure siting, and architecture and landscaping complementing the environment."* Goals, policies and implementation programs in the approved 1993 Specific Plan also include the following objectives:

- Enhance visitor-oriented services in Lee Vining area by allowing flexibility for multiple uses on Specific Plan parcels;
- Ensure adequate facilities for the Specific Plan development (by obtaining all applicable permits, and ensuring adequate fire prevention management);
- Strive to reduce the project's visual intrusiveness in the area (by minimizing site disturbance, maximizing use of indigenous species, using introduced species that provide additional screening at maturity, ensuring that landscaping is properly maintained, providing landscaping for picnic and walking and relaxation areas, ensuring a visually attractive development, reducing reflective glare from the development);
- Conserve the potential for forage in the Plan area (by maintaining areas for deer feeding and gathering, retaining naturally vegetated areas, avoiding construction during peak migration, prohibiting unauthorized off-road activity, ensuring that pets do not roam freely);
- Maintain safe traffic by conforming to Caltrans access requirements and County circulation and fire safe requirements.

¹ The cell tower was approved by Mono County in 2007 under Permit # 07BLD-00079.

² Of the 10 hilltop units approved in the Specific Plan, only 8 units were constructed.

³ CEQA §15124 states: "A clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives [and aid]...decision makers in preparing findings or statement of overriding considerations, if necessary."

⁴ CEQA §15126.6(c) states: "The range of potential alternatives...shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects."

All of the 1993 objectives remain valid with the current project, joined by the additional objectives listed below:

- To provide sufficient workforce housing on the project site to accommodate a majority of employees of the hotel, the full-service restaurant and other onsite land uses;
- To incorporate water conservation and energy efficient features and design elements in order to manage costs and conserve resources;
- To ensure that infrastructure sizing is adequate to meet existing and future needs.
- To provide additional gasoline services consistent with demands.

3.5 DESCRIPTION OF PROJECT ELEMENTS

The discussion in this section provides details concerning all project elements. All of the project components will comply with applicable requirements of the Americans with Disabilities Act (ADA) including access to goods, services, facilities and programs, as set forth in the most current California Building Code.

3.5.1 Residential and Workforce Housing

The 1993 project included 5-acres on the northwestern-most parcel to be used for 10 residential rental units (5 duplexes housing ten single-story 2-bedroom units). Only 8 of the approved units were constructed. The units provide housing for Mobile Mart employees as well as Lee Vining residents. Six additional unpermitted workforce housing units were subsequently constructed (the 6 units are located about 200' due south of the promontory parking area).

Changes: The amended plan makes no changes to the original residential units, but eliminates the six newer units and incorporates a new Workforce Housing complex in the southcentral portion of the site (see Exhibit 3-3). The complex will provide up to 100 rental units (including a separate 4-bedroom manager's unit) with up to 150 total bedrooms for onsite and area employees and their dependents. The workforce housing will include a central common area with day care facilities and play area, and laundry facilities. The maintenance building will include a separate storage area for use by residents.

3.5.2 Gas Pump Island and Convenience Store

The 1993 project included 2 gas pump islands with 2 underground storage tanks plus overhead canopies and lighting, a 4,800 square foot convenience store, and an outdoor picnic area; all of these elements were constructed as proposed. The deli (located inside the convenience store) was not identified as a permitted use in the 1993 Specific Plan (nor was it addressed in the Specific Plan Amendments of 1995 and 1997) but was approved during 2012 through a Director Review process. The Director Review (provided in Appendix B) included a requirement that, *"No other commercial or retail space expansion will be permitted on the convenience storage gas station parcel without a revision to the Tioga Inn Specific Plan."*⁵

Changes: The amended plan adds a third gas pump island with overhead canopy and lighting (with modifications to ensure that the lighting here and elsewhere on the site conforms to the county's Dark Sky initiative), and provides Specific Plan standards to govern the delicatessen.

3.5.3 Parking

The 1993 project included minimum parking standards for the hotel, the minimart, the full service restaurant, and private parking for the residential area. Although the full service restaurant has not been constructed, a total of 52 parking spaces (including oversize parking for RVs) are located adjacent to the restaurant site; additional parking has been provided for transit (ESTA and YARTS) that was not discussed in the 1993 EIR.

Changes: Amendment #3 meets the minimum parking requirements in the approved Specific Plan for all onsite uses, and provides substantial additional parking for the workforce housing (a minimum of 200 spaces for up to 100 units). Parking requirements outlined in the 1993 Specific Plan are summarized in Table 3-3, along with parking provisions anticipated in the current project plan.

⁵ Mono County, Notice of Decision, *Director Review 12-007/Tioga Inn Kitchen Expansion*. 2012 (see Appendix B).

TABLE 3-3. MINIMUM PARKING STANDARDS

LAND USE CATEGORY	1993 SPECIFIC PLAN			PROPOSED AMENDMENT #3		
	AUTO PARKING	RV + TRAILER PARKING	OTHER PARKING	AUTO PARKING	RV + TRAILER PARKING	OTHER PARKING
Hotel	120+2	2	1 space per 2 employees	120+2	2	1 space per 2 employees
Full-Service Restaurant	50	2 (buses) 5 (trailers)	None	50	2 (buses) 5 (trailers)	None
Convenience Store/Fuel Sales	10	2 (buses) 2 (trailers)	None	10	2 (buses) 2 (trailers)	None
Hilltop Residential Units	Attached private garage or covered parking	None	None	Attached private garage or covered parking	None	None
Open Space	No parking required or proposed			No parking required or proposed		
Workforce Housing	NA	NA	NA	190	0	None

3.5.4 Sanitation and Reuse

The 1993 project included a standard septic tank and leach field system for land uses on the site; the leach field was designed with a 100% expansion field area for onsite facilities.

Changes: The amended plan incorporates a new package wastewater treatment plant. Effluent from the plant will be distributed to a subsurface drip irrigation system during the late spring, summer and fall months (about 8 months of the year). The existing septic tank will be abandoned and disabled per Health Department regulations, and the existing leach field will be used for disposal of treated effluent during the low-flow winter months. Peak summer flows are projected to be 40,800 gallons per day (gpd), dropping to 22,000 gpd during the winter months. A detailed discussion of the proposed sanitation system and facilities is provided in EIR §5.2, Hydrology.

3.5.5 Energy and Communication

Project energy needs are currently met with propane and electrical service. Propane is provided through five existing tanks (with a combined 2,500-gallon capacity) that are owned by the project owner/applicant and situated in various locations around the property. Electric service is provided by SCE; overhead SCE power lines cross the site on the portion of Parcel 2 that is located east of US 395. Propane and electricity will continue to be used on site.

Changes: The proposal includes a new commercial 30,000-gallon propane tank that will be sufficient to serve all onsite uses as well as demands in the surrounding areas if there is a market demand. The five existing tanks will be removed. The applicant plans to install solar panels on most project structures (existing and proposed) as a primary source of project-wide renewable energy. Solar energy was not a part of the 1993 Specific Plan. Under the current California Government Code (Title 7, Division 1, Chapter 4, Article 2, §65850.5),⁶ the use of solar energy is not a discretionary action. Following a satisfactory compliance review, the solar energy application will be approved ministerially.

Wood-burning appliances (fireplaces, wood stoves, etc.) will comply with current requirements and standards of the County for new construction. Cable, telephone and internet services will be wireless (cell phone service in this area is provided by Verizon). The project will use energy efficient appliances and practices as rated by Energy Star, a joint program of USEPA and the U.S. Dept. of Energy.⁷ Proposed energy conservation features are discussed more fully in the Specific Plan (EIR §4) and in EIR §5.8 (Public Services and Utilities).

⁶ Calif. Legislative Info: http://leginfo.ca.gov/faces/codes_displaySection.xhtml?sectionNum=65850.5&lawCode=GOV.

⁷ Source: USEPA and Dept. of Energy website: www.energystar.gov/.

3.5.6 Water Supply Facilities

Until 2017, the Mobil Mart development was served by a single onsite water supply well located on the portion of Parcel 2 that is east of US 395. In 2017, a second water supply well was installed in the same location. Both wells are currently classified by Mono County as Transient Non-Community water system permits.⁸ Water from both wells is piped under US 395 and into the existing water storage tank located on Parcel 4 adjacent to the existing workforce housing area.

Changes: If the proposed Tioga Workforce Housing Project is approved, the existing water system 'Transient Non-Community' permit will be revised to incorporate the new development and reclassified as a 'Non-transit Non-Community' permit or possibly as a 'Community' system, depending on the number of full-time residents. The existing permit will remain in effect pending any changes.

3.5.7 Water Storage Facilities

The 1993 EIR provided for construction of a new 300,000-gallon steel water storage tank on a site located by the eight existing hilltop workforce housing units.

Changes: The amended plan calls for demolition of the existing water storage tank. A new tank, also with 300,000-gallon capacity, will be constructed in the general location of the old tank.

3.5.8 Tioga Inn Hotel

As approved in 1993, the hotel will be a two-story structure with 120 guest rooms, a coffee shop, a banquet room, a small retail gift shop, a swimming pool, and parking. The hotel will be oriented in an east-west direction, presenting an end view to SR 120 and providing hotel rooms with expansive views of Mono Lake to the north/northeast, and Tioga Pass to the west; solar panels will be oriented to the south, away from Mono Lake viewpoints. The current proposal retains the hotel standards approved in the 1993 Specific Plan.

Changes: No changes are proposed.

3.5.9 Full Service Restaurant

As approved in 1993, the full-service restaurant will be a freestanding structure with up to 5,000 square feet of interior dining area as well as an exterior site-down eating area, interior and exterior areas serving alcohol, and miscellaneous accessory uses including a gift shop, information center, parking, deck, appurtenant service areas, and other similar uses. Maximum height of the full-service restaurant was set at 20-feet from the top of the stem wall to the top of the roof line (not counting chimneys, gables and snow control devices).

Changes: No changes are proposed.

3.5.10 Solid Waste Facilities

Solid waste on the property is stored in bear-proof commercial dumpsters (including recycling bins) located adjacent to the gas station. Refuse is collected by a commercial service. All existing dumpsters will remain in use, along with new bear-proof structures that were approved in 1993 for the hotel and restaurant.

Changes: The proposed project calls for additional bear-proof solid waste facilities to serve the new workforce housing units. Further discussion of solid waste is provided in EIR §5.8.

3.5.11 Stormwater Drainage

Following the 1993 EIR approvals, the Mobile Mart project was constructed with a controlled drainage system in which runoff is captured and diverted to onsite dry wells. The dry-well process was designed in conformance with requirements of the LRWQCB.

⁸ Communication from Jon Drodz, Mono County Environmental Health Department, 23 May 2019.

Changes: The proposed drainage system includes 2 concrete retention basins (1 each for the hotel and housing area), and 4 bioswales (all for the hotel). Facilities are designed to the County's 20-year storm return frequency, and the bioswales comply with LRWQCB Low Impact Development goals.

3.5.12 Roads, Circulation and Access

The 1993 EIR proposed that access to the project site be taken from SR 120 via a common drive located immediately south of the hotel parking area and north of the minimart and gas pump islands. The access was constructed as proposed (with one entry lane and two exit lanes), and remains in use to the present time. The access point is about 800 feet west of the junction with US 395. Roads on the project site are privately owned and maintained, with 3 classes as shown in Table 3-4.

TABLE 3-4. Road Standards			
Private Road Classification	Easement Width	Pavement Width	Special Notes
Main Access Road	60 feet	24 feet	3-foot shoulder
Existing Residential Access	40 feet	16 feet	10% grade
Existing Utility Access	Driveway	12 feet	No public use

Changes: The amended plan calls for reconfiguration of the access drive. The reconfiguration would retain the existing single entry and two exit lanes, but the access lane is now proposed to have a dedicated left-turn lane into the hotel, and a relocated right-turn entry to the gas pumps. The reconfiguration is designed to improve the flow of traffic. A second change pertains to Caltrans' sale of a 70-foot wide portion of the SR 120 right-of-way easement to the project applicant. The easement extends for a distance of 1,170-feet adjacent to the Tioga site. A portion of this easement (west of the entry) has long been used informally by minimart customers as a picnic and play area. The ownership transfer will provide more public parking area for YARTS customers, facilitate long-term use of the picnic area by customers, and provide greater flexibility in design of the land adjacent to and north of the hotel. Caltrans will continue to own the remaining SR 120 right of way, which includes an apron (east and west of the entry) that is used heavily by motorists as a Mono Lake vista point, and also used as an overflow parking area by Tioga Mart patrons and YARTS customers.⁹

3.5.13 Fire Protection

The site is located in the service area of Lee Vining Fire Protection District (LVFPD), a volunteer fire department. Project elements are required to have an operational water system before building permits are granted. Existing on-site roads have been designed to meet County and Lee Vining Fire Protection District (LVFPD) standards.

Changes: New project elements (including roads, water supply, hydrants, fire suppression features) will be required to meet all current CalFire and LVFPD standards, including CalFire Fire Safe Regulation PRC §4290 and §4291, and Mono County Chapter 22 Fire Safe Regulations (for development in the State Responsibility Areas). The project will fully comply with all applicable fire safe rules and regulations. EIR §5.8 provides additional information about fire protection on the site.

Proposed Specific Plan Amendment #3 would modify the acreage in each of the open space designations shown in the 1993 Specific Plan; the changes would increase overall open space acreage by 0.7 acres. Changes in the acreage of designated open space areas are shown in Table 3-5.

TABLE 3-5. Proposed Changes in Open Space Acreage			
Open Space Designation	1993 Specific Plan	Specific Plan Amendment #3	CHANGE
OS-Preserve	14.8 acres	27.8 acres	(+) 13.0 acres
OS Facilities	13.2 acres	12.3 acres	(-) 0.9 acres
OS Support	18.5 acres	7.1 acres	(-) 11.4 acres
TOTAL	46.5 acres	47.2 acres	(+) 0.7 Open Space Acres

⁹ Note: Caltrans has recently initiated a resurfacing, restoration, and rehabilitation project to improve safety, accessibility, and mobility along US 395 through Lee Vining; study recommendations are not anticipated to be available during the timeframe of the current project.

3.6 PROPOSED PARCEL REVISIONS

The project approved in 1993 had 4 parcels totaling 73.7 acres of land.

Changes: The current proposal would reduce the overall land area by about 5 acres, as shown in Table 3-6.

TABLE 3-6. Proposed Changes in Parcel Acreage		
PARCEL #	ACREAGE APPROVED IN 1993	ACREAGE PROPOSED IN 2018
1	30.3	27.4
2	36.0	32.1 ¹⁰
3	2.4	2.7
4	5.0	6.8
TOTAL	73.7 acres	67.8 acres

As shown in Table 3-5, the changed acreage affects Parcel 1 (reduced from 30.3 to 26.5 acres), Parcel 2 (reduced from 36.0 to 32.1 acres), and Parcel 4 (increased from 5.0 to 6.8 acres). In whole, the project area is proposed to be reduced by 5.9 acres. The reduced area of Parcels 1 and 2 occurred when Caltrans expanded US 395 to 4 lanes, which required acquisition of land from adjoining properties; the expanded acreage of Parcel 4 occurred when the owner redesignated parcel acreages to provide additional land for a new cell tower to improve internet access; land gained through purchase of Caltrans' SR 120 right-of-way in 2018 120 was relinquished to Parcels 1 and 2.

3.7 PROJECT DESIGN

The 1993 Final EIR described the project design as having a unified theme comprised of exposed stone foundations, natural wood walls with areas of stone, and metal roofs in green or earth-tone colors. The original design theme is evident in the project elements that were subsequently constructed on the site, as shown in the photos below:



The current proposal retains the design theme and design guidelines established in 1993, and no changes are proposed. The hotel, the full service restaurant, and the workforce housing elements will all be constructed with use of exposed stone foundations, natural wood walls with areas of stone, and metal roofs in green or earth-tone colors. As noted previously, the roofs on most project structures will be designed to accommodate solar panels (solar panels have already been installed on the Tioga Mart deli and store building, as shown above).

3.8 PROJECT PHASING AND GRADING

Development phases for the proposed Amendment #3 are yet to be finalized. It is anticipated that some or all of the proposed workforce housing area may be developed in advance of the hotel and the full-service restaurant in order to provide housing for project construction workers and existing employees. Occupancy would shift to onsite employees upon completion of the hotel and restaurant elements. Infrastructure will be constructed to meet the development sequence of approved uses.

¹⁰ Note that a small portion of Parcel 2 is located east of US 395; the two existing water wells are located on this sub-parcel.

3.9 DISCRETIONARY ACTIONS AND REQUIRED PERMITS

3.9.1 Lead Agency

Mono County is Lead Agency for this project, and will consider the following discretionary actions in processing the Tioga Workforce Housing project proposal:

Certification of the Subsequent Final Environmental Impact Report. The 1993 Specific Plan was incorporated into the 1993 environmental impact report; similarly, the proposed Specific Plan Amendment #3 is included with the current Subsequent EIR (SEIR); the current SEIR builds upon the original 1993 documents. The SEIR must be certified by the Board of Supervisors in order for the changes proposed in Specific Plan Amendment #3 to take effect. EIR Certification is considered by the Board of Supervisors before (and is an action separate from) the consideration of project approval.

Actions associated with the Specific Plan. (1) The proposed Specific Plan Amendment #3 will be the subject of a hearing and recommendation from the Planning Commission and a hearing and action by the Board of Supervisors. The County may deny approval of the proposed Specific Plan Amendment #3, it may approve the amended Plan as submitted, or it may approve a modified version of the amended Specific Plan. If the County takes action to approve the proposed Plan amendment or a modified version of the amended Plan, and if the SEIR identifies one or more significant and unavoidable impacts, the Board must then adopt a Statement of Overriding Considerations explaining why the impacts and mitigations have been approved despite the fact that significant and unavoidable impacts remain. (2) The Specific Plan land use district was adopted for this project site as part of the 1993 approvals, and will remain valid whether the current proposed amendment #3 is approved or denied. (3) Modifications to the tentative parcel map (adjusting the boundaries and acreage of the four parcels) must be approved by the Planning Commission.

Approval of a Mitigation Monitoring and Reporting Program. The County is required to adopt (or make a statement of overriding effects indicating the basis for rejecting) recommended mitigation measures. If mitigation measures are a part of the project approval, the County and proponent must enter into a program for implementation, monitoring, and enforcement of the adopted measures.

3.9.2 Other Agencies that may use the EIR

Table 3-7 lists all agencies that are expected to make use of the EIR when considering project permits and approvals. Note that the Responsible and Trustee agencies may impose requirements (typically as conditions of permit approval) in addition to the Mitigation Measures contained in this EIR.

Table 3-7. Use of this Subsequent EIR by Other Agencies	
AGENCY	PERMIT OF USE OF THE EIR
California Regional Water Quality Control Board – Lahontan Region	<u>Responsible Agency:</u> <ul style="list-style-type: none"> §401 Water Quality Certification or Dredge & Fill Waste Discharge Requirements required for excavation, discharge to or alteration of surface waters; §402 Storm Water Permit, required for land disturbance of more than 1 acre; note that the permit includes a NPDES General Construction Storm Water Permit, and individual waste discharge requirements may be established. BMPs should be provided in the EIR with information as outlined in the LRWQCB letter. NPDES General Construction Storm Water Permit, for new industrial operations. Waste Discharge Requirements for disposal from a small domestic wastewater treatment facility. NPDES General Permit-Limited Threat Discharges or General Waste Discharge Requirements for discharges to land with a low threat to water quality, for water diversion & dewatering.
State Water Resources Control Board – Division of Drinking Water (DDW)	<ul style="list-style-type: none"> Water Reclamation Requirements for Recycled Water Use (per Order WQ 2016-0068-DDW), or Individual Water Reclamation Requirements may be required. Approval of a Title 22 Engineering Report, or a letter from DDW indicating that the project does not need to satisfy Title 22.
California Dept. of Transportation	<u>Responsible agency:</u> Encroachment permit, modifications to the scenic turn-out on State Route 120 (SR 120).
California Dept. of Fish and	<u>Trustee Agency:</u> For fish and wildlife resources, and a <u>Responsible Agency:</u> For discretionary

Wildlife (CDFW)	actions including Lake or Streambed Alteration Agreement, Permit for Incidental Take of Endangered, Threatened and/or Candidate Species, etc.
California Dept. of Forestry	<u>Trustee agency</u> : Review plans for fire safety & wildlife protection
Mono County Department of Environmental Health	<u>Responsible agency</u> : Permits are required for the sewage disposal system, the small water system; the restaurant kitchen, any kitchen in the hotel, the swimming pool, and the spa.
Lee Vining Fire Protection District	<u>Local public agency</u> : Inspection or review of plans for conformance with fire safety regulations
Federal Aviation Administration	<u>Responsible Agency</u> : Determination whether project obstructions in the imaginary surface zone of Lee Vining Airport represent a hazard.

3.10 INCORPORATION BY REFERENCE AND RELATED ACTIONS

Two documents are incorporated by reference into the current Tioga Workforce Housing Draft Subsequent EIR review: the 1993 Tioga Inn Final EIR, the Mono County Regional Transportation Plan (RTP) and General Plan Final EIR with all supporting technical documents. No other applicable documents have been identified for incorporation by reference in this DSEIR, and no related actions have been identified other than the approvals that were granted for the Tioga Inn project following completion of the 1993 Tioga Inn Final EIR and Specific Plan. The conclusions presented in each Final EIR are briefly summarized below.

3.10.1 1993 Tioga Inn Final EIR

The 1993 Tioga Inn Final EIR concluded that implementation of the approved Tioga Inn Specific Plan would result in significant and irreversible impacts to the visual quality of the project area. No other significant and unavoidable adverse direct or cumulative environmental impacts were identified in the Final EIR.

To minimize or avoid these significant impacts, the *1993 Final EIR* refers to design and development standards contained in the Specific Plan for project construction, operation and ongoing maintenance. Particular emphasis is placed on provisions calling for County review and approval of a detailed landscape plan and use of onsite lighting with minimal offsite visibility and reflective glare, subject to detailed specifications following a night-time inspection of the site by County staff.

3.10.2 2015 Mono County RTP and General Plan Final EIR

The 2015 Mono County RTP and General Plan Final EIR concluded that implementation of the General Plan may potentially result in a wide range of significant and unavoidable adverse environmental effects including:

- *Impacts to Candidate, Sensitive & Special Status Species*
- *Impacts to Riparian Habitat*
- *Impacts to Federally Protected §404 Wetlands*
- *Interference with Fish or Wildlife Movement or Migration*
- *Conflict with Local Biological Protection Ordinances*
- *Exposure to Seismic Effects and Unstable Geology*
- *Substantial Soil Erosion*
- *Loss of Mineral Resources*
- *Potential for Release of Hazardous Materials*
- *Inadequate Emergency Response*
- *Exposure to Wildland Fire Risks*
- *Exposure to avalanche, rockfall, storms, volcanism*
- *Impacts to Prehistoric or Historic Resources*
- *Impacts to Paleontological Resources*
- *Impacts to Sacred Lands*
- *Violation of Water Quality Objectives*
- *Violation of Waste Discharge Requirements*
- *Uncertain Availability of Adequate Water Supplies*
- *Erosion and Siltation from Altered Drainage*
- *Impacts on Recreational Facilities*
- *Impacts to Scenic Resources in a State Scenic Highway*
- *Degraded Visual Character or Quality*
- *Create new sources of Light and Glare*
- *Impacts on public fire and utility services*

To minimize or avoid these significant impacts, the *General Plan* contains numerous goals, objectives, policies and actions that will be monitored by the county. The mitigations address a range of issues including air quality/greenhouse gases, biological resources, hydrology/water quality, and geologic conditions. Applicable policies and policy recommendations are identified and discussed throughout the CEQA Checklist analyses.

TIOGA WORKFORCE HOUSING DRAFT SUBSEQUENT EIR



SECTION 4.0 SPECIFIC PLAN

4.1 INTRODUCTION TO TIOGA INN SPECIFIC PLAN AMENDMENT #3

In 1993, the Mono County Board of Supervisors approved a multiple-use visitor commercial project on a roughly 74-acre site located at the junction of US 395 and State Route 120 (the southwest quadrant). The property is located in central Mono County about one mile south of the community of Lee Vining. The 1993 project approvals included certification of a Final EIR, and approval of the Tioga Inn Specific Plan. Upon approval, the Tioga Inn Specific Plan established both the zoning and the General Plan uses and standards for the project site.¹ The approved land use designations included “hotel,” “full-service restaurant,” “residential,” “convenience store/fuel sales,” “open space-preserve,” “open space-facilities,” and “open space-support.”

Many of the approved uses were developed and in operation by 1996, including the residential units, the convenience store/fuel sales, and the designated open space areas. In 1997, the deli opened inside the convenience store. The deli was not included in the 1993 Specific Plan, but was conditionally approved through a retroactive Director Review during 2012. The 2012 approval included a condition stating *“No other commercial or retail space expansion will be permitted on the convenience store gas station parcel without a revision to the Tioga Specific Plan.”* Specific Plan standards for the deli are included as part of the current proposed Amendment in accordance with this requirement.

The 1993 Specific Plan was amended in 1995 (Amendment #1), and again in 1997 (Amendment #2). Proposed Tioga Inn Specific Amendment #3 has a primary goal of facilitating the construction of up to 100 workforce housing units with up to 150 bedrooms to accommodate employees of the previously approved hotel and full-service restaurant. In order to accommodate changes in workforce demographics over time, the workforce housing is designed and would be plumbed to allow flexibility in ratio of 1-bedroom, 2-bedroom and 3+-bedroom units. Additional elements of proposed Amendment #3 include the addition of a third gas pump island, installation of a new wastewater treatment system with subsurface distribution for summer irrigation, expansion of the propane tank storage capability, realignment of the road providing access to the existing hillside residential units, changes in the parcel boundaries and acreages, and replacement of the existing water storage tank with a new tank of the same size in the same general location. Changes associated with Amendments #1 and #2, and with the 2-12 Director Review, are summarized in Table 4.2 (1995 Amendment #1), Table 4-3 (1997 Amendment #2), and Table 4-4 (2012 Director Review 12-007).

4.2 TIOGA INN SPECIFIC PLAN HISTORY AND BACKGROUND

4.2.1 Original 1993 Specific Plan

The Tioga Inn Specific Plan was originally approved by the Mono County Board of Supervisors in July of 1993. Uses and parcel sizes allowed with the 1993 approval are shown in Table 4-1:

TABLE 4-1. Original 1993 Tioga Inn Specific Plan Approved Uses and Parcel Sizes		
PARCEL #	PARCEL ACREAGE	APPROVED USES

¹ Mono County has integrated its Zoning Code into the General Plan Land Use designations. Thus the General Plan *Land Use Element* contains (a) policies and use designations to guide land use decisions, and (b) land development regulations to regulate development activities. The General Plan policies guide land use decisions, and the land development regulations govern the use of buildings, the size and layout and intensity of uses, parking requirements, allowed lot coverage, setbacks and other regulatory development standards.

1	30.3	Hotel
2	36.0	Full-Service Restaurant
3	2.4	Store & Gas Station
4	5.0	Residential Units (10)
TOTAL	73.7	

4.2.2 1995 Specific Plan Amendment #1

The first Specific Plan amendment occurred in April 1995, and included 3 changes as outlined in Table 4-2 below:

TABLE 4-2. Changes Approved in Tioga Inn by 1995 Specific Plan Amendment #1	
#	CHANGE
1	Amend p. 39 Figure 9, moving the proposed location of the water tank approximately 600 feet west to a site next to the proposed housing area on Parcel 4
2	Amend p. 20, Implementation Measure 1d(1) to allow for a two-bedroom apartment, not to exceed 1,500 square feet, as part of the Convenience Store/Fuel Sales
3	Amend the text on p. 12 to allow for the building of a Convenience Store before the Hotel.

4.2.3 1997 Specific Plan Amendment #2

The second Specific Plan amendment occurred two years after the first amendment, in June of 1997, and included 12 changes as outlined in Table 4-3 below:

TABLE 4-3. Changes Approved in Tioga Inn by 1997 Specific Plan Amendment #2	
#	CHANGE
1	Amend p. 7 (Full-Service Restaurant): The restaurant will be built on the flat area on top of the ridge, with a parking lot screened by the terrain to the south and access from the same road as the hotel.
2	Amend p. 10 (Facilities and Services): The water delivery system and sewage disposal system are not to serve any projects other than the four components of the Tioga Inn Specific Plan.
3	Amend p. 27, policy 5a(2): Other than access for authorized personnel to the parcels adjacent to US 395, there shall be no access to the project from US 395.
4	Amend p. 28: 8, Financing the Specific Plan
5	Amend p. 17, Policy 1b: The Hotel land use designation shall permit the following land uses: ■ A public restroom/shower/laundry facility may be permitted.
6	Amend p. 17 - Implementation Measure 1b(2): Site development standards for the Hotel land use designation shall be (Refer to Footnote 13): ■ The public restroom/shower/ laundry facility shall not exceed 20' in height, shall not exceed 1,500 square feet of interior floor space, and shall not exceed an occupancy load of 30 persons. Location of building will be in the vicinity of the swimming pool,
7	Amend p. 19 - Implementation Measure 1c(2): Site development standards for the Full Service Restaurant land use designation shall be: ■ One flag pole shall be allowed on the restaurant parcel. Flagpole shall not exceed 20 feet in height. The maximum area of the flag shall be 40 square feet. Illumination is not permitted.
8	Amend p. 18 – Implementation Measure 1b(2): ■ Signs – See Master Sign Program.
9	Amend p. 19 - Implementation Measure 1c(2): ■ Signs – See Master Sign Program.
10	Amend p. 20 – Implementation Measure 1d(2): ■ Signs – See Master Sign Program.
11	Amend Page 28: 6. Master Sign Program. 6a) <u>Intent</u> . The Master Sign Program is a requirement and mitigation measure of the Tioga Inn Specific Plan. The Specific Plan requires that all signs be coordinated in design and concept with all other facility signs. The Master Sign Plan will coordinate design, theme, and placement of signs within the Tioga Inn Specific Plan area. This Specific Plan is one site with four separate parcels. All signs are required to be on site. 6b) <u>General Provisions</u> . (a) Signs and sign faces will be constructed with natural materials like stone, wood and other

	<p>natural materials to enhance the overall architectural theme of the Tioga Inn. Plastic, metal and other materials may be used but should not be the (predominant²) feature of any sign or sign face. The exceptions to this are directional signs which may be plastic or metal. (b) The background or unused portions of the sign facing will be painted in muted earth tone colors or left in a natural state. (c) The sign area is calculated as the area that would enclose all words and letters of a sign face. The portions of the sign enclosed by the decorative border or frame and the foundation are not calculated as sign area. (d) Illumination for all signs shall be indirect or back-lit channel letters.</p> <p>6c) Permitted Signs. Monument signs – The Tioga Inn Specific Plan is permitted three monument signs for the three commercial land uses. These signs will be visible to travelers on Highways 120 and 395. The maximum height will not exceed 10 feet. The sign will not exceed 64 square feet per facing. Approximately 21 square feet will be allocated for each commercial use (convenience store/fuel sales, hotel, and full-service restaurant). The three monument signs are permitted within the Tioga Inn Specific Plan on the 30-acre Hotel parcel. One sign may be installed along the Highway 120 corridor approximately 150 feet east of the gas station. Two monument signs may be installed below the restaurant knoll adjacent to Highway 395. These signs are not permitted to be silhouetted against the skyline or located on top of the knoll. Placement may be on either side of the knoll but on the hotel parcel. A fourth monument sign is permitted in the vicinity of the hotel entrance site. This sign is an interior monument sign and will be used to primarily direct visitors to the various facilities within the Tioga Inn Specific Plan site. This sign will generally not be visible to travelers on Hwy 120.</p> <p>Directional signs: Signs for air and water, registration, observation deck, parking, office or deliveries shall be permitted with a maximum area of 3 square feet per sign facing. Directional signs may be combined subject to Director Approval.</p> <p>Other signs: ▪ Convenience store/fuel sales – Signs identifying the property, name ownership, and amenities shall be limited to a maximum of forty-eight total square feet. ▪ Hotel – Signs identifying the property, name, ownership, and amenities shall be limited to a maximum of sixty-four total square feet. ▪ Restaurant – Signs identifying the property, name, ownership, and amenities shall be limited to a maximum of forty-eight square feet. ▪ Required Signs – These signs include those mandated by federal, state, or local agencies (i.e., the display of gas prices).</p> <p>6d) Prohibitions. ▪ No signs shall be permitted within the residential land use. ▪ No monument or freestanding signs shall be permitted off the Tioga Inn Specific Plan site.</p>
12	<p>Integrate the letter from Tom May, lighting consultant, into the Specific Plan as number 7, Lighting.</p> <p>7. Lighting. Night time lighting for the project site is required to be screened and aimed in a manner to reduce offsite impacts. In order to reduce potential lighting impacts the following changes are required: ▪ Replace the light fixture at the front entrance and on the picnic island near the gas pumps. A KIM Mfg. 2B-ET4 400 watt MH. This change should eliminate any light deflection toward the town and would maximize light distribution on the ground surface. ▪ Place metal glare shields on two sides of the canopy lights facing town. These shields should project 2-6 inches below the prismatic lens. ▪ To light the parking area immediately to the rear of the store add one light pole at the southeast corner near the dumpster area. A KIM 2B-ET3 will spread the light satisfactorily. ▪ To light the road to the restaurant site, place bollard lights with 50 watt lamps on the downslope at 100-foot internals. This will light the road with the light directed away from town.</p>

4.2.4 2012 Director Review 12-007/Tioga Inn Kitchen Expansion

Director Review permit 12-007, approved in July of 2012, retroactively permitted expansion of the Convenience Store kitchen by 316 square feet, noting that the convenience store and gas station had been remodeled on several prior occasions. Findings of the 2012 approval are presented in Table 4-4.

TABLE 4-4. 2012 Director Review 12-007/Tioga Inn Kitchen Expansion	
FINDINGS	EXPLANATORY MATERIALS
1. All applicable provisions of the Mono County General Plan and Tioga Inn Specific Plan are complied with, and the site of the proposed use is adequate in size to accommodate the use and to accommodate all yards,	<p>The subject property is approximately 2.35 acres in size, adequate to accommodate the 316 square feet of kitchen expansion. The property's Specific Plan land use designation allows for: "Other uses that are similar in nature, typically associated with the primary land use, and equal to or less in intensity—subject to individual review and approval by the Planning Director."</p> <p>The proposed 316 square feet kitchen expansion will provide additional services on the convenience store/gas station parcel. Due to the lack of a hotel or full-service restaurant on this property, this limited kitchen expansion is permitted by the Planning Director, subject to this Directors Review, as permitted in the Specific Plan. No other commercial or retail space</p>

² The word 'predominant' is missing from the original text, but inserted herein for clarification.

walls and fences, parking, loading, landscaping and other required features;	expansion will be permitted on the convenience store gas station parcel without a revision to the Tioga Inn Specific Plan. The proposed addition meets the Specific Plan height limit of 20', is located within the building envelope established in the Specific Plan (Figure 7), and meets the minimum parking requirements of 10 standard vehicle spaces, two bus or recreational vehicle spaces, and two spaces for vehicles towing trailers.
2. The site for the proposed use relates to streets and highways adequate in width & type to carry the quantity and kind of traffic generated by the proposed use;	The proposed project is located on Vista Point Drive with access to State Route 120. The proposed kitchen addition will not create impacts to surrounding streets or to Highway 120. The project has existing encroachment permits with Caltrans District 9.
3. The proposed use will not be detrimental to the public welfare or injurious to property or improvements in the area in which the property is located;	The Specific Plan allows for a hotel, full-service restaurant, a residential area, and a convenience store and gas station. The only two uses on the project site at this time are the convenience store/gas station and the residential uses. The hotel and full-service restaurant have never been constructed. The proposed 316 square foot kitchen expansion will provide additional services on the convenience store/gas station parcel. Due to the lack of a full-service restaurant on the project site, this limited expansion will not be detrimental to the public welfare, and/or injurious to property or improvements in the project area.
4. The proposed use is consistent with the map and text of the Mono County General Plan and Tioga Inn Specific Plan;	The Tioga Inn Specific Plan designates this parcel as Convenience Store/Gas Station which provides for a retail store and fuel purchase facility, an apartment, two fuel islands with four multi-grade dispensing stations per island for a total of eight pumping stations, a picnic area sited in conjunction with the scenic turn-out, public restrooms, and parking areas, including spaces for recreational vehicles, vehicles towing trailers, and tour busses. Mono County Land Use Element, Ch. 36 Specific Plans: General Plan §36.60 Specific Plan Amendment states that amendments to a specific plan can be handled through the Director Review process if no change in density results and no change in conditions are necessary. [Reference to Attachment 1 Ground Floor Plan that shows existing uses and the proposed kitchen expansion]. With DR 2012-007, the expansion of 316 square feet to the kitchen does not change the density of the project or change conditions. This Specific Plan was adopted in 1993 and as of this date, only the Residential and Convenience Store/Gas Station uses have been developed. In consideration of this and the fact that the Hotel and other Restaurant uses are undeveloped, the increase in footprint of the Convenience Store/Gas Station from 6,300 permitted square feet to 6,835 square feet (includes the 316 sf kitchen expansion) is considered minor and allowed within the Specific Plan area.
5. Improvements as indicated on the development plan are consistent with all adopted standards and policies as set forth in the Land Development Regulations;	The project is consistent with the Mono Basin Area Plan because it conforms to the policies encouraging infill development within or adjacent [to] Lee Vining. Mono County Land Use Element, Mono Basin Area Plan: Objective A: Direct future development to occur in and adjacent to Lee Vining. Objective D, <u>Policy 3</u> : Focus commercial development within or adjacent to Lee Vining. The project is consistent with the Tioga Inn Specific Plan because it is located on the Convenience Store/Gas Station parcel and the permitted uses allowed on this parcel.
6. The project is exempt from CEQA.	a. It qualifies for a Class 1 Categorical Exemption. Class 1 exemptions would allow for: (e) additions to existing structures provided that the addition will not result in an increase of more than 50% of the floor area of the structures before the addition, or 2,500 sf whichever is less. b. In addition, an EIR was certified as part of the Tioga Inn Specific Plan approval in 1993.
DR 12-007 CONDITIONS OF APPROVAL	
1. The project shall comply with the requirements of the building Division and Environmental Health.	
2. All exterior lighting shall be shielded and directed downward to comply with Chapter 23, Dark Sky Regulations and the Tioga Inn Specific Plan.	
3. The roof and exterior construction shall match the existing building store and roof colors.	
4. No other commercial or retail space expansion will be permitted on the convenience store gas station parcel without a revision to the Tioga Inn Specific Plan.	

<p>5. Termination. A Director Review shall terminate and all rights granted therein shall lapse, and the property affected thereby shall be subject to all the provisions and regulations applicable to the land use designation in which such property is classified at the time of such abandonment, when any of the following occur:</p> <p>A. There is a failure to commence the exercise of such rights, as determined by the Director, within one (1) year from the date of approval thereof. Exercise of rights shall mean substantial construction or physical alteration of property in reliance with the terms of the Director Review.</p> <p>B. There is discontinuance for a continuous period of one (1) year, as determined by the Director, or the exercise of the rights granted.</p> <p>C. No extension is granted as provided in §31.08o.</p>
<p>6. Extension. If there is a failure to exercise the rights of the Director Review within one (1) year of the date of approval, the applicant may apply for an extension for an additional one (1) year. Any request for extension shall be filed at least sixty (60) days prior to the date of expiration and shall be accompanied by the appropriate fee. Upon receipt of the request for extension, the Planning Division shall review the application to determine the extent of review necessary. Conditions of approval for the Director Review may be modified or expanded, including revision of the proposal, if deemed necessary. The Planning Division may also deny the request for extension. Exception to the provision is permitted for Director Reviews approved concurrently with a tentative parcel or tract map; in those cases the approval period(s) shall be the same as for the tentative map.</p>
<p>7. Revocation. The Planning Commission may revoke the rights granted by a Director Review and the property affected thereby shall be subject to all of the provisions and regulations of the Land Use Designations and Land Development Regulations applicable as of the effective date of revocation. Such revocation shall include the failure to comply with any condition contained in the Director Review or the violation by the owner or tenant of any provision pertaining to the premises for which such Director Review was granted. Before revocation of any permit, the Commission shall hold a hearing after giving written notice thereof to the permittee at least ten (10) days in advance of such hearing. The decision of the Commission may be appealed to the Board of Supervisors in accordance with Ch. 47, Appeals, and shall be accompanied by an appropriate filing.</p>

4.2.5 Tioga Inn Specific Plan Proposed Amendment #3

The proposed 3rd Specific Plan Amendment would make new changes to the approved specific plan as listed below:

- WORKFORCE HOUSING: Allow up to 150 new workforce housing bedrooms in up to 100 units (including one manager's unit with up to 4 bedrooms);
- GAS ISLAND: Allow construction of a third gas pump island with 4 new fueling stations, one new underground gasoline storage tank, an overhead canopy and lighting;
- WATER STORAGE: Allow demolition of the existing 300,000-gallon water storage tank and replacement with a new 300,000-gallon water storage tank on a pad located in the same approximately location as the existing tank;
- PARKING: Allow additional parking to serve oversize vehicles, park & ride vehicles, ESTA & Yosemite transit;
- INTERNAL ACCESS: Realign the road providing access to the existing hilltop residential area, and reconfigure lanes and turning areas near the main entry to eliminate conflict between the hotel and the gas station/convenience store;
- SANITATION & REUSE: Replace the septic tank with a new package wastewater treatment facility including new subsurface irrigation facilities and retention of the existing leach field for disposal of surplus treated water;
- PARCEL BOUNDARIES: Modify the acreage and boundaries of the four parcels;
- PROPANE: Replace the five existing propane tanks (combined 2,500-gallon capacity) with a new 30,000-gallon propane tank to meet demand for onsite heating and offer commercial propane sales to area residents and businesses.
- EQUIPMENT & PERSONAL STORAGE: Construct a new building for storage of residents' items and maintenance vehicles and equipment.

Table 4-5 provides an overview of approved uses and changes proposed in conjunction with Specific Plan Amendment #3.

Table 4-5. TIOGA INN EXISTING, APPROVED & PROPOSED LAND USES AND ACREAGES					
PARCEL	ACRES APPROVED IN 1993	CURRENT PROPOSED ACREAGE	EXISTING LAND USES	LAND USES APPROVED IN 1993	USES NOW PROPOSED & SUBJECT TO DISCRETIONARY ACTION
1	30.3	26.5	<ul style="list-style-type: none"> ▪ Open Space Monument Signs (2) 	<ul style="list-style-type: none"> ▪ 120-room 2-story hotel with coffee shop, swimming pool, banquet room and gift shop; 	<ul style="list-style-type: none"> ▪ Changed parcel boundary and acreage ▪ Modifications to vehicle movement at main access &

				<ul style="list-style-type: none"> ▪ Parking spaces for onsite uses <ul style="list-style-type: none"> ▪ Signage Plan ▪ Septic System 	<ul style="list-style-type: none"> ▪ realignment of road serving existing hilltop housing units ▪ New Package Wastewater Treatment System
2	36.0	32.1	<ul style="list-style-type: none"> ▪ Overflow parking ▪ Historical Marker ▪ 6 cabin units (no formal approvals) ▪ Electric supply shed ▪ Two Water Wells ▪ SCE powerlines ▪ Buried Utility Xing septic /leach field ▪ 5 propane tanks with a combined capacity of 2,500 gallons 	<ul style="list-style-type: none"> ▪ Overflow/oversize vehicle parking <ul style="list-style-type: none"> ▪ Full-service Promontory restaurant ▪ Restaurant parking ▪ Maintenance Building ▪ Propane Tanks 	<ul style="list-style-type: none"> ▪ Changed parcel boundary and acreage ▪ New workforce rental housing with up to 150 bedrooms ▪ Day care facilities sufficient to accommodate all onsite youth ▪ Net 0.7-acre gain in Open Space including 13.0-acre increase in Open Space-Preserve acreage, 0.9-acre decrease in Open Space - Facilities, and 11.4-acre decrease in Open Space-Support <ul style="list-style-type: none"> ▪ 30,000-gal. propane tank ▪ Elimination of septic tank; retention of septic leach field ▪ New Subsurface Irrigation System using flows from the Package Treatment Plant.
3	2.4	2.4	<ul style="list-style-type: none"> ▪ 2 Gas Islands (8 fuel pumps, canopies, lighting, 2 underground gasoline storage tanks). <ul style="list-style-type: none"> ▪ Tioga Gas Mart ▪ Whoa Nellie Deli 	<ul style="list-style-type: none"> ▪ 2 gas islands with 8 fuel pumps & canopies, lighting, 2 underground gasoline storage tanks. <ul style="list-style-type: none"> ▪ Tioga Gas Mart ▪ Delicatessen 	<ul style="list-style-type: none"> ▪ 3rd Gas Pump island with 4 additional fuel pumps, 1 additional underground gasoline storage tank, and overhead canopies & lighting
4	5.0	6.8	<ul style="list-style-type: none"> ▪ 8 hilltop housing units ▪ One 300,000-gal Water Storage Tank near hilltop units <ul style="list-style-type: none"> ▪ 1 Cell Tower³ 	<ul style="list-style-type: none"> ▪ 10 Hilltop Housing Units⁴ ▪ One 300,000-gal water storage tank. 	<ul style="list-style-type: none"> ▪ Changed parcel boundary and acreage ▪ Demolition of existing water tank, replacement with new tank of same size in same area.
SR 120 Easement	NA	Included in Parcels 1 and 2	<ul style="list-style-type: none"> ▪ 1-ingress & 2-egress lanes to SR-120 ▪ Park & Ride Area ▪ Caltrans ROW acquisition area (adjacent to deli) 	<ul style="list-style-type: none"> ▪ Access from SR-120 ▪ Park & Ride Area 	<ul style="list-style-type: none"> ▪ One new traffic lane added adjacent to gas station to enhance interior circulation
TOTAL PROPOSED ACRES 67.83 (reduced from 73.7 acres in 1993)					

4.3 FORMAT OF TIOGA INN SPECIFIC PLAN AMENDMENT #3

EIR §4.3 (starting on following page) presents the Tioga Inn Specific Plan. The Plan is as originally presented in 1993 with the following exceptions:

1. **HOW CHANGES ARE SHOWN:** The previous two amendments were incorporated into the text of the 1993 Specific Plan through insertions and cross-outs that were shown on pages provided next to a scanned copy of the original 1993 Specific Plan text. For clarity in this third proposed amendment, the Specific Plan text has been fully retyped, which will allow modifications to be shown with the 'Track Changes' tool, and will also enable text searches and facilitate other document accessibility tools.
2. **TEXT FORMATTING:** For ease of comparison, the Specific Plan text provided herein (§3.3) retains the formatting used in the original document, with updated section, table, exhibit and page numbers. Proposed amendments are

³ The cell tower was approved by Mono County in February 2007 (Permit # 07BLD-00079).

⁴ Of the 10 hilltop housing units approved in 1993, only 8 were constructed.

shown using “Track Changes”; all other sections remain as approved in 1993 or as modified in earlier approved amendments, and are shown in plain text. The original 1993 Specific Plan document is contained on pages 1 through 28b of *The Tioga Inn Specific Plan and Final Environmental Impact Report*, May 24, 1993.⁵ Tables and Figures that no longer apply (such as the 1993 summary of impacts and mitigation measures and the 1993 grading plan) have been deleted.

3. **CITATIONS:** The amended text does not include citations from the 1993 document unless still relevant. California Government Code citations have been deleted, and some terms have been replaced with abbreviations (for example, EIR in lieu of Environmental Impact Report, SR 120 in lieu of State Highway 120). Minor editorial changes (e.g., letter capitalizations) are not called out in Track Changes.
4. **INFORMATION:** Discussion of the Relationship between the Specific Plan and the EIR (§4.3.3) has been updated to reflect the current language of the CEQA Guidelines regarding the relationship between the Specific Plan and the EIR (as stated in CEQA Guidelines §15166 (EIR as Part of a General Plan)).

4.4 PROPOSED TIOGA INN SPECIFIC PLAN AMENDMENT #3⁶

4.4.1 Introduction⁷

In the early 1990s, an application was submitted to the Mono County Planning Department for a multiple use visitor commercial project located at the junction of Highways 395 and 120 adjoining Lee Vining in central Mono County. Mono County's General Plan requires that a specific plan be prepared for this project. A Specific Plan requires environmental analysis prior to its consideration by the Planning Commission and Board of Supervisors. It was recognized that the Tioga Inn proposal had the potential to significantly affect the environment. For this reason, an environmental impact report (EIR) was prepared as part of the specific plan. The 1993 document (as amended), in conjunction with the 2018 Tioga Inn Specific Plan and Draft Subsequent EIR, represents the consolidated specific plan and environmental impact report. Although both the specific plan and its EIR are being published together, the two are separate documents. Figure 1 shows the location of Mono County relative to the state of California.

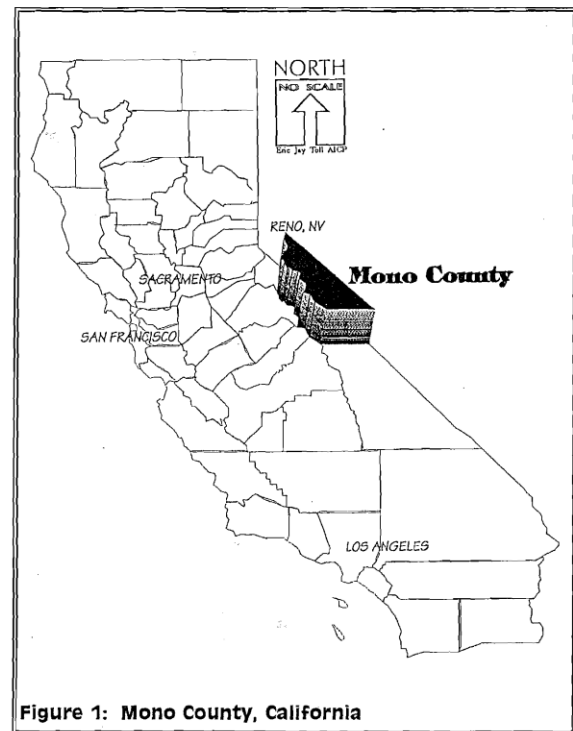


Figure 1: Mono County, California

4.4.1.1 Specific Plans

Once the County has adopted a general plan, it may prepare specific plans to provide a more detailed and systematic implementation of the general plan for all or part of the area covered by the general plan.⁸

4.4.1.1.1 What is a Specific Plan?

Although the General Plan and area or community plans usually address land development patterns and standards, a Specific Plan provides an opportunity for a more precise set of standards and opportunities for development of an

⁵ The 1993 EIR and Specific Plan are available online at https://www.monocounty.ca.gov/sites/default/files/fileattachments/planning_division/page/10062/tioga_inn_sp_feir_05_24_93_with_amendments.pdf.

⁶ As indicated in §3.1, the Specific Plan text has been retyped in its entirety to allow all proposed text amendments to be shown using ‘Track Changes’, and to enable text searches and other document accessibility tools.

⁷ The 1993 project approvals included Final EIR certification and approval of the Tioga Inn Specific Plan. Upon approval, the Tioga Inn Specific Plan established zoning and the General Plan uses and standards for the project site.⁷ Approved land use designations included “hotel,” “full-service restaurant,” “residential,” “convenience store/fuel sales,” “open space-preserve,” “open space-facilities,” and “open space-support.” Several of the approved uses were developed soon after the 1993 approvals including the residential units, the convenience store/fuel sales, and the open space uses. The hotel and full-service restaurant are scheduled for development in 2023-24.

⁸ California Government Code (CGC) §65450 through §65457 states the legal requirements for Specific Plans.

individual parcel or group of parcels. A Specific Plan provides a means by which the County or a group of property owners can develop a long-term comprehensive project over an extended number of years. The Specific Plan does not include “elements” as are found in a General Plan.⁹ Its focus is on the policies related to the development of a project area. Explanation 1 (next page) quotes the requirements of California Government Code for Specific Plans.

4.4.1.1.2 Relationship of the Specific Plan to the General Plan.

Explanation 1. Contents of a Specific Plan (GC §65461)

(a) A specific plan shall include a text and a diagram or diagrams which specify all of the following in detail:

(1) The distribution, location, and extent of the uses of land, including open space, within the area covered by the plan.

(2) The proposed distribution, location, and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities proposed to be located within the area covered by the plan and needed to support the land uses described in the plan.

(3) Standards & criteria by which development will proceed, and standards for conservation, development, and utilization of natural resources, where applicable.

(4) A program of implementation measures including regulations, programs, public works projects, and financing measures necessary to carry out paragraphs (1), (2), and (3).

(b) The specific plan shall include a statement of the relationship of the specific plan to the general plan.

The specific plan establishes goals, policies, implementation measures, development standards, land use, and zoning for an area. Specific plans can be authorized by the Board of Supervisors or proposed by a private developer. Mono County and the property owner proposed preparation of the 1993 *Tioga Inn Specific Plan* as well as the current 2018 Specific Plan update; the proponent (property owner) is responsible for the costs of preparation, review, and implementation.

The *Tioga Inn Specific Plan*, as amended, provides supplemental and more detailed policies for the project area. The Mono County General Plan addresses a broad range of development policies through its various elements. The General Plan, however, does not provide the level of detail in its policies to establish the programs needed for complex projects carried out over a number of years. The Tioga Inn Specific Plan provides the policies at a greater level of detail than the General Plan. The Specific Plan, however, does not address the individual elements as established in the General Plan. For those policies of the General Plan that are not called out in the Specific Plan, the provisions of the Mono County General Plan apply (in keeping with Government Code §65461(b)).

The General Plan identifies the subject property in the “SP,” *Specific Plan*, land use designation on the Lee Vining Community Area map (Land Use Element, Figure 23). The Specific Plan must be consistent with other goals, policies, and implementing programs of the General Plan. Specific Plans are incorporated by reference into the General Plan.

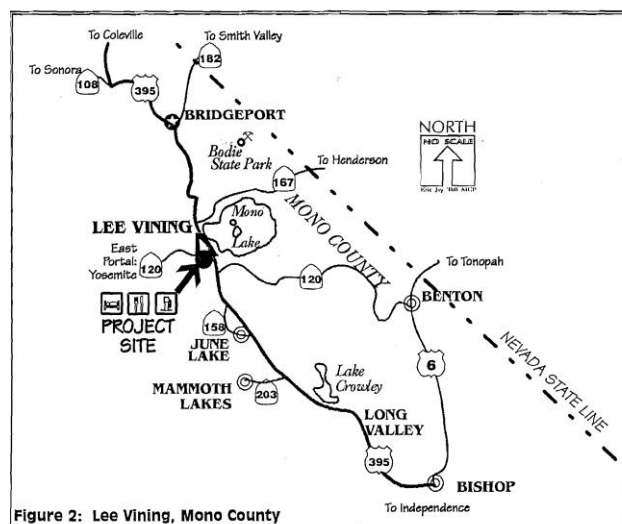
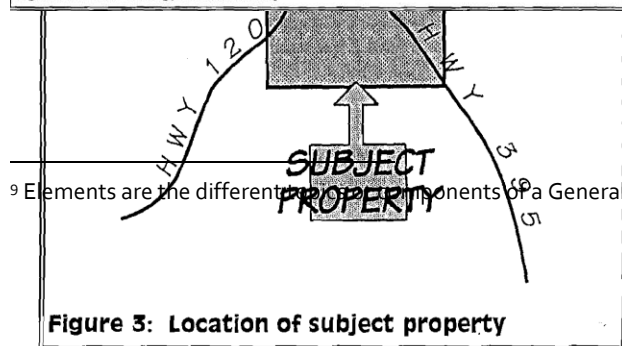


Figure 2: Lee Vining, Mono County



⁹ Elements are the different components of a General Plan that address land use, housing, circulation, and others.

4.4.1.1.3 Relationship between Specific Plan and EIR

The State *CEQA Guidelines* state in §15166 (EIR as Part of a General Plan):

“(a) The requirements for preparing an EIR on a local general plan, element, or amendment thereof will be satisfied by using the general plan [...] as the EIR and no separate EIR will be required if: (1) The general plan addresses all the points required to be in an EIR by Article 9 of these Guidelines, and (2) The document contains a special section or a cover sheet identifying where the general plan document addresses each of the points required.

(b) Where an EIR rather than a Negative Declaration has been prepared for a general plan, element, or amendment thereto, the EIR shall be forwarded to the State Clearinghouse for review. The requirement shall apply regardless of whether the EIR is prepared as a separate document or as a part of the general plan or element document.”

4.4.2 Project Description

a. **Location of the Project.** The Tioga Inn project site is located at the intersection of State Highway 120 (SR 120) and US Highway 395 (US 395) at the southern edge of the Lee Vining area in Mono County. It is located in a portion of the southeast quarter of the northwest quarter, and the southwest quarter of the northeast quarter of Section 14, Township 1 North, Range 26 East (MDBM). Figure 2 shows the location of the project area in Mono County.

b. **Project Objectives.** The objective of the project is to provide central Mono County with an inclusive resort facility that can draw upon north-south traffic traveling through Mono County as well as Yosemite-oriented visitor traffic traveling over Tioga Pass. The facility is to provide a complete range of services for the Mono Basin visitor including accommodations, meals, vehicle fuel, supplies, meeting/banquet rooms, and business center facilities. The resort hotel is designed to serve both the transient traveler and those whose destination includes the Mono Lake Basin or Yosemite National Park. The project is also intended to serve local residents with meeting facilities, a swimming pool that can be used by school swim teams and area swim clubs, and a full-service restaurant.

Implementation of the Specific Plan is intended to add to the area's economy through increased employment opportunities, provision of additional needed motel rooms during peak months, and provision of additional rental housing. Visually, the objective of the project is to blend into the natural setting through careful structure siting, and architecture and landscaping complementing the environment.

Objectives of Proposed Amendment #3 are to substantially increase workforce housing on the project site to provide housing for employees of onsite uses (hotel, full-service restaurant and other) as well as offsite land uses in the larger community; to achieve the development goals of the original 1993 Tioga Inn Specific Plan, adapted to current needs; to lower energy costs and increase the energy- and water-efficiency of existing and future uses on the project site; and to maintain onsite infrastructure in good condition and ensure that sizing is adequate to meet existing & future needs.

c. **Tioga Inn Project Description.** The 1993 Specific Plan area (refer to the site plan) encompassed 73.7 acres in gross land area. With the 1993 approvals, the project proponent subdivided the property into four parcels of various sizes. The division of land required a tentative parcel map, which was also part of the 1993 Specific Plan project. Parcel Map 34-35 had previously divided the property into two lots of 63.4 and 10.3 acres on each side of US 395. Amendment #3 would modify the overall project area and the individual parcel acreages as shown below in revised Table 4-6(A); note that the Table Letter reflects original numbering from the 1993 Specific Plan).

TABLE 4-6 (Table A): 1993 Specific Plan and Proposed Amendment #3 Parcel Sizes		
PARCEL	SIZE APPROVED IN 1993	ACREAGE PROPOSED IN AMENDMENT #3
1-Hotel	30.3	27.4
2-Restaurant	36.0	32.1
3-Store	2.4	2.7
4-Residential	5.0	6.8
Total	73.7	69.0

The parcel acreage changes are due to several factors. The acreage of parcels 1 and 2 was reduced when Caltrans purchased land from the Specific Plan owner for construction of additional lanes on US 395; the acreage of parcel 4 increased when land for a cell tower was added to the residential parcel. Further changes occurred during 2018 with the acquisition from Caltrans of a portion of the SR 120 right-of-way.

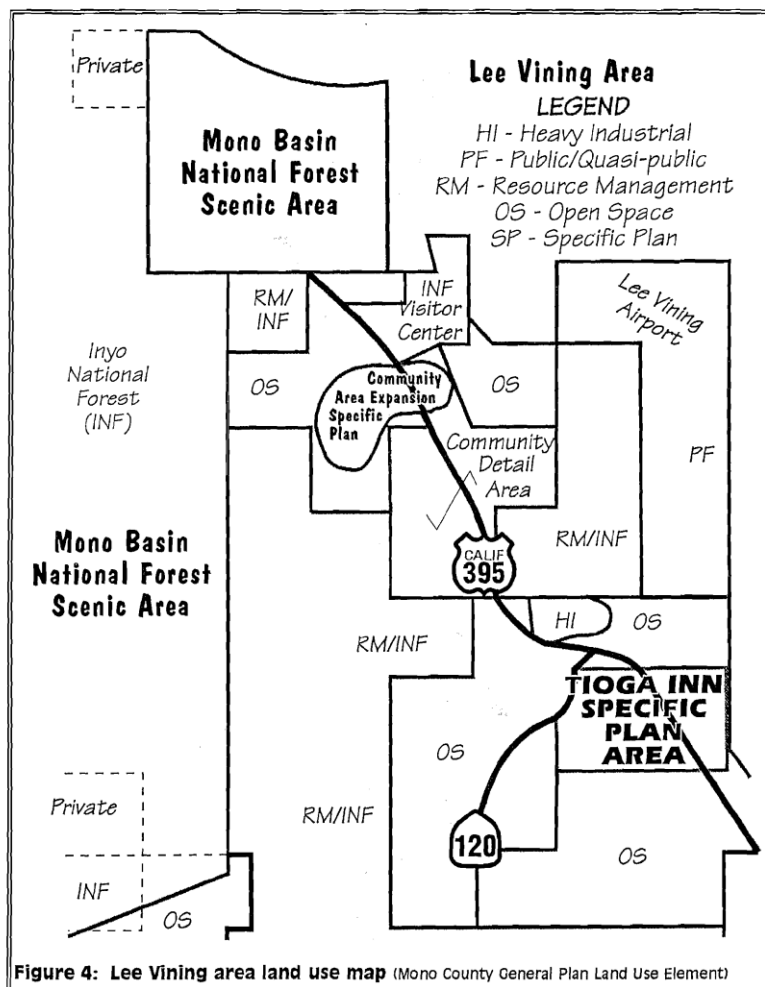


Figure 4: Lee Vining area land use map (Mono County General Plan Land Use Element)

Tioga Inn – Hotel and Accommodations. The hotel (refer to revised Figure 6) is to be located adjacent to Highway 120 on a relatively level bench about eight hundred feet south of the intersection with US 395. The hotel will contain 120 rooms, a coffee shop, banquet room, and a small retail gift shop primarily serving hotel guests. A swimming pool for hotel guests, with use by the local school and area swimming clubs, is also included. Parking for the hotel will be south of the structure, screened from view by the hotel building. Access from SR 120 will be on a common drive located immediately south of the parking lot at the bottom of a steep north-facing slope. The two-story hotel structure will be oriented in an east-west direction, presenting an end view to traffic on SR 120 and taking advantage of hotel room views to the north and northeast toward Mono Lake, and west toward Tioga Pass. The hotel roof will be designed to accommodate the most efficient use of solar panels.

Full-Service Restaurant. A sit-down restaurant is proposed to be located at the top of a ridgeline about five hundred feet east of the hotel. The difference in elevation between the location of the restaurant and US 395 offers an opportunity to provide views for patrons from the restaurant site while screening the structure from traffic on US 395. The restaurant will be built on the flat area on top of the ridge, with a parking lot screened by the terrain to the south and access from the same road as the

hotel. An observation deck will flank the northwest and northeast faces of the restaurant taking advantage of the panorama of Mono Lake, Tioga Pass and Mono Craters visible from that location. The restaurant will include seating for one hundred persons in the restaurant and lounge and a small gift shop/information center. The restaurant roof will be designed to accommodate the most efficient use of solar panels.

Hilltop Residential Area. A 6.84-acre parcel intended for ten residential rental housing units is proposed on the southwest corner of the subject property. This housing consists of two 2-bedroom one-story duplexes plus one 3-bedroom duplex, plus two 2-bedroom single family units, for a total of 8 units (two fewer units than were approved in 1993). Consistent with the 1993 approvals, access is taken via a private road near the top of the main access road leading up to the restaurant. Amendment #3 proposes to realign the access road to a long and more southerly (and sunnier) alignment, which will reduce the road gradient and reduce icing during winter months. The proposed new alignment follows a route that was previously graded and used for access by a previous site owner. The existing road would be retained and used for service vehicles and pedestrian movements. The residential property is not proposed for further subdivision. These units have been added to the County's rental housing stock. With the inclusion of the residential units, it has been possible for project employees to live onsite, meeting the Housing Element requirements.

A separate residential complex of 6 individual units was subsequently constructed south of the flagpole. This area, which was not a part of the 1993 Specific Plan or any later approval, would be demolished to make room for the workforce housing village proposed as part of Amendment #3.

Convenience Store, Deli and Gas Station. A smaller parcel immediately southwest of the hotel has been developed as a gas station/mini-mart. The gas station currently has two gas pumping islands and a small 4,800 square foot mini-mart. Parking areas are screened from highway views by buildings, terrain and landscaping.

Amendment #3 proposes the addition of a third gasoline pumping island with a total of 4 additional fuel pumps, one additional underground gasoline storage tank, an overhead canopy and lighting. While self-service gas is available year-round, the mini-mart and deli are currently open only during summer months; is expected that the mini-mart/deli and entertainment will in the future remain closed during winter months. Live outdoor events and music concerns are now and will continue to be held at the Deli during summer weekends.

The deli was added to the mini-mart in 1997, and formalized through a 2012 Director Review process that included a condition of approval stating, "No other commercial or retail space expansion will be permitted on the convenience store gas station parcel without a revision to the Tioga Inn Specific Plan." Proposed Specific Plan Amendment #3 includes standards and implementation measures for the deli. The deli currently has 16 indoor tables that provide seating for up to 88 people, and 80 outdoor picnic tables that provide seating for approximately 300 people (including visitors who do not patronize the deli or mini-mart). During summer, the deli serves approximately 2,000 people on an average day and up to 3,000 people per day during peak season. Additional parking is required to accommodate patrons to the deli. The project proponent anticipates that the construction of the full-service restaurant will reduce demands on the deli and help to accommodate the current parking overflow. The convenience store/deli has a second floor that houses a 1,500 square foot office space.

Workforce Housing Village. Proposed Amendment #3 includes a new workforce housing village occupying a portion of the 32.11-acre Parcel 2, on the southwest corner of the subject property. The workforce housing village is proposed to consist of up to 150 bedrooms in up to 100 units, with a mix of one-bedroom, two-bedroom, 3-bedroom and 4-bedroom units plus a manager's unit. The proposed residential area will include a manager's unit, a day care facility and common area, and a play area. These units will add to Mono County's rental housing stock and provide affordable housing for onsite employees. As such, the workforce housing responds to the Mono County Housing Element goal for developments of this type to provide opportunities for employee housing. No fewer than 200 parking spaces will be provided in the workforce housing complex to meet resident and guest parking needs. Access is proposed via a private road off the main access to the full-service promontory restaurant.

Equipment & Personal Storage Facility and Propane. Proposed Amendment #3 includes a new building up to 5,000 square feet in area for storage of project equipment and residents' belongings. Two outdoor parking spaces and the 30,000-gallon commercial propane tank will be housed on the same pad as the equipment storage facility.

Design and Landscaping Concepts. Architecturally, the hotel, restaurant, workforce housing, and gas station/deli/mini-mart will continue to carry the same theme. Exposed foundation areas will feature stone. The wall areas will be predominantly natural wood interfaced with stone. The roof areas will be earth-tone or green metal.

Manicured and introduced landscaping (as proposed in the updated conceptual landscape plan described in Table F) for all sites will be minimal and native compatible. The introduced plant species will continue to be limited to primarily decorative landscaping in and around the buildings and parking lots. Planters adjacent to the hotel and gas station/mini-mart and immediate surrounding areas are also proposed. Landscaping around the residential housing and proposed workforce housing village will be native, low-maintenance shrubs and small trees. All onsite plants will be irrigated through a subsurface drip system using treated effluent from the package treatment plant. The existing septic tank will be decommissioned and the existing leach field will be used for disposal of treated effluent during the winter months when use of the subsurface irrigation system is suspended due to freezing conditions.

The native sagebrush on the ridges and hillsides will be preserved and areas disturbed for installation of facilities or during construction will be revegetated with low profile indigenous plants selected to optimize deer forage. The exception to this will be the area viewing the pumice processing facility. This viewshed – located to the northeast of the hotel – will be

planted with taller trees to block the view of the US Pumice facilities from the Tioga Inn. All facility roofs will be designed to accommodate use of solar panels.

Project facilities and services. Project facilities and services for the Tioga Inn Specific Plan are described below. Most are now or are proposed to be private systems, designed to serve project needs. Several systems may be expanded to serve off-site customers and land uses; these include propane, water (which is provided for use at the Lee Vining Airport), and solar power (to the extent that the future solar panels generate more electricity than can be used on site). Facilities and services are briefly described below.

Transportation. The site plan (see Figure 3.3 in EIR §3.0, the Project Description) shows the location of the roads, driveways and parking areas. These are the “major” components of the public and private transportation system. The road system is described further in the Traffic element of the Specific Plan beginning on page 58. “Intensity and extent” means location and width.

Water Supply and Storage: Water supply is derived from two wells located east of Highway 395, including one well that was constructed following approval of the Tioga Inn Specific Plan, and a second well that was constructed late in 2017. Each well has been shown to produce a suitable volume of potable water, individually, to serve existing and proposed uses on the project site. Both wells connect to an existing 300,000-gallon steel storage tank near the hilltop housing on the southwestern site boundary. Amendment #3 proposes replacement of the existing water storage tank with a new 300,000-gallon tank located in the same area as the existing tank, which will be demolished. Replacement of water storage tank is proposed to increase reliability of the water storage capability. An updated aquifer study and an Antidegradation Analysis have been completed as part of this 2019 SEIR to determine whether well production would have potential to impact surrounding wells and to assess project impacts on water quality standards of the LRWQCB. Results are presented and analyzed in EIR §5.2. Water system elements will continue to meet all applicable requirements of the Mono County Health Department, the Lee Vining Fire Protection District, and the Lahontan Regional Water Quality Control Board.

Open Space. As discussed below under ‘Open Space Lands and Designations’, development restrictions in the form of open space easements are proposed for the portion of the project located east of US 395 and the steep slope adjacent to and facing US 395. Development in these areas will allow underground utility lines, two moderately illuminated monument signs below the restaurant, and appurtenant features such as a well housing, electric equipment shed, or utility related facilities. A water main will be constructed under US 395 through existing pipe sleeves from the well site. Sewage disposal systems’ expansion areas may cross under the highway to the site at some time in the future.

Sewage. Sewage disposal is currently handled by standard septic tank/leach field systems for each separate land use area in conformance with Mono County Health Department and Lahontan Regional Water Quality Control Board (RWQCB) standards. A new wastewater treatment system will be provided as part of the proposed Amendment #3. The system will replace the existing septic tank treatment system, and will include a new subsurface irrigation system for use during the summer season. A septic leach field system will be retained for disposal of surplus treated effluent, primarily during the low-flow winter months.

Solid Waste: Solid waste on the property is stored in commercial dumpsters located within screened areas adjoining each of the project buildings, and at a separate screened area for refuse cans serving the residential development. Refuse is collected by a commercial disposal service recognized by Mono County for delivery of such service. Amendment #3 calls for continued use of commercial dumpsters in bear-proof structures that would be constructed adjacent to the hotel and restaurant, with separate collection facilities (also bear-proof) for the workforce housing area. Refuse will continue to be collected by a commercial disposal service recognized by Mono County for delivery of such service.

Drainage: The stormwater retention system proposed for the project is based on the Town of Mammoth Lakes’ 1984 Storm Drain Design Manual and developed to meet requirements of LRWQCB and Mono County. The system is designed to accommodate uses now proposed (as analyzed in the current Subsequent EIR) as well as the previously-approved but unbuilt hotel and promontory restaurant. Retention volume calculations are based on storm water volume less storm water infiltration. Onsite soils are sandy, and a conservative infiltration rate of 5 minutes per inch was used to calculate retention volumes. The resulting retention volume calculations include 11,246 cubic feet (cf) for the workforce housing and restaurant components, plus 9,947 cf for the hotel. The report notes that if the restaurant is constructed separate from the housing, separate retention basins will be installed for each use. Three-48” storm drain pipes will be installed for

the hotel (with a total basin length of 167'), and 3-48" pipes will be installed for the workforce housing (with a total basin length of 188 feet). Storm drainpipes will be perforated.

Runoff treatment will be accomplished in four bioswales that will be located in landscaped areas of the parking lot. The bioswales will be constructed in accordance with standard LID design, and planted with drought-tolerant plant species. Other means of treatment may include installation of oil removal inserts into the inlets, or a separate oil treatment unit.

Communications: All telephone and cable and internet services on the site are wireless. Verizon Wireless installed a cell tower on the project site in 2007 and the site is also connected to the 'open access network' created by Digital 395.

Energy: Energy for the project will be provided by Southern California Edison for electricity, augmented by electricity produced in the onsite solar energy panels. All non-solar electrical utilities will continue to be placed underground. Project elements will emphasize the energy-efficient products and practices of Energy Star, a joint program of USEPA and the U.S. Department of Energy. Private contractors will provide propane to the site. As part of Amendment #3, the applicant proposes to replace the 5 existing propane tanks (2,500-gallons combined) with a new 30,000-gallon propane tank; the new tank will have capacity to meet all existing and future propane requirements on the Tioga site, and to provide propane services to the larger Lee Vining community (all offsite deliveries would be trucked to customers; no distribution pipelines to the community are proposed). The propane tanks will be sited in conformance with the Uniform Building Code and the Fire Code. Screening – such as designed fencing or landscaping -- will be used to mitigate visual impacts of the tanks.

Open space lands and designations. Areas designated as "open space" are proposed to be retained in a natural condition. Three open space designations are proposed. (1) The *Open Space – Preserve* designation is generally intended for lands that cannot be developed as part of the project. (2) The *Open Space – Facilities* designation is for lands on which no surface construction will take place, other than small structures to provide access to underground utilities. The *Open Space – Facilities* designation provides an open visual area, but does allow some surface disturbance. The third designation is *Open Space – Support Services*. This designation provides the locations [for] certain above ground facilities, such as the water tank, an outdoor yard storage area, and the well house(s).

Proposed Specific Plan Amendment #3 would modify the acreage in each of the open space designations shown in the 1993 Specific Plan; the changes would increase overall open space acreage by 0.7 acres, all within the Open Space-Preserve designation. Changes in the acreage of designated open space areas are shown in Table 3-5.

TABLE 4.7. Proposed Changes in Open Space Acreage			
Open Space Designation	1993 Specific Plan	Specific Plan Amendment #3	CHANGE
OS-Preserve	14.8 acres	27.8 acres	(+) 13.0 acres
OS Facilities	13.2 acres	12.3 acres	(-) 0.9 acres
OS Support	18.5 acres	7.1 acres	(-) 11.4 acres
TOTAL	46.5 acres	47.2 acres	(+) 0.7 Open Space Acres

Phasing. As originally planned, the project was to be developed in phases based on the expectation that each component of the Specific Plan would be dependent upon development of the infrastructure to serve the hotel and its related facilities. The Tioga Inn's primary infrastructure – road access, and water supply – was to be constructed in concert with the construction of the convenience store and gas station.¹⁰ Sewage disposal systems was anticipated to be constructed with the appropriate land uses and it was envisioned that each use on the project would have an independent disposal system. It was anticipated that some of the infrastructure components that are related only to one aspect of the project – for example, the road to the residences – would be constructed as a part of that phase. This phasing concept was largely retained following approval of Amendment #1, in which the Specific Plan provided that the project would be developed in the following progression.¹¹

TABLE 4-8 (B). Original Project Phasing

¹⁰The original Specific Plan provided that the project be developed in a four-phase progression that would begin with the hotel, followed by the residences, the convenience store/gas pumps, and the full service restaurant. Specific Plan Amendment #1 changed the phasing to allow for the building of a convenience store before the hotel (see Table 3-2).

¹¹ No timelines or time limits are established on when the phases occur, as long as the phases occur in this order.

Phase and Facility	What's Included
I. Convenience Store, Deli, and gas pumps	Convenience market, deli, fuel pumps, underground gasoline storage tanks, picnic area, restrooms, accessory facilities, lighting, signage, landscaping, parking, water supply, sewage disposal system
II. Hotel and Accessory Uses	Tioga Inn hotel, conference rooms, swimming pool and facilities, banquet room, coffee shop; water supply, septic system, improvements to Hwy 120 intersection with project; lighting, signage, landscaping; parking
III. Residences	A maximum of ten residential units; water supply, sewage disposal system, access, accessory structures such as garage, personal storage sheds, landscaping
IV. Full Service Restaurant	Restaurant, observation deck, signage, landscaping, accessory facilities, parking, water supply, sewage disposal system.

In practice, the convenience store and gas station and deli were constructed first (as approved), followed by the hilltop residences. Neither the hotel nor the full-service restaurant has been constructed to date. It is anticipated that the entire development will be constructed within 5 years, or by 2024. Initial construction would likely focus on the new gas pump island, infrastructure improvements (sanitation, water storage, propane tank), and construction of the promontory restaurant and hotel. Some of the proposed workforce housing area may be developed in advance of the hotel and the full-service restaurant in order to provide housing for project construction workers. Occupancy would shift to onsite employees upon completion of the hotel and restaurant elements. Infrastructure would be constructed to meet the development sequence of approved uses.

Sustainability. The project will comply with California GHG emission standards by adopting applicable elements of the updated Mono County General Plan (including Low Impact Development, Green Development Guides, and the Resource Efficiency Plan) as part of the design and development process. Roofing will be preferentially constructed in a south-facing direction to maximize the use of solar panels. The new package wastewater treatment system will provide higher quality treated effluent than the septic system. Landscape irrigation will be accomplished through a new subsurface irrigation system using treated effluent from the package waste treatment plant. Potable water supplies will be used for irrigation only where required for public health. The provision of onsite workforce housing will minimize home-to-work traffic and fuel consumption; fuel consumption will also be minimized by use of high 'R-Value' insulation in the workforce housing units, use of Energy Star appliances, LED lighting, and the provision of a wide range of onsite employee facilities (laundry, storage, space for group child care services).

d. Use of the EIR and Approvals Required.

Other Agencies that may use the EIR. A complete list of all agencies that are expected to make use of the EIR when considering future permits for the project is provided in EIR §3.0 (Project Description), subsection 3.9.2 (Other Agencies that may Use the EIR), Table 3-7 (Use of this Subsequent EIR by Other Agencies). As noted therein, 8 Responsible and Trustee agencies have been identified including the California Regional Water Quality Control Board-Lahontan Region, the State Water Resources Control Board-Division of Drinking Water, the California Department of Transportation, California Department of Fish and Wildlife, California Department of Forestry, Mono County Department of Environmental Health, Lee Vining Fire Protection District, and the Federal Aviation Administration.

Mono County Discretionary Approvals Required. Mono County will consider the following discretionary actions for the Tioga Inn project proposal:

Certification of the Environmental Impact Report. The 1993 Specific Plan was consolidated with an environmental impact report, and the proposed Specific Plan Amendment #3 is consolidated with a Subsequent EIR that builds upon the original 1993 documents. Both EIRs provide a range of mitigation measures that will eliminate or reduce potentially significant environmental impacts. These "conditions" or mitigation measures are incorporated into the Specific Plan and into project discretionary actions as formal conditions of approval (including policy and implementation programs). The SEIR must be certified by the Board of Supervisors prior to taking action on the proposed Specific Plan Amendment #3. Certification of the EIR is a separate action from approval of the project.

Actions associated with the Specific Plan. (1) The proposed Specific Plan Amendment #3 will be the subject of a public hearing and recommendation from the Planning Commission, and a public hearing and action by the Board of Supervisors. The County may deny approval of the proposed Specific Plan Amendment #3, it may approve the amended Plan as submitted, or it may approve a modified version of the amended Specific Plan. If the County takes action to approve the proposed Plan Amendment #3 or a modified version of the amended Plan, and if the SEIR identifies one or more significant and unavoidable impacts, the Board must then adopt a Statement of Overriding Considerations explaining why the impacts and mitigations have been approved despite the fact that significant and unavoidable impacts remain. (2) The Specific Plan district was adopted for this project site as part of the 1993 approvals, and will remain valid whether the current proposed amendment #3 is approved or denied. (3) Modifications to the tentative parcel map (to adjust the boundaries and acreage of the four parcels) must be approved by the Planning Commission.

Approval of a Mitigation Monitoring and Reporting Program (MMRP) with assignment of enforcement responsibility in conformance with the Mono County Environmental Handbook. If the SEIR identifies mitigation measures, the approval of the Specific Plan may incorporate some or all of those measures. If the mitigation measures are a part of the project approval, the County and proponent must enter into a program that provides for monitoring and enforcement of the adopted measures. The program must also assign compliance responsibility.

4.4.3 ENVIRONMENTAL SETTING

4.4.3.1 Mono County and Lee Vining Setting

Mono County is located in eastern California between the Sierra Nevada mountains and the State of Nevada. The County is relatively isolated from most major metropolitan areas in California. Reno, Nevada, approximately 120 miles to the north on US 395, is the closest major city.

The Mono County economy is predominantly recreation-oriented. The County offers skiing, camping, hunting, fishing and other visitor-activities. In 1992, the County had an estimated population of 10,403, an increase of 4.5% over the 1990 Census population of 9,955 full-time residents (Dept. of Finance, 1992). The Census Bureau estimates that the county population had increased to 13,981 by July 2016. More than half the population (7,994 residents) now resides in the County's only incorporated community, Mammoth Lakes. Lee Vining, the unincorporated community where the project is located, had a 2010 population of 222 full-time residents (<http://censusviewer.com/city/CA/Lee%20Vining>), down from the 1990 population of 285 full-time residents.

Lee Vining, the unincorporated community where the project is located, had a 1990 population of 285 full-time residents, an increase of fourteen percent from 1980. The Lee Vining population declined to 222 residents as of the 2010 Census. Lee Vining is a summer staging area for visitors to Yosemite National Park; the east gate to the Park on SR 120 is closed in the winter. The community overlooks Mono Lake. Most visitors to the Lee Vining area are from southern California and are visiting Mono Lake, Bodie State Historic Park, and in the summer Yosemite National Park.

4.4.3.2 Consistency with Plans

Mono BasinThe Mono Basin Community Plan¹² is a community-based plan to guide future land use, development, and quality-of-life decisions for the Mono Basin communities of Lee Vining and Mono City. The Plan identifies 6 key elements, all of equal importance, as summarized herein: (1) Small, compact communities with a clear edge between developed and natural areas; (2) Safe, friendly communities where people interact and feel connected, (3) A sustainable economy with diverse job opportunities that offers year-round employment and competitive wages. (4) Recreation opportunities and access that highlight our exceptional outdoor venues. (5) A healthy natural environment with clean air and water, scenic grandeur, dark night skies,

**Table 4-9 (D): LEE VINING AREA
CENSUS DATA**

	1980	1990	2010
Population	250	285	222
Households	102	120	85
Average Age	29.3	33.9	30.4
Avg. HH Income	\$20,498	\$33,000	\$45,500
Persons/HH	2.45	2.38	2.62

Population Distribution by Age (percent)

Under 18	21.4
18-21	6.0
21-29	12.3
30-44	37.5
45-54	10.9
55-64	6.3
65+	6.0

HH means "household"

Sources: 1990 & 2010 Census, 93541 Zip Code,

¹² Mono County website, http://www.monocounty.ca.gov/sites/default/files/fileattachments/rpac_-_mono_basin/page/981/mb_plan_rpacfinal_06.13.12.pdf.

pristine wilderness and open space. (6) Historic uses and character that recalls and re-creates the vitality, strength and character of the Mono Basin. The Tioga Inn development to date, and the proposed Amendment #3, are in conformance with these goals.

The subject property is an orderly extension of the Lee Vining community area. Although surrounded by lands in public ownership, it is one of the larger privately-owned parcels that can be developed with the services and facilities needed to provide additional visitor services to the Mono Basin area. Other regional plans include the Inyo National Forest Land and Resource Management Plan – which proposes concentrated recreation activities on parcels adjacent to the project – and the Mono Basin Scenic Area Comprehensive Management Plan, which protects the scenic values of that area.

4.4.3.3 Site Characteristics

The terrain is gently to steeply sloping over the east-west course of the property. There are several natural benches on the property upon which all development is proposed. The area is generally scrub vegetation with a predominance of sagebrush. Several scattered pine trees are onsite as well.

Access to the subject property can be derived from either SR 120 or US 395. The proponent proposes to limit general vehicle access to SR 120 as previously negotiated with Caltrans, and has acquired the Caltrans easement along SR 120 west of the property entrance.

The subject property has been used for sheep grazing in the past. It is possible that this activity historically altered the species composition of cover vegetation in the area. The agricultural use of the area was terminated prior to approval of the 1993 Specific Plan.

4.4.3.4 Rare and Unique Environmental Resources

The Tioga Inn and its facilities are located on a small parcel that is a part of the Mono Basin. The general area contains numerous rare and endangered plant and animal species. Some of California's unique geologic formations are accessible to area visitors. There is an abundance of wildlife and fisheries in the general vicinity. The Lee Vining area expresses extraordinary pride in the unique and significant views of the natural scenery. Analyses prepared for the 1993 Specific plan and its EIR determined that none of the unique, rare, or endangered resources are located on or in close proximity to the Tioga Inn parcel. Analyses prepared for Specific Plan Amendment #3 indicate that the proposed changes would have significant and potentially unavoidable adverse impacts on migrating deer; all other impacts can be reduced to less than significant levels through mitigation measures outlined in the EIR.

4.4.4 Specific Plan Goals, Policies and Implementation Programs¹³

4.4.4.1 Land Use

Goal 1: Enhance visitor-oriented services in the Lee Vining Area.

Policy 1a: Provide flexibility in the project to accommodate multiple uses on Specific Plan parcels.

Implementation measure 1a(1): Permit the land use designations "Hotel," "Full Service Restaurant," "Residential," "Convenience Store/Deli/Fuel Sales," "Open Space-Preserve," "Open Space-Facilities," "Open Space-Support," and "Workforce Housing" to be the land use designations of the Tioga Inn Specific Plan.

Implementation measure 1a(2): Limit the siting of the land uses to the parcel designations and locations shown on amended Figure 7 (Exhibit 4-1).

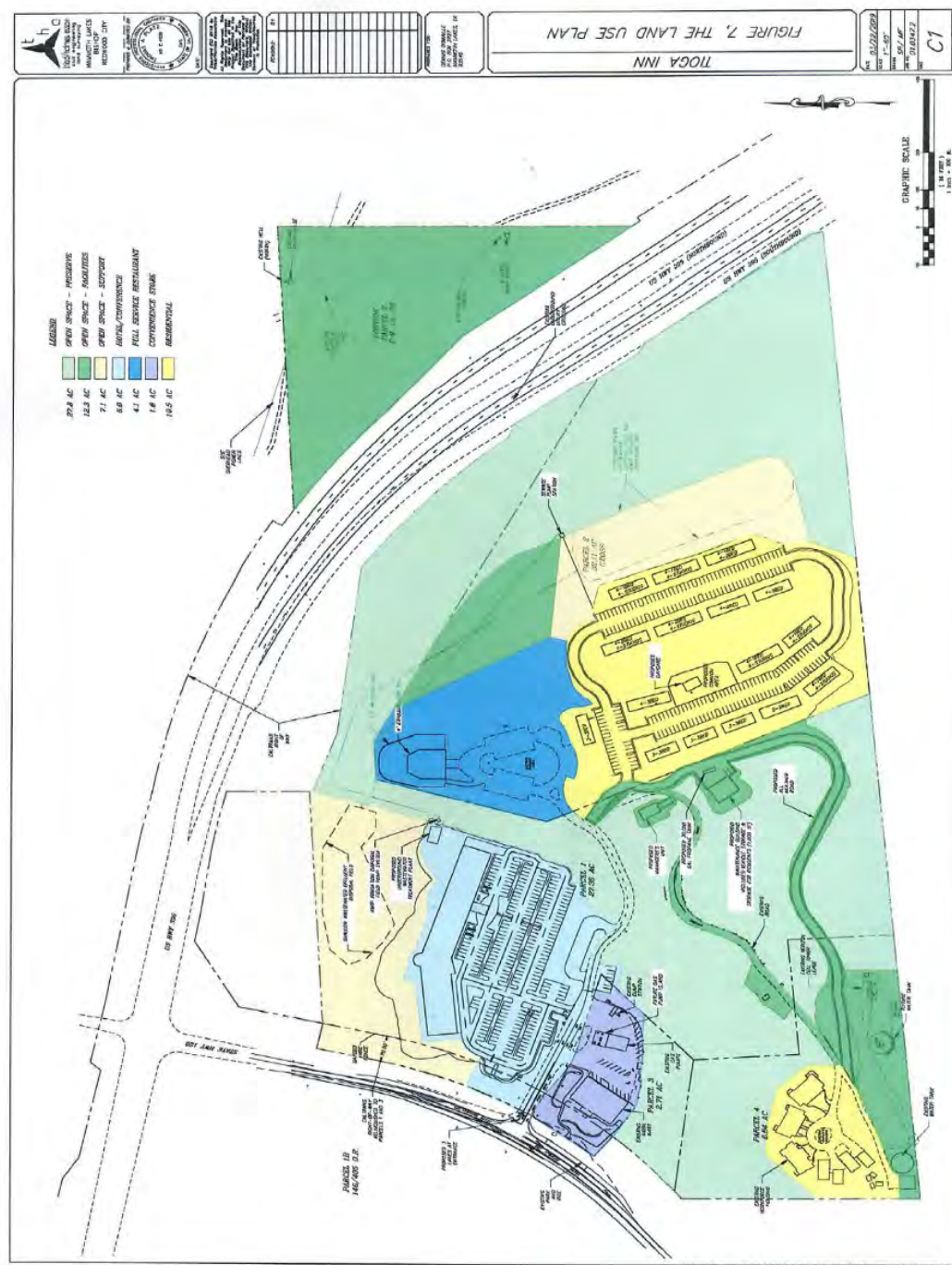
Policy 1b: The Hotel land use designation shall permit the following land uses:

¹³ Note: the 1993 project approvals included FEIR certification and Tioga Inn Specific Plan approval. The Tioga Inn Specific Plan established zoning and the General Plan uses and standards for the project site.¹³ The approved land use designations included "hotel," "full-service restaurant," "residential," "convenience store/fuel sales," "open space-preserve," "open space-facilities," and "open space-support." Several of the approved uses were developed soon after the 1993 approvals, including the residential units, the convenience store/fuel sales, and the open space uses. The hotel and full-service restaurant are anticipated to be developed by 2023.

Implementation measure 1b(1): The Hotel land use permits a facility with a maximum of one hundred and twenty rooms for overnight guests. The Hotel facility land use allows the following accessory uses:

- Banquet, meeting room facilities with dividers for a maximum of 250 persons
- A coffee shop with a maximum capacity of 50 persons
- Kitchen and food preparation facilities
- Retail shop containing items typically needed or desired by guests at a hotel facility – including and not limited to toiletries, reading materials, souvenirs, and prepackaged snack items

EXHIBIT 4-1. SITE CONTEXT MAP. To view the full image please visit <https://www.monocounty.ca.gov/planning/page/tioga-inn-specific-plan-seir>



- Swimming pool and spa (indoor or outdoor). The pool may be made available for use by local schools and swimming clubs
- Parking facilities, uncovered
- Appurtenant service and delivery bays, storage areas, and trash receptacle area. These include offices, storage areas, and loading dock.
- Resident manager's apartment
- Guest-oriented business center
- Outdoor kennel for pet control
- Laundry room with coin operated machines for guest convenience
- A public restroom/shower/laundry facility may be permitted
- Other uses that are similar in nature, typically associated with the primary land use, and equal to or less in intensity – subject to individual review and approval by the Planning Director.

Implementation measure 1b(2): Site development standards for the Hotel land use designation shall be:

- Maximum building height: thirty feet (30') from the top of the stem wall to the top of the roof line. Chimneys, gables, solar panels and snow control devices shall not be counted in the height calculation.
- Building envelope: The hotel and parking lot shall be sited in substantial conformance with the location of the facility as shown in Figure 7.
- Waste disposal containers: Shall be fitted with bear-and raven-exclusion devices.
- Parking Requirements:
 - A minimum of one (1) standard-sized vehicle parking space for each guest room, plus two spaces for resident manager's quarters.
 - A minimum of two (2) bus or recreation vehicle-sized parking spaces.
 - A minimum of one (1) parking space for each two projected employees.
 - Parking shall be paved and striped in conformance with the Mono County Code prior to the use or occupancy of the hotel.
- Location of mechanical equipment, telecommunications antennae: All mechanical equipment (heating, ventilation, air conditions and similar exterior mechanical equipment) located outside of the structure shall be sited so that the equipment cannot be seen from SR 120 or US 395. No roof mounted antennae shall be permitted to be higher than the roofline.
- The public restroom/shower/laundry facility shall not exceed 20 feet in height, shall not exceed 1,500 square feet of interior floor space, and shall not exceed an occupancy load of 30 persons.
- All exterior lighting shall conform to Mono County Dark Sky regulations.
- Signs – *See Master Sign Plan.*

Policy 1c: The Full-Service Restaurant land use shall permit the following land uses:

Implementation measure 1c(1): The Full Service Restaurant designation permits a freestanding full service restaurant with a maximum of one hundred (100) seats in a maximum five thousand (5,000) square foot interior dining area, not including offices, kitchen, food preparation or storage areas. The restaurant facility shall be entitled to include both an interior sit-down eating area and an exterior sit-down eating area on the observation deck, and interior and exterior areas serving as a cocktail lounge. Accessory uses permitted shall include:

- Retail gift shop and information center. The gift shop shall be limited to items typically needed or desired by restaurant guests such as packaged snacks and candies, maps, area information and souvenirs
- Parking, including parking spaces for recreation vehicles, vehicles towing trailers, and tour busses
- Public observation deck
- Appurtenant service and delivery bays, storage areas, and trash receptacle area
- Other uses that are similar in nature, typically associated with the primary land use, and equal to or less in intensity – subject to individual review and approval by the Planning Director.

Implementation measure 1c(2): Site development standards for the Full Service Restaurant use shall be:

- Maximum building height: twenty feet (20') from the top of the stem wall to the top of the roof line. Chimneys, gables, solar panels and snow control devices shall not be counted in the height calculation
- Building envelope: The restaurant and parking lot shall be sited in substantial conformance with the location of the facility as shown in Figure 7.
- Waste disposal containers: Shall be fitted with bear-and raven-exclusion devices.
- Parking Requirements:
 - A minimum of fifty (50) standard-sized vehicle parking spaces
 - A minimum of two (2) bus or recreation vehicle-sized parking spaces
 - A minimum of five (5) spaces for vehicles towing trailers shall be provided.
 - Parking shall be paved and striped in conformance with the Mono County Code prior to the use or occupancy of the restaurant.
- Location of mechanical equipment, telecommunications antennae: All mechanical equipment (heating, ventilation, air conditions and similar exterior mechanical equipment) located outside of the structure shall be sited so that the equipment cannot be seen from SR 120 or US 395. No roof mounted antennae shall be permitted to be higher than the roofline.
- One flagpole shall be allowed on the restaurant parcel. Flagpole shall not exceed 20 feet in height. The maximum area of the flag shall be 40 square feet. Illumination is not permitted.
- All exterior lighting shall conform to Mono County Dark Sky regulations.
- Signs – *See Master Sign Plan.*

Policy 1d: The Convenience Store/Deli/Fuel Sales land use shall permit the following land uses:

Implementation measure 1d(1): The Convenience Store/Deli/Fuel Sales designation shall include the following uses:

- A retail store, deli and fuel purchase facility not exceeding 6,835 square feet of gross floor area, including offices, kitchen, food preparation and sales, and storage areas.
- An office, not to exceed 1,500 square feet, as part of the Convenience Store/Deli/Fuel sales.
- A maximum of three fuel islands, each with four multi-grade dispensing stations and overhead canopies with lighting for a total of twelve pumping stations.
- Picnic area sited in conjunction with the scenic turn-out
- Public restrooms
- Parking areas, including spaces for recreation vehicles, vehicles towing trailers, and tour busses
- Appurtenant service (not including vehicle service or repair) and delivery bays, storage areas, publicly accessible air supply, vehicle water supply, trash receptacle area
- Facility for the disposal of sewage from recreational vehicles (an RV “dump” station)
- Underground fuel tanks (one per fuel island).
- Other uses that are similar in nature, typically associated with the primary land use, and equal to or less in intensity – subject to individual review and approval by the Planning Director.
- Live indoor and outdoor music events and concerts shall be permitted in the Convenience Store/Deli/Picnic areas.

Implementation measure 1d(2): Site development standards for the Convenience Store/Deli/Fuel Sales land use designation shall be:

- Maximum building height: twenty feet (20') from the top of the stem wall to the top of the roof line. Chimneys, gables, solar panels and snow control devices shall not be counted in the height calculation.
- Building envelope: The convenience store, fuel islands, and site parking lot shall be sited in substantial conformance with the location of the facility as shown in Figure 7.
- Waste disposal containers: Shall be fitted with bear-and raven-exclusion devices.
- Parking Requirements:
 - A minimum of ten (10) standard-sized vehicle parking spaces.

- A minimum of two (2) bus or recreation vehicle-sized parking spaces.
- A minimum of two (2) spaces for vehicles towing trailers.
- Parking shall be paved and striped in conformance with the Mono County Code prior to the use or occupancy of the hotel.
- Location of mechanical equipment, telecommunications antennae: All mechanical equipment (heating, ventilation, air conditions and similar exterior mechanical equipment) located outside of the structure shall be sited so that the equipment cannot be seen from SR 120 or US 395. No roof mounted antennae shall be permitted to be higher than the roofline.
- All exterior lighting shall conform to Mono County Dark Sky regulations.
- Signs – *See Master Sign Plan.*

Policy 1e: The **Residential** land use designation shall be implemented as permitting the following land uses:

Implementation measure 1e(1): The Residential land use permits a maximum of ten residential dwelling units. The units may be constructed in a configuration of either single-family residences, or five (5) structures with two dwelling units (duplex).

- Accessory uses shall be limited to one storage building of not more than two hundred square feet per dwelling unit. Accessory buildings shall be constructed in a compatible architectural style to the main building if the accessory structure is visible from SR 120 or US 395.
- Attached private garage or covered parking shall be permitted
- Home businesses in conformance with the single-family residential zoning district provisions of the Mono County Code shall be permitted
- One or more of the residential units may be made available as employee housing
- No signs shall be permitted
- Other uses that are similar in nature, typically associated with the primary land use, and equal to or less in intensity – subject to individual review and approval by the Planning Director.
- All exterior lighting shall conform to Mono County Dark Sky regulations.

Implementation measure 1e(2): Site development standards for the Residential land use designation shall conform to the requirements of the Mono County Code for the Multi-Family Residential, Low (MFR-L), Moderate (MFR-M), High (MFR-H) zoning district. The residential units shall be constructed within the building envelopes identified on the Site Plan whether the units are attached duplexes or detached single-family homes. Private kennel facilities or fenced areas for pets shall be permitted in the residential area to restrain the pets from reaching deer foraging areas.

Implementation measure 1e(3): The area on which residences are sited shall not be further subdivided.

Policy 1f: The **Workforce Housing** designation shall permit the following land uses:

Implementation measure 1f(1): The Workforce Housing land use permits a maximum of 150 workforce bedrooms and approximately 100 workforce units. Units will be designed with the flexibility to accommodate changes in the mix of studio, 1-bedroom, 2-bedroom and 3+-bedroom units; this may increase or decrease the unit count, but the number of bedrooms shall not exceed 150. The workforce units may be constructed in a configuration of single structures, or structures with two (duplex) or three (triplex) dwelling units, or in apartment structures.

- Accessory buildings shall be constructed in an architectural style that is compatible with the main building, if the accessory structure is visible from SR 120 or US 395.
- Uncovered parking for residents and guests shall be provided at a minimum ratio of 1.75 spaces per workforce unit
- Onsite child-care facilities shall be permitted
- A recreational/social/picnic/BBQ/play area and structure shall be permitted.
- Shared laundry facilities shall be permitted.
- Home businesses in conformance with the multi single family residential zoning district provisions of the Mono County Code shall be permitted

- Workforce housing must be occupied by persons working at onsite or offsite businesses and locations, and may include one or more units for occupancy by a housing manager(s) and their family(ies).
- Workforce housing shall be reserved for exclusive use by employed persons and their families.
- Shared kennel facilities or fenced areas for pets shall be permitted in the workforce residential area, provided that such facilities and fenced areas must be designed to prevent pets from reaching deer foraging areas.
- Residents shall be required to keep pets on leashes at all times when outside of fenced areas; enforcement of this regulation shall include eviction following two advisory noncompliance notices by the housing manager.
- Short-term (i.e., for less than 30 days) and transient rentals are prohibited.
- All exterior lighting shall conform to Mono County Dark Sky regulations.
- Other uses that are similar in nature, typically associated with the primary land use, and equal to or less in intensity – subject to individual review and approval by the Planning Director.

Implementation measure 1f(2): Site development standards for the Workforce Housing land use designation shall conform to the requirements of the Mono County Code for the Multi-Family Residential-High (MFR-H) zoning district. The “MFR-H” designation is intended to encourage multifamily units by allowing for higher population densities and to provide for commercial lodging facilities; i.e., hotels, motels.

Implementation measure 1f(3): The residential units shall be constructed in the locations identified on the Site Plan, regardless of the size or type of the workforce residential unit.

Implementation measure 1f(4): Solar panels shall be permitted on any and all workforce housing structures.

Implementation measure 1f(5): The land on which the workforce housing units are sited shall not be further subdivided.

Policy 1g: The **Open Space-Preserve** designation shall permit the following uses.

Implementation measure 1g(1): Improved or undisturbed landscaped areas consisting of native materials shall be a permitted part of the open space-preserve group.

Implementation measure 1g(2): With one exception for a water pump control structure (see Implementation Measure 1g(3) below), physical development within Open Space-Preserve areas is limited to underground utilities. New overhead utilities shall be classified as surface structures and are not permitted in this classification, except that existing overhead utility lines may be retained. Snow storage shall be permitted.

Implementation measure 1g(3): Permitted uses shall include underground leach tanks, underground sewage/reclaimed water pipelines, underground reclaimed water irrigation lines, one above-surface sewage/reclaimed water pump control structure with up to 100’ feet of area, and other underground utility structures.

Implementation measure 1g(4): With the exception of the sewage/reclaimed water pump control structure (maximum 100 square feet), no above ground structures of any type shall be permitted in the Open Space-Preserve designation as shown on Figure 7.

Policy 1h: The **Open Space-Facilities** designation shall permit the following uses.

Implementation measure 1g(1): The Open Space-Facilities land use is intended to provide a land area for private utility service development. All of the uses permitted within the Mono County General Plan Open Space designation are permitted in the Facilities designation. In addition, above-ground and subsurface appurtenance structures, such as the wastewater treatment system, the well houses, a building (up to 5,000 square feet) for storage of project equipment and residents’ belongings, a pad for the propane tank, and other similar uses are also permitted. The land use shall also permit an on-site nursery for the

purpose of growing and cultivating replacement landscaping, increasing transplant capacity of native species, and growing flowers or other landscape amenity storage.

Policy 1i: The **Open Space-Support** designation shall permit the following uses.

Implementation measure 1h(1): The Open Space-Support designation is intended for accessory type buildings that are used for storage of supplies and equipment, a kennel for guests' pets, stable or horse corral, parking area expansion when and if needed, and other similar uses. Examples of accessory buildings include the buildings for storing snow removal equipment, amendments and nutrients for introduced landscaping, wastewater treatment, the water storage tank (existing and proposed replacement tank), and irrigation supplies. These identified sites would permit construction of small utility structures and storage sheds, provided that the facilities are not generally visible within the scenic view corridors from SR 120 and US 395. The land use shall also permit an onsite nursery for the purpose of growing and cultivating replacement landscaping, increasing transplant capacity of native species, and growing flowers or other ornamentals; final design of the nursery would be subject to Director Approval.

4.4.4.2 Facilities and Services

Goal 2: Ensure adequate facilities for the Specific Plan development

Policy 2a: All applicable permits shall be obtained for all gasoline, water production, water storage, propane, wastewater treatment and disposal, and subsurface irrigation facilities.

Implementation measure 2a(1): Prior to the issuance of any building permits, the Planning Director shall receive verification from the Mono County Health Department that the proponent has received applicable permits for all infrastructure improvements (water, water storage, gasoline, propane, wastewater treatment and disposal, and subsurface irrigation and any other relevant infrastructure components). This measure shall not apply to the construction of onsite storage buildings for security of supplies and materials.

Implementation measure 2a(2): Prior to the issuance of a certificate of occupancy for any development facilities, with the exception of storage facilities, the Planning Director shall receive a letter from the Mono County Health Department indicating that all water and wastewater facilities have been constructed to the satisfaction of the department.

Implementation measure 2a(3): The subsurface irrigation and all supply infrastructure will be maintained and operated so that it does not cause sustained surface wetting either due to leaks or to over-burdening of the system by operating it above its designed capacity.

Implementation measure 2a(4): Irrigation on any and all Specific Plan parcels shall be limited to subsurface irrigation (via the subsurface irrigation system or the septic disposal system, depending on season) and hand watering, on a year-round basis. Spray irrigation shall not be permitted in any areas of the project site except the lawn and picnic areas adjoining the approved uses (hotel, hilltop housing, deli and restaurant), and the playground and lawn inside the common area of the proposed workforce housing.

Policy 2b: Ensure that there is an adequate fire prevention management program

Implementation measure 2b(1): Prior to the issuance of any building or grading permits, the Planning Director shall request confirmation from the Lee Vining Fire Protection District, and CalFire indicating that the design and siting of roads and structures conforms to the California Fire Safe regulations and Lee Vining Fire Protection District requirements.

Implementation measure 2b(2): Prior to the use or occupancy of any structures, the Planning Director shall receive a letter from the Lee Vining Fire Protection District indicating that the buildings conform to fire safety and prevention requirements.

Implementation measure 2b(3): All fire suppression systems and facilities, locations of fire hydrants, sprinklers, valves, emergency water access, and fire doors shall be written into text and diagrams for a facilities fire management plan approved by the Lee Vining Fire Protection District.

Implementation measure 2b(4): All fire prevention systems shall be maintained in a usable and safe condition for the life of the project. An inspection shall be required on a periodic basis meeting the reasonable requirements of the Lee Vining Fire Protection District.

4.4.4.3 Design

Goal 3: Strive to reduce the project's visual intrusiveness in the area

Policy 3a: Minimize site disturbance.

Implementation measure 3a(1): Prior to the issuance of occupancy permits for any of the site facilities, the planning director shall approve a revegetation plan for areas within the open space designations disturbed during construction of underground facilities.

Implementation measure 3a(2): The revegetation plan shall conform to the mitigation measures and recommendations outlined in the Subsequent Final EIR Mitigation Program.

Policy 3b: Maximize the use of indigenous plant species.

Implementation measure 3b(1): The landscaping plan shall identify areas that have been or will be temporarily disturbed during construction. All such areas shall be revegetated using the native shrubs and herbaceous species that are dominant within project-designated Open Space lands. Native species also are to be used to the greatest extent possible throughout areas of formal landscaping within the project area.

Implementation measure 3b(2): Prior to issuance of any building or grading permits, the project proponent shall submit a detailed landscape plan to the Mono County Planning Department for review and approval. The species of native vegetation and how they will be procured and introduced (seeding, transplanting) will be included in the landscaping plan and subject to approval. Revegetation methods detailed in the landscape plan shall be in substantial conformance with the conceptual landscape standards and objectives contained in Table F. Mono Basin

Policy 3c: Utilize introduced vegetation that at maturity will provide additional screening to aid in the visual blending of the project into the natural landscape.

Implementation measure 3c(1): The landscaping plan shall include a map that shows all existing project site trees. Existing trees shall be retained on site and incorporated when landscaping.

Implementation measure 3c(2): The landscaping plan shall specify use of locally adapted species and appropriate plant husbandry that will cause the most rapid possible attainment of mature screening height or bulk in the Mono Basin climate.

Implementation measure 3c(3): The landscaping plan shall identify visually prominent areas where vegetation can be effectively used for screening and visual blending of the project into the native landscape. Landscape techniques in these areas shall include transplanting and focused husbandry of nursery-grown native shrubs and trees to the greatest extent possible. Plant irrigation and protection from herbivory will be provided to the greatest extent possible to enhance survivorship and growth. This landscaping will be designed to screen or block views of the project from passenger vehicles on Highways 120 and 395, and shall be employed in the restaurant parking area, so that screening becomes effective within three to seven years after construction is completed.

Policy 3d: Ensure that introduced landscaping plants are irrigated, fertilized and maintained as necessary to prevent plantings from failing or becoming weedy.

Implementation measure 3d(1): The landscaping plan shall describe adaptive contingency measures should planting fail to thrive. Vegetation in formal landscaping areas shall be maintained in a vigorous and healthy condition for the life of the project. Routine project operations shall include at least weekly inspection and repair of irrigation and diligent removal of non-native plant growth. Introduced landscaping that does not survive shall be replaced using the species and husbandry techniques that are described in the approved landscaping plan.

Policy 3e: Provide landscaped areas for picnicking, walking and relaxation.

Implementation measure 3e(1): Picnic and walking areas shall be landscaped using locally adaptive native vegetation to the maximum possible extent. The design for picnic and walking areas within developed portions of the project shall serve to implement water conservation, enhance visual attractiveness, and provide a visual complement to the area. Final plans shall be submitted for the approval of the planning director prior to use or occupancy of the Workforce Housing component. Table 4.10 (Table F) presents conceptual landscape standards, and Table 4.11 presents a Plant Palette, for the Tioga Specific Plan.

TABLE 4.10 (F). Conceptual Landscaping Standards	
FORMAL LANDSCAPING	NATURAL LANDSCAPING
<p>Lawn Areas: Landscaped areas planted with lawns or grasses shall be limited to cultivars requiring reduced or limited irrigation needs. The preference shall be for using grasses that will not invade into the project area's native plant communities. Lawn areas shall be irrigated, kept free of invasive weeds, and maintained in a firesafe manner. Because avoiding lawn grasses that could spread and increase fire danger is a primary landscaping objective, it will be appropriate to consult Mono County Community Development Department when selecting grass species for introduction in landscaped areas. Landscape lawns and other areas that will be stabilized by introduced grasses will be planted within 9 months of the completion of project-related disturbance.</p>	<p>Shrublands: Project areas that are temporarily disturbed during construction and that are intended as formal landscaping shall be returned to natural vegetation as rapidly as feasible. Such areas are to be revegetated utilizing native species, either through seeding or by transplanting of nursery-grown shrubs. The revegetation species palette shall include at least five native perennial shrub and grass species so as to emulate the Great Basin Mixed Scrub that remains onsite. Seeding and planting will not commence until the species palette has been approved by Mono County Community Development Department. The objective is to rapidly restore a native shrublands appearance to temporarily disturbed project areas. Therefore, where feasible, more mature nursery-grown transplants and applied irrigation will be utilized in addition to seeding. Revegetation at areas that will be stabilized by native plants will commence within 9 months of the completion of project-related disturbance.</p>
<p>Shrubs, Flowers and Screening: The formal gardens and landscape areas around structures are intended to provide color, special attractions, and a degree of limited contrast to the colors of the natural environment. Another objective is to provide seasonal shading for residences and common areas. The intent is to have an attractive facility that would encourage walking and relaxation in the project area. Screening trees and shrubs shall be planted to provide a visual break of the views of the facilities from the Highway. The objective is to reduce the appearance of residence height and bulk as seen from the scenic highways.</p>	<p>Other Vegetation: Areas that currently are visibly scarred by wildfire will be seeded with native species, emphasizing bitterbrush. Conifers of the existing onsite tree species shall be introduced in a random pattern in reserve lands between the new and existing housing. The objective is to provide a "blended" appearance of native and created landscapes from the scenic highways.</p>

TABLE 4.11. Tioga Specific Plan Amendment #3 Plant Palette		
Landscape Stratum	Species – Common Name	Species – Scientific Name

tree	Jeffrey Pine	<i>Pinus jeffreyi</i>
tree	Single-leaf Pinyon	<i>Pinus monophylla</i>
tree (irrigated during summer)	Quaking Aspen	<i>Populus tremuloides</i>
shrub	Mountain Mahogany	<i>Cercocarpus ledifolius</i>
shrub	Desert Peach	<i>Prunus andersonii</i>
shrub	Yellow Rabbitbrush	<i>Chrysothamnus viscidiflorus</i>
shrub	Wild Buckwheat	<i>Eriogonum fasciculatum</i> , and/or <i>E. umbellatum</i> , <i>E. microthecum</i>
shrub (irrigated during summer)	Willow	<i>Salix exigua</i>
shrub (irrigated during summer)	Wild Rose	<i>Rosa woodsii</i>
herb	Silvery Lupine	<i>Lupinus argenteus</i>
herb	Chicalote	<i>Argemone munita</i>
herb	Douglas' sedge	<i>Carex douglasii</i>
herb	Basin Wildrye	<i>Elymus cinereus</i>
herb	Needlegrass	<i>Stipa hymenoides</i> and/or <i>S. comata</i> , <i>S. occidentalis</i>
herb (irrigated during summer)	Needlegrass	<i>Stipa occidentalis</i>

Policy 3f: Ensure a visually attractive development.

Implementation measure 3f(1): All structures – including residences – shall be constructed in conformance with the appearance of the structures and architectural elevations that are a part of the Specific Plan.

Implementation measure 3f(2): All exterior materials shall be in harmony with the theme of a rustic, alpine appearance.

Implementation measure 3f(3): The roof materials shall be of dark muted colors, such as and not limited to “earthtone” or “green.” Visible chimney materials shall be limited to stone or wood in conformance with appropriate fire codes. Tones shall be muted or earthtone in theme.

Implementation measure 3f(4): Dark or neutral colors found in the immediate surroundings should be used for vertical surfaces and structures.

Policy 3g: All exterior lighting shall comply with Mono County Land Use Element Chapter 23 (Dark Sky Lighting Requirements) and Chapter 8 (Scenic Combining District and State Scenic Highway 395).

Implementation measure 3g(1): All onsite exterior lighting (including existing and proposed exterior light sources) shall comply fully with requirements of the Mono County Scenic Combining Element (General Plan *Land Use Element* Chapter 8) and with requirements of the Mono County Dark Sky Regulations (General Plan Chapter 23).

4.4.4.4 Natural Environment

Goal 4: Conserve habitat and forage areas on the site.

Policy 4a: Provide wildlife habitat through retention of naturally vegetated areas. Maintain open space areas where mule deer can forage and find concealing cover.

Implementation measure 4a(1): During project design and implementation, all reasonable efforts shall be undertaken to avoid the habitat with the greatest value to deer. The construction plans and disturbance limits as marked in the field shall clearly identify areas of the project where the soil and vegetation will not be disturbed. Native vegetation in all areas that are not converted into project structures, roads and landscaping shall be retained to provide forage for deer throughout the lifetime of the project.

Implementation measure 4a(2): The landscaping plan shall include any developed paths outside the housing development and indicate that they have been designed to avoid deer foraging areas. Informational signs explaining the purpose of the path system, the need to protect deer foraging areas, and the requirement for leashing of pets, shall be placed at pathway entry points.

Policy 4b: Livestock grazing shall continue to be precluded from the site.

Policy 4c: Avoid potential construction-related interference with local mule-deer migration. Avoid creating barriers or other construction-related impacts that would redirect deer movements onto the highways at any time of year.

Implementation measure 4c(1): Construction activities shall be limited to daylight hours. Implementation will be further accomplished by clearly marking the limits of construction zones and by instructing construction personnel to recognize areas in which ground-disturbing activities and vegetation removal can take place. Construction personnel will also be instructed to leash any dogs brought onto the site. Night lighting will not be allowed in Open Space-Reserve designated areas during the critical migration times of April through June and October through November. At all times of year, linear barriers shall not be permanently or temporarily installed anywhere within the Open Space area lying between Tioga Inn project elements and the highways.

Policy 4d: Prohibit unauthorized off-road vehicle activity.

Implementation measure 4d(1): Road construction shall be limited to the areas identified on the approved land use plan (Figure 7). Public vehicle access shall not be permitted off of paved roads anywhere within areas designated as Open Space. In lieu of fences or other linear barriers, natural material shall be employed to block access. Large stones will be stockpiled during construction for distribution to areas of potential unpermitted vehicle access. Any incidence of unpermitted access will be mitigated by redistributing the stones.

Policy 4e: Provide facilities for pets to prevent domestic animals from wandering loose on the property.

Implementation measure 4e(1): Place limitations to exclude pets belonging to facility customers and guests from becoming a limiting predatory influence in the surrounding environment. Leases for tenants at the residential areas shall include a requirement that pets be contained in an enclosed area. Outdoor kennels serving guests and residents shall be provided within a central portion of the hotel and housing areas. The designated tenant and guest pet containment areas shall be fenced sufficiently to prevent pets from roaming unattended outside the human habitats of the project.

Implementation measure 4e(2): Pets including service animals shall be kept on leashes or otherwise restrained to prevent free roaming when not in a fencing containment area. Tenants shall agree to pet leashing rules as a condition of rental, and shall be evicted for noncompliance following two notifications by the housing manager. Signs that state the requirement for leashing will be maintained at the housing area and at any walking trails that are established within the project area.

Policy 4f: Avoid becoming an “attractive nuisance” for local wildlife.

Implementation measure 4f(1): To exclude wildlife from access to trash and to food items stored by residents, all waste receptacles will be fitted with exclusion devices sufficient to prevent access by ravens and bears. Signs will be clearly posted informing of the need to secure trash, pets and stored food from wildlife access. Rental agreements will include restriction against storage of trash or unsecured food items outside of the residences (including in vehicles) for any substantive length of time.

4.4.4.5 Traffic and Circulation

Goal 5: Maintain safe traffic access.

Policy 5a: Conform to the requirements of Caltrans for project access.

Implementation measure 5a(1): Prior to issuance of any permits for use or occupancy, the Planning Department shall receive a copy of the approved encroachment permit issued by the California Department of Transportation.

Implementation measure 5a(2): Other than access for authorized personnel to parcels adjacent to US 395, or emergency use, there shall be no access to the project from US 395.

Policy 5b: Internal traffic circulation shall conform to County and fire safe requirements.

Implementation measure 5b(1): Roads shall be constructed in conformance with standards identified in Table 4-12 (Table G), and shall be designed to maintain safe access through all seasons.

TABLE 4-12 (G): Road Standards			
ROAD CLASSIFICATION	EASEMENT	PAVEMENT WIDTH	SPECIAL NOTES
Main Access Road	60 feet	24 feet	3 foot shoulder
Residential Access Road	40 feet	16 feet	10% grade
Utility/Facility Access Roads	Driveway	12 feet ¹⁴	No public use

Implementation measure 5b(2): All publicly-accessible roads shall be paved in conformance with the requirements of the Mono County Code for parking areas and parking access.

Implementation measure 5b(3): Parking shall be provided in accordance with this Specific Plan Amendment #3. If not specified herein, parking shall be in accordance with the Mono County Code. Additional parking may be allowed in appropriate locations following review and approval of the Planning Director in order to accommodate future demand.

4.4.5 Master Sign Program

6a) Intent: The Master Sign Program is a requirement and mitigation measure of the Tioga Inn Specific Plan. The Specific plan requires that all signs be coordinated in design and concept with all other facility signs. The Master Sign Plan will coordinate design, theme and placement of signs within the Tioga Inn Specific Plan area. This Specific Plan is one site with four separate parcels. All signs are required to be on site.

6b) General Provisions: These provisions apply to all signs within the Tioga Inn Specific Plan.

- Signs and sign faces will be constructed with natural materials like stone, wood and other natural materials to enhance the overall architectural theme of the Tioga Inn. Plastic, metal, and other materials may be used but should not be the dominant feature of any sign or sign face. The exceptions to this are directional signs which may be plastic or metal.
- Background or unused portions of the sign facing will be painted in muted earth-tone colors or left in a natural state.
- The sign area is calculated as the area that would enclose all words and letters of a sign face. The portions of the sign enclosed by the decorative border or frame and the foundation are not calculated as sign area.
- Illumination for all signs shall be indirect or back-lit channel letters.

6c) Permitted Signs.

- Monument Signs – The Tioga Inn Specific Plan is permitted three monument signs for the three commercial land uses. These signs will be visible to travelers on Highways 120 and 395. The maximum height will not exceed 10 feet. The total facing area for all three signs combined will not exceed 64 square feet. Approximately 21 square feet will be allocated for each commercial use (convenience store/deli/fuel sales, hotel, and full-service restaurant).

¹⁴ 12 feet of surface width, no paving.

The three monument signs are permitted within the Tioga Inn Specific Plan on the 30-acre Hotel parcel. One sign may be installed along the Highway 120 corridor approximately 150 feet east of the gas station. Two monument signs may be installed below the restaurant knoll, as close as possible to the US 395 right-of-way. These signs are not permitted to be silhouetted against the skyline or located on top of the knoll. In compliance with Mitigation Measure 5.3(d-3) prohibiting brightly lit signs, all new signage along the US 395 and SR 120 scenic corridors shall be limited to a maximum 100 cd/m².¹⁵

A fourth monument sign is permitted in the vicinity of the hotel entrance site. This sign is an interior monument sign and will be used to primarily direct visitors to the various facilities within the Tioga Inn Specific Plan site. This sign will generally not be visible to travelers on SR 120.

- Directional Signs – Signs for air and water, registration, observation deck, parking, office or deliveries shall be permitted with a maximum area of three (3) square feet per sign facing. Directional signs may be combined subject to Director Approval.
- Other Signs
 1. Convenience store/fuel sales – Signs identifying the property, name ownership and amenities shall be limited to a maximum of forty-eight (48) total square feet.
 2. Hotel – Signs identifying the property, name, ownership, and amenities shall be limited to a maximum of sixty-four (64) total square feet.
 3. Restaurant – Signs identifying the property, name, ownership and amenities shall be limited to a maximum of forty-eight (48) square feet.
 4. Required Signs – Signs mandated by federal, state or local agencies (i.e., display of gas prices)

6d) Prohibitions.

- No temporary signs shall be permitted within the residential or workforce housing land use areas.
- No monument or freestanding signs shall be permitted off the Tioga Inn Specific Plan site.

4.4.6 Financing the Specific Plan

The Specific Plan represents a private project for which no public monies have been used; the proponent has to date been responsible for obtaining all funds for development. In conjunction with the workforce housing associated with Amendment #3, the applicant may seek funding in support of the workforce housing component and/or amenities to better serve the workforce housing component. The application for funding would follow, and be subject to prior approval of, Amendment #3. The implementation program contains components that tie use and occupancy of the project to completion of the various infrastructure, landscaping, and mitigation programs.

¹⁵ Luminance (also known as brightness) is the level of light emitted by an LCD display. Luminance is measured in candelas per square meter (cd/m²). One candela is equal to one cd/m²; <https://www.lrc.rpi.edu/programs/solidstate/pdf/Freyssinier-SPIE6337-52.pdf>.

TIOGA WORKFORCE HOUSING DRAFT SUBSEQUENT EIR



SECTION 5.1 GEOLOGY AND SOILS

5.1.1 INTRODUCTION AND SUMMARY

The following discussion is drawn from detailed Alquist-Priolo fault studies conducted in 1991 by GeoSoils, Inc. for the 1993 Final EIR, as well as a Groundwater Resources Assessment and Peer Review of the 1991 GeoSoils, Inc. studies that was prepared in 1992 by Kleinfelder. The 1991 GeoSoils, Inc. Geologic Investigation is provided as Appendix C. Appendix D provides the 1992 Groundwater Assessment and GeoSoils Peer Review prepared by Kleinfelder. None of the scoping meeting comments or written comments on the NOP referenced issues pertaining to soils and geology. Key findings are summarized in this section.

SUMMARY OF IMPACTS AND MITIGATIONS

<u>IMPACT GEO 5.1(a):</u>	<u>RISK OF STRONG GROUND SHAKING, GROUND FAILURE, LANDSLIDE</u>
Mitigation GEO 5.1(a-1):	Site Specific Soils Report during Structural Design
Mitigation GEO 5.1(a-2):	Debris flow mitigation
Mitigation GEO 5.1(a-3):	Further investigation if grading exposes fault traces
Significance:	Less than significant with mitigation
<u>IMPACT GEO 5.1(b):</u>	<u>RISK OF SOIL EROSION, LOSS OF TOPSOIL</u>
Mitigation GEO 5.1(b):	Use of Low Impact Development Best Management Practices
Significance:	Less than significant with mitigation
<u>IMPACT GEO 5.1(c):</u>	<u>RISK OF LIQUEFACTION, COLLAPSE, LANDSLIDE, SOIL EXPANSION</u>
Mitigation GEO 5.1(c):	Supplemental Geotechnical Studies prior to Grading Permit
Significance:	Less than significant with mitigation
<u>IMPACT GEO 5.1(d):</u>	<u>SOILS INCAPABLE OF SUPPORTING SEPTIC OR ALTERNATIVE WASTEWATER TREATMENT</u>
Mitigation:	No mitigation required
Significance:	Less than significant impact
<u>IMPACT GEO 5.1(e):</u>	<u>LOSS OF MINERAL RESOURCES</u>
Mitigation:	No mitigation required
Significance:	Less than significant impact
<u>IMPACT GEO 5.1(f):</u>	<u>IMPACTS TO PALEONTOLOGICAL RESOURCES</u>
Mitigation & Significance:	Please see discussion in EIR §5.4 (Cultural Resources)

5.1.2 EXISTING CONDITIONS

5.1.2.1 Regional Hydrogeology¹

The project site is located on the eastern edge of the Sierra Nevada at the boundary of the Sierra Nevada and the Basin and Range geologic provinces. The Sierra Nevada is an uplifted and tilted block of Mesozoic-age igneous rocks, overlain by older sedimentary and metamorphic units. Tertiary and Quaternary-age volcanic rocks are also present in the Lee Vining area, associated with the Mono/Inyo Craters volcanic chain.

Earth materials in the Lee Vining area comprise recent-age soils, Quaternary-age colluvium and alluvium, Quaternary and Tertiary-age volcanic rocks associated with the Mono Craters volcanic chain, and Paleozoic and Mesozoic-age

¹ Surface Water & Groundwater Availability Assessment – Lee Vining Area, 27 Sept. 2006. Prepared by Team Engineering; California Geologic Survey, *Geologic Map of California, Mariposa Sheet*: <http://www.quake.ca.gov/gmaps/GAM/mariposa/mariposa.html>.

metamorphic and igneous rocks associated with the Sierra Nevada. The recent-age soils (primarily evident as surface deposits) are underlain by Quarternary-age unconsolidated deposits (glacial till, colluvium and alluvium) resulting from erosion and deposition. The glacial till consists of poorly sorted and unconsolidated deposits found along the base of the Sierra Nevada. The colluvium consists of hillside-related deposits (such as talus slopes), and the Quarternary-age alluvium consists of the remaining unconsolidated deposits that comprise basin fill. The alluvium is interbedded with fine-grained lake sediments that increase in thickness and proportion toward Mono Lake. The surficial deposits are underlain by tertiary volcanic rocks and Paleozoic and Mesozoic-age metamorphic and igneous rocks. In general, the alluvium comprises the most important aquifer materials in the area. Groundwater flow in the metamorphic and igneous rocks is controlled by fracturing, and flows can be significant in areas of highly fractured rock, though generally less than flows in the alluvial aquifer.

5.1.2.2 Site Topography²

The project site is a trapezoidal parcel located just southeast of the intersection of SR 120 with US 395. Elevations rise from the north to the south (leading up to the Sierra Nevada), with the lowest points on the northwest (elevation of approximately 6,800') and the highest points on the southwest (elevation of about 7,200').

5.1.2.3 Seismicity, Volcanic Activity, and Hydrogeology

The Mono County *Multi-Jurisdictional Local Hazards Mitigation Plan* provides a comprehensive assessment of the risks and vulnerabilities affecting the region, as well as mitigation strategies and actions to reduce or eliminate the risks or vulnerabilities. The Plan is currently being updated to include the Town and the County, and will include a Community Wildfire Protection Plan for both jurisdictions (the final plan is expected to be completed in May 2018). The current 2006 Plan notes that Mono County is in an area of California with a major fault system known as the Eastern California Shear Zone (ECSZ), one of two systems (along with the San Andreas Fault system) that account for most of the movement between the Pacific and the North American plates; about 10mm/year (~0.4"/year) of slip occurs on faults east of the Sierra Nevada (see Figure 4.5-3 below). The Mono County MEA (XII-Geology) notes that Mono County is located at a stress point, where the earth's crustal plates exert opposite pressures against each other. This combination creates both "tectonic" earthquakes (land mass movement) and volcanic activity that can trigger earth shaking. The primary seismic hazard is strong to severe ground-shaking: Mono County is in Seismic Zone 4, which has an associated ground acceleration of 0.40 'g' and requires stringent engineering and construction for new and existing structures (per CGC §8875, existing buildings that may be subject to seismic hazards must now comply with requirements of the unreinforced masonry building law).

The Mono County General Plan *Safety Element*³ notes that the entire County is located in Seismic Zone D, the zone of greatest hazard as defined in the California Building Code. All new construction must comply with stringent engineering and construction requirements. Active faults in the region are shown in Table 5.1-1 below.

TABLE 5.1-1. Active Fault Zones in the Study Region		
<i>Fault Name</i>	<i>Slip Rate (mm/yr)</i>	<i>Max. Magnitude</i>
Hilton Creek	2.5	6.7
Hartley Springs	0.5	6.6
Silver Lake	2.0	7.5
Mono Lake/Lee Vining	2.5	6.6
Laurel-Convict	NA	6.8
Round Valley/Wheeler Crest	1.0	6.8
Owens Valley	1.5	7.6
Volcanic Tableland/Fish Slough	0.2	6.6
White Mountain	1.0	7.1
Long Valley Caldera	NA	7.0

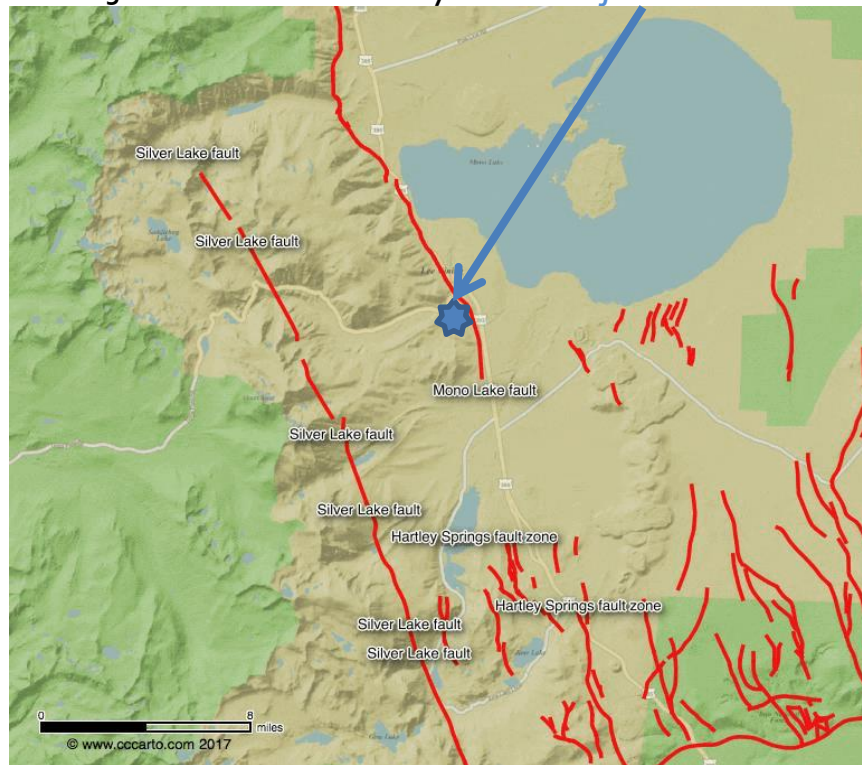
² Tioga Inn Conceptual Grading Plan, prepared by Triad Associates, May 2016.

³ Mono County *Safety Element*, 2001 and 2015.

The Mono Lake Fault is closest of the faults noted above, passing through the northwestern portion of the project site. The Mono Lake Fault is classified as having an estimated slip rate of 2.5 millimeters per year and is capable of producing a magnitude 6.6 earthquake. As with other area faults, the Mono Lake fault generally trends north-northwest. The fault forms the front scarp of the Sierra Nevada in the Lee Vining area, and likely includes subordinate parallel faults along the trace. The fault places relatively impermeable bedrock units against basin-fill deposits. The extent to which this and other area faults inhibit groundwater flow is not known.

The Mono Basin has been identified by the United States Geological Survey (USGS) as an area with potential for future volcanic activity, and the Mono-Inyo craters are considered to hold the highest statistical probability for eruption in the near future. USGS has developed an eruption alert system; based on past eruptions, such an event would likely be of a rhyolitic and explosive nature preceded by a phreatic (i.e., steam-powered) event.⁴ The 1993 EIR noted that then-recent information from the Division of Mines and Geology showed a potential fault zone trending toward the project site.⁵ Two geologic studies were conducted for the 1993 EIR, and both reports concluded that there is no potential of surface rupture or soil displacement on the project site. The 1991 report by GeoSoils, Inc. was prepared to satisfy requirements of the Alquist-Priolo special studies zone act, based on previously-mapped faults on the project site. The report concluded that active faulting was not encountered, nor were adverse geologic features identified that would preclude the feasibility of the Tioga Inn development.⁶ The report concluded that potential impacts would be less than significant with mitigations including adherence to the latest Uniform Building Code standards. The California Geologic Survey has recently updated the Alquist-Priolo Earthquake Fault Zone maps;⁷ faulting in the vicinity of the Tioga Workforce Housing project remains as shown and as investigated for the 1993 Final EIR (see discussion under Impact 5.1(a).

Exhibit 5.1-1. Faults in Site Vicinity



⁴ Elizabeth Nixon, *Geologic History of the Mono Basin*, 2012: <http://www.indiana.edu/~sierra/papers/2012/Nixon.pdf>

⁵ Alquist-Priolo Website, Lee Vining Map: http://gmw.conservation.ca.gov/SHP/EZRIM/Maps/MONOCRTS_NE.PDF

⁶ GeoSoils Inc., Preliminary Geologic Investigation, 83±-Acre Parcel, Tentative Parcel Map No. 34, Lee Vining Area, Mono County, CA. 4 April 1991, Report W.O. 431-A-RC.

⁷ Department of Conservation, Earthquake Fault Zone Maps: <https://maps.conservation.ca.gov/cgs/EQZApp/app/>

5.1.2.4 Mineral Resources

The Mono County General Plan notes that significant mineral resources are present throughout Mono County. Gold and silver mining once attracted early settlers to Mono County, but mining now has only a small role in the Mono County economy, primarily related to pumice (the most valuable mineral commodity), clays, chalk, sand and gravel, with occasional exploration for precious metals in the Bodie Hills. Several active pumice mines and processing operations are located near the Tioga Inn project site, including the U.S. Pumice Company c/o Tilden (which has two claim sites in the area and processes pumice on SR 120 just east of US 395), and U.S. Pumice Supply Company (near Panum Crater).

The Surface Mining and Reclamation Act (SMARA) requires the state geologist to classify areas that are threatened by land uses that would jeopardize or preclude mining activities; the designations are developed through mineral land classification surveys. The small portion of Mono County that has been officially classified (see the Dept. of Conservation's *Mineral Land Classification of the Eureka, Saline Valley Area, Mono and Inyo Counties*) does not include the project site or other areas around Mono Lake. Mining-sponsored land classification studies have shown the Mono Basin as having potential gold-production zones.

5.1.3 **APPLICABLE REGULATIONS GOVERNING GEOTECHNICAL ISSUES**

5.1.3.1 Federal Regulations

The U. S. Department of Agriculture Natural Resources Conservation Service (NRCS): NRCS produces soil surveys that assist planners in determining which land uses are suitable for specific soil types and locations.

Earthquake Hazards Reduction Act: Congress passed the Earthquake Hazards Reduction Act in 1977 (amended in 1990 by the National Earthquake Hazards Reduction Program Act) to reduce seismic risks. The Act focuses on establishing and maintaining the National Earthquake Hazards Reduction Program (NEHRP). NEHRP goals are to strengthen the understanding, characterization, and prediction of earthquake hazards and vulnerabilities; improve building codes and land use practices; reduce risk through post-earthquake investigations and education; improve design and construction techniques; improve mitigation capacity; and accelerate the application of research findings. FEMA (the Federal Emergency Management Agency) is the designated NEHRPA lead agency; other participating agencies include the National Institute of Standards and Technology, the National Science Foundation, and USGS.

5.1.3.2 State Regulations

Alquist-Priolo Earthquake Fault Zoning Act of 1972: The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The Alquist-Priolo Earthquake Fault Zoning Act pertains only to hazards associated with surface fault rupture. The Mono County Multi-Jurisdictional Local Hazard Mitigation Plan notes that Alquist-Priolo Fault Hazard zones occur in a number of Mono County areas, particularly along the base of the Sierra Nevada and White Mountains. Seismic ground failure includes liquefaction, lateral spreading, lurching, and differential settlement, all of which usually occur in soft, fine-grained, water-saturated sediments. During the 1980 Mammoth Lakes earthquake sequence, ground failure was prevalent at Little Antelope Valley, along Owens River in upper Long Valley, along the northwest margins of Lake Crowley, and Hot Creek Meadow.

California Geological Survey (CGS): The California Geological Survey (CGS) provides regulatory information pertaining to soils, geology, mineral resources, and geologic hazards. CGS maintains and provides information about California's nonfuel mineral resources. California ranks second in the United States in nonfuel mineral production. In 2007, more than 30 nonfuel commodities were produced from 660 California mines (CGS 2008a). CGS also offers information about handling hazardous minerals and Surface Mining and Reclamation Act (SMARA) mineral land classifications. Information about CGS's role in the handling of hazardous minerals is provided in Chapter 4.16, "Hazards and Hazardous Materials." Information about SMARA mineral land classifications is provided directly below.

California Surface Mining and Reclamation Act (SMARA). SMARA was enacted by the California Legislature in 1975 to regulate activities related to mineral resource extraction. The act requires the prevention of adverse environmental effects caused by mining, the reclamation of mined lands for alternative land uses, and the elimination of hazards to

public health and safety from the effects of mining activities. At the same time, SMARA encourages the conservation and the production of extractive mineral resources, requiring the State Geologist to identify and attach levels of significance to the state's varied extractive resource deposits. Under SMARA, the mining industry in California must plan for the reclamation of mined sites for beneficial uses and provide financial assurances to guarantee that the approved reclamation will actually be implemented. The requirements of SMARA must be implemented by the local lead agency with permitting responsibility for the proposed mining project (see discussion below under 'Local Regulations'). Lands with identified mineral resources are classified MRZ-2. If a proposed use would threaten the potential recovery of minerals from an area classified as MRZ-2, SMARA requires that the jurisdiction prepare and provide public notice of a justification statement, and forward a copy of the statement to the State Geologist and the State Mining and Geology Board (PRC §2762). Notably, California is alone among the 'lower 48 states' in not regulating surface mine reclamation at the state level; permitting authority is decided by Lead Agencies at the local level. Mono County is one of 113 California lead agencies under SMARA (52 counties, 50 cities, and the State Mining & Geology Board). SMARA makes no distinction between exploration and actual mining. Activities below the defined threshold (disturbance of more than 1 acre and/or displacement of more than 1000 cubic yards of material) are exempt from regulation, while those exceeding the threshold are regulated. Mining projects on federal land in Mono County are required to meet NEPA provisions for environmental review with BLM or USFS serving as lead agency.

California Geological Survey Strong Motion Instrumentation Program (CSMIP). Through the CSMIP, the California Geological Survey installs earthquake-monitoring devices in structures such as buildings, hospitals, dams, utilities and industrial facilities. Data collected from those devices are used both for earthquake emergency response and for engineering and scientific research. Sites are selected according to long-term strategies developed in consultation with the Strong Motion Instrumentation Advisory Committee, a committee of the Seismic Safety Commission. SMIP stations in Mono County are maintained at Lake Crowley (Hwy 395 bridge, Long Valley Dam), Mammoth Lakes (Convict Creek, Fire Dept., High School), Chalfant (Zack Ranch), June Lake (Fire Station), Benton, Lee Vining (Tioga Pass), Bridgeport and Walker.

Division of Mines and Geology (DMG). DMG operates within the Department of Conservation and is responsible for assisting the Department in the beneficial utilization of mineral deposits and identification of geological hazards.

State Geological Survey. The California Geological Survey is responsible for assisting in the identification and proper utilization of mineral deposits, as well as the identification of fault locations and other geological hazards.

California Building Standards Code (CBC). California provides minimum standards for building design through the CBC (CCR Title 24). The CBC applies to all occupancies throughout the state unless local amendments have been adopted, and includes regulations for seismic safety, excavation of foundations and retaining walls, and grading activities including drainage and erosion control and construction on unstable soils. The CBC, most recently updated in 2016, uses Seismic Design Categories A through F (where F requires the most earthquake-resistant design) to provide structural protection through "collapse prevention" at the maximum potential level of ground shaking. CBC Chapter 16 specifies how each seismic design category is to be determined for a site, based on soil characteristics and proximity to potential seismic hazards. Chapter 18 regulates the excavation of foundations and retaining walls, specifies conditions that require special studies (preparation of a preliminary soil report, engineering geologic report, geotechnical report, and supplemental ground-response report), and describes methods for analyzing expansive soils and determining depth to groundwater. For Seismic Design Category C, Chapter 18 requires analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading. For Categories D, E, and F, Chapter 18 requires these same analyses, plus evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also addresses mitigations to be considered in structural design, such as ground stabilization, selecting appropriate foundation type and depths, selecting appropriate structural systems to accommodate anticipated displacements, or a combination of these measures. The potential for liquefaction and soil strength loss must be evaluated for site-specific peak ground acceleration magnitudes and source characteristics. Mono County complies with the adoption cycle for the CBC (currently being updated to a new 2019 edition, effective January 2020) and has adopted design standards specific to local climate and topography.

Seismic Hazards Mapping Act. The 1990 Seismic Hazards Mapping Act addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically-induced landslides. Under the Act, the State Geologist maps

seismic hazard zones to assist local governments in land use planning. The program and actions mandated by the Seismic Hazards Mapping Act closely resemble those of the Alquist-Priolo Earthquake Fault Zoning Act (which addresses only surface fault-rupture hazards). The State Geologist is required to delineate the various “seismic hazard zones” that are used by local permitting authorities to regulate projects in the zones; development permits can be issued only after site geologic and soil conditions are investigated and appropriate mitigations incorporated. Additional regulations, policies and criteria are provided by the State Board of Mining and Geology, which also provides guidelines for preparation of Seismic Hazard Zone Maps and evaluating and mitigating seismic hazards. Sellers (and their agents) of real property in a mapped hazard zone must disclose that the property lies within such a zone at the time of sale.

5.1.3.3 Local Regulations

Mono County General Plan Safety Element. To mitigate seismic hazard risks, the Mono County General Plan Safety Element regulates development near active faults, seismic hazard zones and other geologic hazards as required by the provisions of the Alquist-Priolo Special Studies Zone Act and the Seismic Hazard Mapping Act. Policies in the County Safety Element require projects in Alquist-Priolo fault hazard zones, seismic hazard zones, or other known geologic hazard areas, to provide a geologic or geotechnical report prior to project approval. County Safety Element policies also encourage applicants to design or redesign their projects as necessary to avoid unreasonable risks from seismic hazards and specify that the County will deny applications for planning permits where geologic studies provide substantial evidence that the proposed project will be exposed to unreasonable risks from seismic hazards. Projects that include mitigation measures to reduce risks to acceptable levels may be approved.

Land Clearing, Earthwork, and Drainage Facilities Regulations. This County ordinance, more commonly known as the Grading Ordinance (Ch. 13.08 of the Mono County Code) regulates grading, cut and fill, and drainage facilities for new development and improvements to existing development. The intent of the regulations is to ensure the safety and stability of development and to prevent on- and off-site erosion impacts. The ordinance requires a soils report prepared by a soils engineer for grading in, on, under, over or adjacent to old fills, swamp, marshlands, or in areas known or believed to be potential slide areas. Areas with expansive soils also require a soils report prepared by a soils engineer.

Land Development Regulations. Mono County Land Development Regulations restrict site disturbance in certain land use designations in order to protect environmentally sensitive areas and reduce landslide risk.

Unreinforced Masonry Mapping Program. In compliance with State law and Safety Element policies, the Mono County Building Dept. has identified potentially hazardous buildings and initiated a housing conditions survey as part of a mitigation program. The 2006 Multi-Hazards Plan notes that there is currently no comprehensive structural survey to facilitate the identification of structurally hazardous areas and allocation of rehabilitation and replacement funding.

5.1.4 **SIGNIFICANCE CRITERIA**

Consistent with Appendix G of the CEQA Guidelines, the proposed RTP/General Plan update project will be considered to have a significant impact on soils, geologic and mineral resources if it will:

- a) **Directly or indirectly cause potential substantial adverse effects involving:**
 - i) **Rupture of a known Alquist-Priolo earthquake fault?**
 - ii) **Strong seismic ground shaking?**
 - iii) **Seismic-related ground failure, including liquefaction?**
 - iv) **Landslides?**
- b) **Result in substantial soil erosion or the loss of topsoil?**
- c) **Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse, or be located on expansive soil creating substantial risks to life or property?**
- d) **Have soils unsuitable for the use of septic tanks or alternative waste disposal systems, and where sewers are not available for wastewater disposal?**
- e) **Result in the loss of availability of a known mineral resource or an identified locally important mineral resource that would be of value to the region and to residents of the state of California?**
- f) **Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?**

5.1.5 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

IMPACT GEO 5.1(a): Is there a substantial risk of rupture of an Alquist-Priolo earthquake fault, strong seismic ground shaking, seismic-related ground failure, or landslides?

LESS THAN SIGNIFICANT WITH MITIGATION: A *Preliminary Geotechnical Investigation for Specific Plan 03-02* was conducted on this site in 1991, as part of the 1993 Final EIR, to evaluate the presence of a mapped fault trace in the Alquist-Priolo special studies zone. The investigation was in compliance with a requirement that fault investigations must be conducted for mapped 'Earthquake Zones of Required Investigation.' As noted in Conservation Dept. *Special Publication 42*, mapped earthquake fault zones do not constitute site-specific fault investigations, but rather indicate where investigations are required.⁸

The 1991 geologic investigation (presented in its entirety in Appendix C) concluded that ground acceleration potential at the project site is similar to acceleration potential through the eastern Sierra Nevada region as a whole. It identified Mono Valley Fault as the "design fault" for the project site, indicating a maximum credible earthquake of 8.0 M (with peak horizontal ground accelerations exceeding 1.0g), and a maximum probable earthquake of 6.5 M. The estimated horizontal design criteria for repeatable acceleration was estimated to be about 0.49g, with an estimated duration of strong shaking in the range of 18-34 seconds, and a large-event recurrence interval on the order of 100,000 years.

The report indicates that ground lurching or shallow ground rupture could occur on the site, as in most of the Mono Basin, from an earthquake originating on the Mono Valley fault or other nearby faults (the report cites 6 active or potentially active faults within 50 miles). Earthquake-induced slope stability problems (such as landslides) may also occur, most likely where earth materials are highly weathered or unsupported bedding planes are present. There were no indications of deep-seated landsliding, significant slope creep or surficial failures on the site during the review, and the potential for seismically induced landsliding is considered low. However, the potential for earth flows on the site is moderate, particularly in the colluvium-filled swales.

Groundwater was not observed during the 1991 investigation, and there were no indications of seeps, springs, or high regional groundwater levels. Liquefaction potential is related to numerous factors, of which depth to groundwater is primary; liquefaction has a relatively low potential where ground water is greater than 30 feet deep and is virtually unknown when groundwater is 50 feet or more below surface. Based on well records, which indicate that groundwater levels are very deep in this location, site liquefaction potential is considered low to nil under current conditions.

The 1991 report also examined adverse geologic structures and seismically induced landsliding. Seismically-induced landslide potential was considered low due to the relatively granular nature of onsite materials and the lack of adverse geologic structures, but the report recommended further evaluation during grading.

The report concluded that with mitigation, the project site is geologically suitable for development, noting that seismic shaking and volcanic activity are the primary geologic developmental considerations affecting the site. Mitigation recommendations, briefly summarized below, would reduce impacts to ***less than significant*** levels.

MITIGATION MEASURES – SEISMICITY

MITIGATION GEO 5.1(a-1) (Seismicity): Site specific soils reports with appropriate recommendations for proposed improvements shall be made at the time that said improvements are being designed.

MITIGATION GEO 5.1(a-2) (Debris Flows): Debris flow mitigation (use of debris/desilting/retention basins and/or rip rap or other mitigative measures) shall be employed in any canyon or gully areas where structures would be located.

⁸ Conservation Dept. *Special Publication 42, Earthquake Fault Zones – A Guide for Government Agencies, Property Owners/ Developers, and Geoscience Practitioners for Assessing Fault Rupture Hazards in California*, Revised 2018; and communication with Tim Dawson, Senior Engineering Geologist, Dept. of Conservation, U.S. Geologic Survey, 29 March 2018.

MITIGATION GEO 5.1(a-3) (Seismicity): Due to the project location in a zone of known active faulting, further geotechnical investigations shall be undertaken if soil removal and/or grading exposes fault traces. This possibility shall be considered throughout the initial construction planning and earthwork phases.

IMPACT GEO 5.1(b): Result in substantial soil erosion or the loss of topsoil?

LESS THAN SIGNIFICANT WITH MITIGATION. Project approval would result in additional grading, soil preparation and construction on the project site, as necessary to develop the new uses proposed in the current application. Project engineers estimate that site preparation earthwork for the new uses would generate 67,920 cy of cut material, and 52,600 cy of fill material. Most of the cut (60,800 cy) will occur in grading for the workforce housing area (particularly along the southwest boundary), and most of the fill (45,030 cy) will be deposited along the northern edge of the hotel. All cut and fill will be balanced onsite; there will be no import and no export of soils. Calculations assume that the volume of cut materials will be reduced to the volume of fill materials through shrinkage (15% loss) and surface area distribution (5-10% loss). The Grading Plan is provided in Exhibit 5.1-2 (at the end of EIR §5.2).

Onsite soils consist of fill materials, colluvium, fluvial glacial deposits, and alluvium, with moderate to high potential for erosion. Earthwork activities would expose soils to weathering from wind and water, increasing the risk of erosion and sedimentation and thus the potential to pollute surface waters and contribute to the transport of pollutants suspended in the stormwater runoff (please see §5.2 for a more detailed discussion of water quality impacts).

The area of direct earthwork disturbance for construction of project infrastructure will exceed 1 acre, which indicates that the project will be subject to NPDES requirements for construction projects. These requirements are enforced by the Lahontan Regional Water Quality Control Board and include preparation of a Storm Water Pollution Prevention Plan (SWPPP) with Low Impact Development Best Management Practices (LID BMPs) to reduce potential erosion and sedimentation to *less than significant* levels, as outlined in Mitigation Measure 5.1(b) below.

MITIGATION MEASURES – EROSION

MITIGATION GEO 5.1(b) (Low Impact Development): A Low Impact Development Best Management Practices Program (LID BMPP) shall be implemented during all construction stages, including pre-construction and post-construction practices for the prevention of erosion, sedimentation, and contamination resulting implementation of all project elements. BMPP measures shall at a minimum include: (1) disposal of all construction wastes in designated areas outside the path of storm water flows; (2) minimizing the footprint of construction zones and prompt installation of erosion controls; (3) stabilizing disturbed soils with landscaping, paving or reseeding to reduce or eliminate the risk of further erosion; (4) perimeter drainage controls to direct runoff around disturbed construction areas; (5) internal erosion controls to allow direct percolation of sediment-laden waters on the construction site; and (6) regular inspection and maintenance of all equipment used during construction. The project shall comply with requirements to obtain a General Construction Stormwater Permit, and prepare a Stormwater Pollution Prevention Plan.

IMPACT GEO 5.1(c): Risk of soils that are or may become unstable and thereby result in landslide, liquefaction, expansion, spreading, subsidence or collapse?

LESS THAN SIGNIFICANT WITH MITIGATION. As noted in the 1993 Final EIR and discussed above under Impact 5.1(a), two geologic studies⁹ were prepared for the project site to determine whether there is a risk of fault rupture on the project site. The reports found that there is no potential for surface rupture or for soil displacement on the project site. The 1993 report states that the areas of the hotel and full-service restaurant are underlain by very fine to fine

⁹ Preliminary Geotechnical Investigation for Specific Plan 03-02, Sierra Geotechnical Services, Inc., March 1991, and Modified Phase I Groundwater Resources Assessment & Review of a Fault Investigation Report for the Tioga Inn Specific Plan, August 1992.

sands, and fine to medium grained pebbly to cobbly sands, with lenses of medium to coarse grained sands. Soils were moderately loose to medium dense in consistency, and slightly moist with slight to moderate organic content in the upper 12-18" of soil. Onsite soils were found to be suitable for foundation support. The report provided detailed recommendations for site preparation, foundation and slab design, slabs on grade and seismicity, paving, temporary excavation and grading, observation and testing, and post-grading criteria. The 1992 Kleinfelder Report provided additional information concerning the geologic setting, noting that the site is located in a transition area between the Sierra Nevada geologic province to the west, and the Basin and Range province to the east. The Sierra province is comprised of predominantly granitic materials, whereas the Basin and Range province is comprised of primarily volcanic rock materials. The Mono Basin is characterized by Quaternary age volcanic activity that has resulted in widespread area deposits of lava, ash and cinders. As with most of the land around Mono Lake, the site is predominantly underlain by alluvial deposits and glacial till. As noted above, both reports concluded that the site would be suitable for development as proposed given adherence to the recommended methods for site preparation. There is no evidence or expectation that onsite soils are or would become unstable and result in landslide, liquefaction, expansion, spreading, subsidence or collapse. Potential impacts would be ***less than significant*** with implementation of Mitigation Measure Geo 5.1(c).

MITIGATION MEASURES – UNSTABLE SOILS

MITIGATION GEO 5.1(c) (Supplemental Geotechnical Studies): Additional geotechnical studies shall be prepared prior to grading permit review to examine subsurface soil and groundwater conditions on all proposed project areas that were not analyzed as part of the 1993 Final EIR. Areas to be studied shall at a minimum include land underlying the workforce housing project, the propane tank storage area, the proposed site of the new replacement water storage tank, and all areas that would be newly impacted by the proposed septic and wastewater treatment system modifications.

IMPACT GEO 5.1(d): Have soils unsuitable for the use of septic tanks or alternative waste disposal systems, and where sewers are not available for wastewater disposal?

LESS THAN SIGNIFICANT IMPACT. Consistent with the 1993 approvals, all sewage disposal on the project site was to be accomplished by standard septic tank and leach field systems for each separate land use area in conformance with Mono County Health Department and Lahontan Regional Water Quality Control Board (RWQCB) standards. The disposal leach fields were designed with a one hundred percent expansion field area for all onsite facilities.

To accommodate the proposed workforce housing development and meet water quality standards, the project proposal incorporates an Orenco Systems AdvanTex AX-Max package wastewater treatment plant (WWTP). Effluent water quality would meet LRWQCB antidegradation requirements and comply with all applicable water quality standards including nitrate and total suspended solids. Treated effluent would be distributed to a subsurface irrigation system during the late spring, summer and fall months (about 7 to 8 months of the year), with use of a Geoflow subsurface drip irrigation system. The existing septic tank will be eliminated, and the existing leachfield will be used for disposal of treated effluent during the winter months when effluent flows are at a minimum and the subsurface irrigation system is suspended due to freezing conditions. The drip system will connect directly to the AX-Max treatment system; the drip line will be placed 6-10" below surface and distributed throughout the landscaped areas of the site (including areas planted with native materials). System flows return to the treatment tank in a closed loop that is regularly flushed. Quality of the irrigation water will be the same as the quality of the tank effluent. An Antidegradation Analysis prepared for this project concluded that the proposed system would conform to applicable standards. ***No significant impacts*** have been identified.

MITIGATION MEASURES – SEPTIC SYSTEMS

GEO 5.1(d) (Wastewater Treatment): No significant impacts have been identified with respect to the proposed package wastewater treatment system or subsurface treated effluent irrigation system, and no mitigation measures are required.

IMPACT GEO 5.1(e): Result in the loss of availability of a known mineral resource or locally important mineral resource?

NO IMPACT. The Mono County *General Plan* states that significant mineral resources are present in Mono County, and the MEA (Ch. XII-Geology) indicates that alluvial fans at the base of the mountains often contain abundant sand and gravel resources. Several areas around Mono Lake are designated as MRZ-2 including large zones north of the lake (just south of Bodie), a large pocket north of Lundy Canyon, an area located near Lee Vining Peak, and a large area extending south from the Mono Basin National Forest Scenic Area. Small areas of MRZ-3 and MRZ-4 are located around the lake, with a large area designated as MRZ-1 around most of the lake margin. Pumice is widely available in the project area as well; the U.S. Pumice and Supply Company is a producer deposit site located directly adjacent to the Tioga Inn site on the northwest side of the junction of US 395 and SR 120. There are no mining activities on the Tioga site, and the project applicant indicates that required construction soils and fill materials would be balanced onsite, with no requirement for the import or export of materials from the site. ***No significant impacts*** on mineral resources are foreseen, and no mitigation is required.

MITIGATION MEASURES – MINERAL RESOURCES

GEO 5.1(e) (Mineral Resources): No significant impacts to mineral resources have been identified, and no mitigation measures are required.

IMPACT GEO 5.1(f): Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

LESS THAN SIGNIFICANT IMPACT WITH MITIGATION. Please see discussion in DSEIR §5.4 (Cultural Resources), Impact 5.4(b), paleontological resources.

5.1.6 SIGNIFICANCE AFTER MITIGATION

All potential project impacts associated with geologic conditions on the site would be reduced to **less than significant** levels through adoption and implementation of the mitigation measures identified above.

[illegible]

TIOGA WORKFORCE HOUSING DRAFT SUBSEQUENT EIR



SECTION 5.2

HYDROLOGY, WATER QUALITY & SUPPLY, WASTEWATER

5.2.1 INTRODUCTION AND SUMMARY

This section discusses existing hydrologic conditions in the Lee Vining region and on the Tioga project site, and assesses potential impacts of the proposed project on hydrology, water quality and water supplies. The discussion of local and regional water supply is based in part on a 2017 Well Test conducted by Sierra Geotechnical Services, Inc. (SGSI) to assess potential project impacts on area wells and water supply. Because the SGSI report was prepared for the project applicant, this EIR includes a peer-review by Resource Concepts, Inc. (RCI) to provide independent verification of the report adequacy and completeness. A response to the peer review, prepared by SGSI, is also provided. The 2017 SGSI Well Test Technical Memorandum is provided in Appendix E1 along with a Supplemental 2019 Technical Memorandum in Appendix E2. The RCI Peer Review is provided in Appendix F, and the SGSI response to the RCI peer review is provided in Appendix G.

This section also addresses hydrologic issues raised in the NOP comment letters and agency scoping communications, including the Regional Water Quality Control Board-Lahontan Region (LRWQCB), the Mono Lake Committee, and numerous area residents. Issues raised in the comment letters and communications included potential project impacts on groundwater levels and Lee Vining Creek and area springs, water conservation and demand sustainability, adequacy of fire flow, stormwater controls and low-impact development with minimal hydromodification, water quality objectives and standards, significance thresholds and beneficial uses, and water quality impacts of the wastewater treatment and subsurface irrigation system (including a required Antidegradation Analysis). LRWQCB noted that the water and sanitation components of this project may be subject to multiple discretionary actions, as listed in Project Description Table 3-7.

Key findings of the §5.2 impact analysis and recommended mitigating policies are summarized in the table below. **NOTE** that LRWQCB has withdrawn its NOP request for a jurisdictional delineation based on the County's finding that there are no surface waters or meadow areas on the project site (see LRWQCB Waiver in Appendix H).

SUMMARY OF GENERAL PLAN IMPACTS & POLICY MITIGATIONS FOR HYDROLOGY	
IMPACT HYDRO 5.2(a):	<u>VIOLATE WATER QUALITY OBJECTIVES</u>
Mitigation HYDRO 5.2(a-1):	Slope Restoration and Monitoring
Mitigation HYDRO 5.2(a-2):	Construction Buffer Zone and Exclusion Fencing to protect surface waters
Mitigation HYDRO 5.2(a-3):	Minimal Vegetation Clearing
Mitigation HYDRO 5.2(a-4):	Spill Prevention and Response
Mitigation HYDRO 5.2(a-5):	Onsite Storm Flow Retention
Significance:	Less than Significant Impact with above Mitigation Measures
IMPACT HYDRO 5.2(b):	<u>VIOLATE WASTEWATER TREATMENT OR DISCHARGE REQUIREMENTS</u>
Mitigation HYDRO 5.2(b-1):	Proper Septic System Decommissioning, Sizing of Proposed New Leachfield
Mitigation HYDRO 5.2(b-2):	Leachfield Percolation Standards, Minimum Depth to Groundwater
Mitigation HYDRO 5.2(b-3):	Package Plant Effluent Treatment Standards
Mitigation HYDRO 5.2(b-4):	Title 22 Verification from Division of Drinking Water
Significance:	Less than Significant Impact
IMPACT HYDRO 5.2(c):	<u>JEOPARDIZE WATER SUPPLY AVAILABILITY</u>
Mitigation HYDRO 5.2(c-1):	Groundwater Level Monitoring
Recommendation HYDRO 5.2(c-2):	Well Monitoring for Sand Content
Recommendation HYDRO 5.2(c-3):	Well Pump Video Survey prior to occupancy
Residual Significance:	Less than Significant Impact with above Mitigation Measures
IMPACT HYDRO 5.2(d):	<u>INCREASED RISK OF EROSION OR SILTATION</u>
Mitigation:	No significant effects identified and no mitigation required
Significance:	Less than Significant Impact

IMPACT HYDRO 5.2(e):	<u>PLACE STRUCTURES IN A 100-YEAR FLOOD HAZARD ZONE</u>
Mitigation:	No significant effects identified and no mitigation required
Significance:	Less than Significant Impact
IMPACT HYDRO 5.2(f):	<u>EXPOSE PEOPLE OR STRUCTURES TO DAM FAILURE & OTHER FLOODING</u>
Mitigation:	No significant effects identified and no mitigation required
Significance:	Less than Significant Impact
IMPACT HYDRO 5.2(g):	<u>EXPOSE PEOPLE OR STRUCTURES TO SEICHE, TSUNAMI OR MUDFLOW</u>
Mitigation:	Small but Significant Mudflow Risk from Volcanic Eruption is Unavoidable
Residual Significance:	SIGNIFICANT and Unavoidable

5.2.2 KEY TERMS USED IN THIS SECTION

Antidegradation Policy. A policy adopted by the State Water Resources Control Board (SWRCB) in 1968 that is designed to protect high quality waters. The policy states that when the existing quality of water is better than required by Basin Plan objectives (both narrative and numerical), such existing quality shall be maintained unless appropriate findings are made under the policy.

Beneficial Uses. Aquatic ecosystems and underground aquifers provide many different benefits to the public; beneficial uses define the resources, services, and qualities of these aquatic systems that are the ultimate goals of protecting and achieving high water quality. The SWRCB identifies 23 beneficial uses of waters of the state.

Low Impact Development (LID). LID is a stormwater management approach designed to maintain a landscape that is functionally equivalent to predevelopment hydrologic conditions with minimal generation of non-point source pollutants. LRWQCB has identified LID as the foremost method of reducing impacts to watersheds from urban development.

Nitrification. Nitrification is the oxidation of ammonia with oxygen into nitrite followed by the oxidation of these nitrites into nitrates that can be taken up from soils by plants. Nitrification is carried out in soil by the action of nitrifying bacteria on decaying organic matter.

CONVERSION FACTORS

1 million gallons per day (mgd) = 1.547 cubic feet per second (cfs)
 1 mgd = 3.08 Acre-Feet (AF) per Day = 1,123.4 AF per Year (AFY)
 1 acre-foot (AF) = 43,560 cubic feet = 324,900 gallons
 1 cfs = 450 gallons per minute = 1.983 AF per 24 hours = .646 mgd
 1 AF is about the amount of water needed to supply a family of 4 for 1 year

5.2.3 OVERVIEW OF EXISTING CONDITIONS

5.2.3.1 Beneficial Uses and Water Quality Standards¹

The State Water Resources Control Board (SWRCB) *Water Quality Control Plan for the Lahontan Region* (known as the 'Basin Plan') designates beneficial uses for waters of the state of California, along with water quality objectives to protect those beneficial uses. Three beneficial uses are not found in the Lahontan Region: 'Marine Habitat,' 'Estuarine Habitat,' and 'Shellfish Harvesting.' However, since the plan was first adopted in 1975, the California Regional Water Quality Board, Lahontan Region (LRWQCB) has added several beneficial uses for the Region, bringing the number of beneficial uses recognized in the Lahontan Region to a total of 22; designations include agricultural supply (AGR), aquaculture (AQUA), preservation of biological habitats of special significance (BIOL), cold freshwater habitat (COLD), commercial and sportfishing (COMM), flood peak attenuation/flood water storage (FLD), freshwater replenishment (FRSH), groundwater recharge (GWR), industrial service supply (IND), migration of aquatic organisms (MIGR), municipal and domestic supply (MUN), navigation (NAV), hydropower generation (POW), industrial process supply (PRO), rare/threatened/endangered

¹ LRWQCB, *Water Quality Control Plan for the Lahontan Region*, March 1995 (as amended).

species (RARE), water contact recreation (REC-1), non-contact water recreation (REC-2), inland saline water habitat (SAL), spawning/reproduction/development (SPWN), warm freshwater habitat (WARM), wildlife habitat (WILD), and water quality enhancement (WQE). Water Quality Objectives for surface waters are divided into 3 categories:

- **Objectives that apply to all surface waters**, including standards for Ammonia, Bacteria (Coliform), Biostimulatory Substances, Chemical Constituents, Chlorine (Total Residual), Color, Dissolved Oxygen, Floating Materials, Oil and Grease, Non-degradation of Aquatic Communities & Populations, Pesticides, pH, Radioactivity, Sediment, Settleable Materials, Suspended Materials, Taste and Odor, Temperature, Toxicity and Turbidity.
- **Objectives for certain water bodies**, comprising standards that supersede the objectives for all surface waters and are designed to protect surface waters (including wetlands) in specific areas. In Mono County, these objectives apply to the Mono HU, West Walker River HU, East Walker River HU, and the Owens HU.
- **Objectives for fisheries management** activities using the fish toxicant Rotenone. Rotenone is a fish toxicant used by DFW for fishery management purposes. When used, rotenone can cause several water quality objectives to be temporarily exceeded. The additional narrative water quality objectives that apply in these areas include color, pesticides, toxicity, and species composition.

The Basin Plan frequently identifies multiple beneficial uses for a given water body, with water quality objectives that protect the most sensitive of the designated uses. Unless specifically exempted, all waters are designated for municipal and domestic supply (MUN). Several beneficial uses apply to only portions of a stream or surface water or under certain conditions; these temporary designations include IND, PRO, GWR, FRSH, NAV, POW, WARM, COLD, SAL, MIGR, SPWN and WQE. Most Mono County hydrologic units have subunits and drainage features with specific beneficial use designations. Table 5.2-1 (on the next page) identifies designated beneficial uses of surface waters in the Mono Hydrologic Unit. As shown, Mono Lake and the Mono Lake wetlands have an exceptionally wide range of beneficial uses (15 of the 22 listed uses) including five uses that are not present in any other Mono HU drainage features: 'industrial supply,' 'aquaculture,' 'preservation of biological habitats of special significance,' 'inland saline water habitat,' and 'rare, threatened or endangered species.' Beneficial uses in Lee Vining Creek are similarly wide ranging, covering fully half of the possible designations.

The Basin Plan also contains two categories of water quality objectives for ground water, including objectives that apply to all groundwaters (including standards for Bacteria, Chemical Constituents, Radioactivity and Taste and Odor), and objectives that apply to specific groundwater basins; there are no Mono County ground water basins subject to these special objectives.

The Regional Board is responsible for implementing state and federal antidegradation policies, which state that when the existing quality of water is better than needed to protect all existing and probable future beneficial uses, the existing high quality shall be maintained until or unless it has been demonstrated to the State that any change in water quality will be consistent with the maximum benefit of the people of the State, and will not unreasonably affect beneficial uses of such water. When determined that some degradation is in the best interest of California residents, an increase in pollutant levels may be appropriate. The *Basin Plan* notes, however, that such increases may not cause adverse impacts to the beneficial uses of waters. *Basin Plan* implementation occurs through multiple channels, and the *Plan* identifies many implementing procedures that involve local agencies including:

- **Stormwater Discharges:** Local governments have authority to control stormwater discharges, subject to a number of State and local laws and regulations with important implications for stormwater control (e.g., CEQA, Grading Ordinance, Subdivision Map Act). The *Basin Plan* recommends that all local governments in the Lahontan Region place a high priority on the prevention and control of development-related stormwater discharges, and encourages local agencies to apply for funding assistance through federal stormwater control grants.
- **Waste Disposal Systems:** Some local agencies have adopted, through Memoranda of Understanding, waste disposal criteria that are as or more stringent than the Regional Board criteria. In these instances, the local agency is fully responsible for issuing permits for developments with domestic waste only.
- **Alternative Individual Waste Disposal Systems:** In areas where conditions do not support the use of conventional individual subsurface waste disposal systems (e.g., septic systems), the use of engineered alternative systems can be considered subject to approval by the Local Health Officer.
- **CEQA.** CEQA compliance is required for any action to be taken on water quality certification.

ABLE 5.2-1. Beneficial Uses of Surface Waters of the Mono Hydrologic Unit

Drainage	Type	BENEFICIAL USES - 601.00 – Mono Hydrologic Unit																						Receiving Water
		MUN	AGR	PRO	IND	GWR	FRSH	NAV	POW	REC ₁	REC ₂	COMMA	AQUA	WARM	COLD	SAL	WILD	BIOL	RARE	MIGR	SPWN	WQE	FLD	
Rush Ck (abv Grnt)	Peren. Strm	X					X		X	X	X	X			X		X				X			Grant Lake
Rush Ck (bel Grant)	Peren. Strm	X	X			X	X			X	X	X			X		X				X			Mono Lake
Grant Lake	Lake	X								X	X	X			X		X				X			Mono Lk/ Aqdct
Silver Lake	Lake	X								X	X	X			X		X				X			Rush Ck.
Gull Lake	Lake	X						X		X	X	X			X		X				X			Reversed Ck.
June Lake	Lake	X						X		X	X	X			X		X				X			Reversed Ck.
Fern Lake	Lake	X	X					X		X	X	X			X		X				X			Reversed Ck.
Reversed Ck	Per. Stream	X								X	X	X			X		X				X			Rush Creek
Agnew Lake	Lake	X							X	X	X	X			X		X				X			Rush Creek
Gem Lake	Lake	X							X	X	X	X			X		X				X			Rush Creek
Alger Lakes	Lakes	X								X	X	X			X		X				X			Silver Lake
Mill Creek	Per. Steam	X	X			X	X		X	X	X	X			X		X				X			Mono Lake
Lundy Lake	Lake	X						X	X	X	X	X			X		X				X			Trib to Mill Ck.
Blue Lake	Lake	X								X	X	X			X		X				X			Trib to Mill Ck.
Crystal Lake	Lake	X								X	X	X			X		X				X			Trib to Mill Ck.
Oneida Lake	Lake	X								X	X	X			X		X				X			Trib to Mill Ck.
Lee Vining Ck (above divrsn.)	Perennial Steam	X	X			X	X		X	X	X	X			X		X				X			Grant Lake via aqueduct
Lee Vining Ck (below divrsn.)	Ephemeral Stream	X				X	X		X	X	X	X			X		X				X			Mono Lake
SADDLEBAG LK	Lake	X							X	X	X	X			X		X				X			Trib to LV Ck.
TIOGA LAKE	Lake	X						X	X	X	X	X			X		X				X			Trib to LV Ck.
ELLERY LAKE	Lake	X						X	X	X	X	X			X		X				X			Trib to LV Ck.
KIDNEY LAKE	Lake	X							X	X	X	X			X		X				X			Trib to LV Ck.
GIBBS LAKE	Ephem.Lk.	X							X	X	X	X			X		X				X			Trib to LV Ck.
Walker Ck/Lk	Peren.Strm.	X	X			X	X			X	X	X			X		X				X			Trib to Owens
Parker Creek	Peren. Strm.	X	X			X	X			X	X	X			X		X				X			Trib to Owens
Mono Lk Wtlds.	Wetlands									X	X					X	X	X			X	X	X	via Aqueduct
Mono Lake	Saline Lk.	X	X		X			X		X	X	X	X			X	X	X	X		X			Internal drain
Minor Surf. Wtrs.		X	X							X	X	X			X		X							
Minor Surf. Wtrs.		X	X			X	X			X	X	X			X		X				X			
Minor Wetlands	Sprngs/Seeps	X	X			X	X			X	X	X			X		X				X	X	X	

- Control Measures for Ground Water Protection and Management: The Regional Board generally waives its regulation of individual waste disposal systems where the systems will be regulated by a local agency; terms of regulation are included in a Memoranda of Understanding. Other agencies that regulate waste discharges include the California Integrated Waste Management Board (CIWMB) and the Dept. of Toxic Substance Control.

5.2.3.2 Surface Water and Groundwater Management Planning²

Hydrologic Units and Watersheds in Mono County. The California Water Quality Control Board (along with many state and federal agencies) uses Hydrologic Units to identify and classify drainage basins in the state. Situated in the southern portion of the Lahontan Region, Mono County contains portions of 7 Hydrologic Units and all or part of 10 watersheds. The Tioga project site is located in the Mono Hydrologic Unit and the Mono Valley watershed.³

Water Quality and Mono Lake as an Outstanding National Resource Water Body. Waters in most of the Inyo-Mono region are of very high quality, with limited potential for contamination compared to other parts of the state; water-quality issues in the planning area generally result from naturally-occurring minerals. The *Basin Plan* does include several waters in the region on the Category 5 List of Impaired Water Bodies, a program established under the Clean Water Act for water bodies that do not meet water quality standards. Category 5 includes water-quality-limited segments where standards are not being met and a Total Maximum Daily Limit (TMDL) is required; Mono Lake is not included among the Category 5 listed waters, and there are no Mono County surface waters listed under Category 4A (Water Quality Limited Segments that are being addressed through approved TMDLs).

Mono Lake is among several Mono County surface waters on the 4B list (segments being addressed by actions other than TMDLs). Mono Lake is listed for chlorides, TDS and salinity. These concerns are being addressed through SWRCB Water Rights Decision 1631, which designated Mono Lake as an Outstanding National Resource Water with exceptional ecological significance. The designation includes special regulatory water quality thresholds: *"The water quality which existed in November 1975 when the federal antidegradation regulation was enacted must be maintained and protected. To maintain the salinity of Mono Lake at 85 g/l or lower would require that the water level of the lake be raised and maintained at 6,379.3 feet or higher. The [Basin Plan] for the South Lahontan Basin was adopted by LRWQCB and approved by the SWRCB in 1975;...designated beneficial uses...include saline water habitat, wildlife habitat, and water contact recreation. The water quality objective for salinity set by the 1975 plan is 76 g/l...would correspond to a lake level of approximately 6,386 feet... The adopted water quality objective of 76 g/l is reasonably necessary to protect the designated beneficial uses of Mono Lake."*⁴

Mono Lake is not among the many Mono county water bodies that are listed under Category 3 (insufficient information to assess beneficial uses), nor is it listed under Category 2 (waters supporting some beneficial uses); an 11-mile segment of Lee Vining Creek is included on the Category 2 list for flow alterations, temperature and water.⁵

Unpaved roads are a principal source of sediments throughout the Sierra Nevada. Erosion potential is increased by activities that compact or expose soils to rainfall and runoff; the eroded materials are often transported into streams. Petroleum- and rubber-based materials wash off paved roads into small channels, and nitrogen and phosphorus enter streams from varied sources including septic system leaks, overuse of fertilizers, pet wastes and others.

Pathogens such as *E. coli* enter surface waters from septic and sewage system leaks, pets and livestock, and human waste from the flushing of RV waste tanks. SWRCB in June 2012 issued a *Water Quality Control Policy for Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment Systems (OWTS)*. The policy identifies impaired water bodies where OWTS is likely to be a contributing source of pathogens or nitrogen; no Mono County water bodies are

² Mono County Powerpoint Presentation, *The Sustainable Groundwater Management Act of 2014* (undated; prepared during 2014.)

³Water Quality Control Plan for the Lahontan Region (Basin Plan), Plates 1A, 1B, 2A, and 2B (Surface Water Hydrologic Units and Groundwater Basins), https://www.waterboards.ca.gov/lahontan/water_issues/programs/basin_plan/references.shtml

⁴ SWRCB Water Rights Decision 1631, September 1994: <https://www.monobasinresearch.org/images/legal/d1631text.php>

⁵ LRWQCB, https://www.waterboards.ca.gov/lahontan/water_issues/programs/tmdl/303d_305b/2012/docs/apxd.shtml

included on that list. In addition to *Basin Plan* water quality objectives, EPA has promulgated standards and numeric criteria for priority toxic pollutants in freshwater and saltwater bodies of California.⁶ For freshwater bodies, the standards cover a total of 21 criterion maximum concentrations and 22 continuous concentrations, and cover a wide range of metals and toxic organic compounds.

Sustainable Groundwater Management Act. In 2014, the California legislature passed the Sustainable Groundwater Management Act, a major piece of legislation with wide ramifications for future management of water resources. The Act requires establishment of groundwater sustainability agencies (GSAs) consistent with the resources and needs of their communities, with the goal of managing water supplies in a manner that anticipates drought and climate change, thereby enhancing reliability under varied weather patterns.

The Act requires that Counties manage 'high' and 'medium priority' basins through groundwater sustainability plans (to be adopted by January 31, 2022), and encourages that low and very low priority basins also be managed under the sustainability plan. Using identified ranking criteria, the Department of Water Resources (DWR) has assigned a priority status to each of Mono County groundwater basins. Mono Basin is classified as a 'Very Low Priority Basin' (along with Slinkard Valley, Antelope and Little Antelope Valleys, Sweetwater Flat, Bridgeport Valley, Adobe Valley and Long Valley). Fish Lake Valley is the only Low Priority Basin in Mono County, and Owens Valley is the sole Medium Priority Basin. No Mono County basin has been identified as 'high priority'⁷ nor are there any basins subject to critical overdraft conditions. Plans have been prepared for most watersheds in Mono County; plans for the Mono Basin are briefly reviewed below.

Mono Basin Watershed Management Plan (Mono County, 2007).⁸ The 2007 Watershed Management Plan was based on results of a 2006 watershed assessment for the Mono Basin that sought to describe and determine causative factors for known water quantity and quality problems. The plan has no authority in itself; implementation of suggested policies and actions depend on decisions of local jurisdictions, agencies, non-profit organizations, and private citizens. A primary recommendation is that the Mono County Collaborative Planning Team assumes the role of overseeing implementation and revision of this plan. The assessment found that the Mono Basin has very good water quality but has serious habitat problems resulting from water diversions. The report identifies maintaining the current high quality of waters as a primary challenge, noting that water quality and aquatic habitat are at risk from careless development and road construction.

Report recommendations include: (a) Water supply for the June Lake area: continue and expand water conservation efforts of the June Lake Public Utility District; (b) Conversion of wetlands: emphasize the importance of wetlands in the Mono County General Plan, Develop and implement a tracking system between Mono County, LRWQCB, and the Army Corps of Engineers (USACE) to ensure regulatory compliance, and use the BLM-initiated land-tenure adjustment program to trade privately-owned wetlands for publicly-owned parcels that could be developed with minimal environmental consequences; (c) Excessive sediment in tributaries: reroute roads away from riparian zones, close rarely used roads, stabilize fords, culverts, and bridges to reduce impact of road-related erosion, and implement low impact development guidelines; (d) Degradation of riparian habitat: move roads, trails, and facilities out of riparian zones, implement low-impact development guidelines; (e) Fecal contamination: build additional outhouses and RV dumps in high-use areas, and educate the traveling public about sanitation principles similar to wilderness users; (f) Contamination from fertilizers & pesticides: educate public to reduce use of household & horticultural chemicals; and (g) Threat of catastrophic wildfire: Expand the Inyo National Forest (INF) fuels management program and the community-based fire-safe program, adopt recommendations of the 2006-2007 wildfire hazard study project.

The report identifies potential future problems including (a) Erosion from OHV use in channels and riparian areas; (b) Mining; (c) Small-hydroelectric proposals; (d) Leaching of pollutants from Pumice Valley landfill; (e) Failure of poorly

⁶ EPA, Federal Register, 40 CFR Part 131, Water Quality Standards, Establishment of Numeric Criteria for Priority Toxic Pollutants for California, Rule. May 2000.

⁷ The Owens Valley Watershed has been proposed by the Department of Water Resources for redesignation as 'high priority' though the final outcome is uncertain.

⁸ *Mono Basin Watershed Plan Management Plan* March-2007.

located and/or poorly maintained septic systems, and (f) Groundwater contamination by gasoline from historic tanks and spills. All five specific report recommendations (including a General Plan emphasis on ecological stream values, a requirement that new development guarantee replacement water supplies if existing users are impacted; riparian protections; establishment of a wetlands tracking system; funding for an on-staff low-impact development specialist; and plans to accommodate added growth in the Bridgeport region) were incorporated as goals of the 2015 Mono County *General Plan Update*.

North Mono Basin Watershed Analysis Inyo National Forest (2001).⁹ The North Mono Basin Watershed Analysis compiles and analyzes technical information about the north basin watershed and landscape. The report includes an exhaustive list of information sources, an assessment of hydrologic conditions, a spreadsheet of flows in Mill and Wilson Creeks during dry, wet and normal year conditions, (d) an analysis of north Basin roads, (e) description of riparian vegetation, (f) description of wildlife species in Conway Ranch; and (g) a census of birds in Thompson Ranch.

Mono Basin Watershed Assessment (Mono County, 2007).¹⁰ This report assesses Mono Basin watershed impacts on the quantity and quality of flows into Mono Lake. Public perceptions are summarized, and issues addressed including: (a) Water Quantity: this primary issue concerns how water flows into hypersaline Mono Lake influence the rise and fall of the lake level. The report notes that from 1941 through 1989, most flows from the main tributaries were diverted to Los Angeles, and the lake level fell from an elevation of 6,417 feet to 6,372 feet in 1982. After diversions were curtailed, the lake level rose to 6,385 feet by 2006. More recently, concern has been expressed over the distribution of water between Mill Creek and Wilson Creek in the northwestern part of the basin; (b) Water Quality: issues include sedimentation in Silver Lake, contamination of Mono City drinking water supplies, and microbial pollution of backcountry streams. (c) Aquatic Habitat: aquatic habitat degradation was a key reason for curtailing diversions since many stream reaches were left without water; subsequent efforts have restored affected channels; (d) Recreation: water-related recreation issues in Mono Basin include recreational fishing in Rush and Lee Vining creeks and management of Grant Lake Reservoir water levels; (e) Wildlife: fire suppression during the 20th century has allowed fuel loads to build, increasing potential for catastrophic fires and associated sedimentation and erosion and sediment transport in parts of Mono Basin; (f) Invasive Species: invasive species in the Mono Basin include salt cedar, soapwort, woolly mullein, Russian thistle, cheatgrass, Russian olive and others; all have implications for terrestrial and aquatic ecosystems. Concerns include water availability for community infill, water quality in individual wells and community supplies, the effectiveness of septic tanks and leach fields, and erosion from construction activities.

Integrated Regional Water Management Plan (IRWMP).¹¹ The IRWMP is a collaborative and comprehensive program with broad goals for sustainable use of water, reliable water supplies, improved water quality, environmental stewardship, efficient urban development, sustainable agriculture, and a strong economy. The IRWMP incorporates a process to gather, maintain and monitor data, tools for responsible interagency governance, resource management strategies, financing methods and sources, a detailed implementation plan, a list of specific projects, and objectives and policies to achieve the broad goals noted above. The 2005 Lahontan '*Basin Plan*' is the foundational reference document for the IRWMP. Major drainage systems in Mono County include Walker and Owens River; Mono Lake is the largest natural lake in the region.

Water storage and transfers in the Inyo-Mono IRWM planning area are dominated by the Los Angeles Aqueduct system, and Los Angeles' land and water ownership underlie many IRWMP water management issues. LADWP diversions from the Mono Basin began in 1941 and increased following completion in 1970 of the second Owens Valley aqueduct. Diversions were halted by court order from 1989 to 1994, but resumed in 1995 under SWRCB Decision 1631. LADWP exports averaged about 356,000 acre-feet (AF) between 1970-2011, but have been well below that level since the dry period of 1987 to 1992. The IRWMP notes that runoff in the eastern Sierra Nevada is dominated by snowmelt from April through July. Following low discharge during autumn and early winter, the winter snowpack usually begins

⁹ Inyo National Forest, *North Mono Basin Watershed/Landscape Analysis Appendices*, 2001. Prepared by Rick Kattleman: <http://inyo-monowater.org/resources/library/>.

¹⁰ Mono Co. Planning Department, *Mono Basin Watershed Assessment*, 2007.: <http://inyo-monowater.org/resources/library/>.

¹¹ Inyo-Mono Regional Water Management Group, DWR, CalTrout, *Integrated Regional Water Management Plan*, October 22, 2014.

to accumulate in November, and attains maximum water storage in late March or early April. There are about 60 distinct groundwater basins in the IRWMP region, including the 270 square mile¹² Mono Valley basin.

Lee Vining Public Utility District (LVPUD). Lee Vining PUD, one of six public water systems in Mono County, provides water and sewer services to the Lee Vining townsites. As a PUD, the district is also authorized to provide lighting, power, heat, transportation, telephone and other communication services, garbage disposal, golf courses, fire protection, mosquito abatement, parks and recreation, building for public purposes, and drainage improvements.

Most areas are served by a community or mutual water system or by private wells. More than 100 small independent governmental and privately-owned water systems are in operation throughout Mono County. These range from systems operated by USFS at its campgrounds, to a private system at Tom's Place.

5.2.3.3 Hydrologic Threats and Hazards

Flood Risk. The *Mono County Multi-Jurisdictional Local Hazard Mitigation Plan* (LHMP) states that flood hazards are among the most prevalent natural hazards in Mono County “*due to their repeated occurrence, the damage they have caused in the past, and the large number of developed parcels within flood hazard areas.*” The *Safety Element* notes that all three Mono County watersheds (Mono Lake, Owens River and Walker River) and numerous streams, rivers and lakes are subject to flooding. FEMA has prepared Flood Insurance Rate Maps showing 100-year flood hazard areas (i.e., areas with a 1% probability of flooding in any given year). Community areas most likely to be impacted by a 100-year flood include properties along the East and West Walker Rivers, Reversed Creek, and Spring Canyon Creek. Flood Insurance Rate Maps prepared by FEMA show a majority of the Tioga project site as an ‘Area of Minimal Flood Hazard’; the convenience store and hilltop residences are classified as Zone D, Area of Undetermined Flood Risk.¹³

Dam Failure Hazards. Twenty-one dams are located in Mono County, including ten dams that drain into Mono Lake (Agnew, Ellery Lake, Gem Lake, Grant Lake, Lundy Lake, Saddlebag Lake, Sardine Lake, Tioga Lake, Waugh Lake and Walker Lake) as shown in Table 5.2-2 below., including the ten dams that drain into Mono Lake (Agnew, Ellery Lake, Gem Lake, Grant Lake, Lundy Lake, Saddlebag Lake, Sardine Lake, Tioga Lake, Waugh Lake and Walker Lake). Non-federal dams in California are regulated through the DWR Dam Safety Program to prevent failure, safeguard lives and protect property. The law requires (a) examination and approval or repair of dams completed before August 1929, (b) approval of plans and specs and construction supervision for new dams, (c) enlargement, alteration, repair, or removal of existing dams, and (d) supervision of all dams under the state’s jurisdiction.

TABLE 5.2-2: Dams and Reservoirs above Mono Lake					
Reservoir	Dam	Acre Feet Impounded	Stream/River	Owner	Location
Agnew Lake	Agnew	810	Rush Creek	SCE	June Lake
Ellery Lake	Rhinedollar	749	Lee Vining Creek	SCE	Lee Vining
Gem Lake	Gem	17,298	Rush Creek	SCE	June Lake
Grant Lake Res.	Grant	47,171	Rush Creek	LADWP	June Lake
Lundy Lake	Lundy	4,113	Mill Creek	SCE	Mono Basin
Saddlebag Lake	Saddlebag	10,077	Lee Vining Creek	SCE	Lee Vining
Sardine Lake	Sardine	385	Walker Creek	LADWP	Mono Basin
Tioga Lake	Tioga	1,254	Lee Vining Creek	SCE	Lee Vining
Waugh Lake	Rush Ck Mdws	5,277	Rush Creek	SCE	June Lake
Walker Lake	Walker	540	Walker Creek	LADWP	Mono Basin
SCE = Southern California Edison; LADWP = Los Angeles Department of Water and Power.					

The greatest threat for dam failure in Mono County occurs in late spring when eastern Sierra reservoirs are typically full; dam failures could also be triggered by large earthquakes, major warm storms that rapidly increase runoff, and lack of

¹²CA Groundwater Bulletin 118-80, Water Library: <http://wdl.water.ca.gov/groundwater/bulletin118/basindescriptions/6-09.pdf>.

¹³ FEMA, Flood Map Service Center, <https://msc.fema.gov/portal/search>.

proper maintenance or operation. Dam failure has been very rare throughout California, and there have been no dam failures in Mono County. The Mono Lake Committee, in its comments on the 2015 *General Plan Draft EIR*, noted that spring snowmelt floods are the most common type of flooding in Mono County, occurring almost yearly on all snowmelt-fed county streams.

Climate Change. In 2009, a number of agencies convened under the Dept. of Interior, EPA and the Council on Environmental Quality ('Task Force') to analyze and identify key concepts and actions required to ensure that water resources in the US are managed to support adaptation to a changing climate. During their study, the Task Force developed a series of specific recommendations and actions to support planning and management for climate change risks to freshwater resources. The report findings are consistent with IRWMP and SNC reviews and include: (a) warmer temperatures will increase precipitation in the form of rain instead of snow, (b) earlier melting of snowpacks, (c) decreases in snowpack size, (d) earlier runoff, and (e) reduced water supply reliability. The report referenced a finding of the U.S. Global Change Research Program that snowpack reductions will be largest in lower elevation mountains of the Pacific Northwest and California where snowfall occurs at temperatures close to the freezing point; the report also forecasts with a relatively high level of confidence that California, Nevada and Utah will experience an overall 10-20% reduction in runoff, coupled with more intense storms including a 9% increase in heavy rainfall events in California.

5.2.3.4 Surface and Storm Water Drainage¹⁴

The Town of Mammoth Lakes is the only area in Mono County with a formal *Master Plan of Drainage*.¹⁵ Storm Drain improvements outside of Mammoth Lakes are limited. June Lake Village has a limited storm drain system (catch basins, grates and culverts) that was constructed by Caltrans,¹⁶ and limited storm drain systems/facilities have been developed for projects approved under specific plans, including the Tioga Inn property as well as the Highlands in June Lake and the Sierra Business Park on US 395 across from the Mammoth Yosemite Airport. Lee Vining and Bryant Field Airport facilities both have improvements to divert flows off the runways. Storm runoff in other areas of the County either percolates into the ground or flows into nearby streams.

5.2.3.5 Mono County Low Impact Development (LID) Regulations

Mono County has adopted Low Impact Development standards as an appendix of the General Plan Land Use Element. LID goals are to keep polluted runoff water out of the rivers and lakes, use the chemical properties of soil and plants to remove pollutants from water, design subdivisions to clean their own stormwater rather than dumping it into streams or lakes, and preserve the natural water flow of the site. These goals are achieved by substantially reducing the volume of runoff water, which can be accomplished only through use of one or more of three methods that include infiltration, evapotranspiration, or capture and reuse. Although compliance with the Low Impact Development regulations is optional, the ordinance provides incentives to encourage use of the LID standards.

5.2.3.6 Project Area Hydrogeology¹⁷

The project site is located in the westernmost portion of the Basin and Range physiographic province, and adjacent to the uplifted fault block of the Sierra Nevada. The site is immediately underlain by Pleistocene Till of the Tahoe Glaciation that consists largely of interbedded sands, gravel, granitic boulders and some clay, to a depth of at least 630.' A thin layer of quaternary alluvium, consisting of sand and clay, overlies the glacial till at the well sites but has not been recorded in the Project area west of US 395. Mapped faults in the site vicinity include one predominant fault that runs along the western edge of the site in a north-northwest orientation. This fault has historically resulted in uplift of the

¹⁴ Mono Co. Public Works, *Capital Facilities Plan by Service Category*, Sept. 2005.

¹⁵ Town of Mammoth Lakes, 2005 Storm Drain Master Plan Update, Boyle Engineering. May 2005. Mammoth Lakes Website: <https://www.townofmammothlakes.ca.gov/DocumentCenter/View/569/2005-Storm-Drain-Master-Plan-Update?bidId=>

¹⁶ Mono County, June Lake MEA, 2002; obtained at Mono County website: http://www.monocounty.ca.gov/sites/default/files/fileattachments/planning_division/page/1745/june_lake_master_environmental_assessment_2002.pdf

¹⁷ Discussion is drawn from Wildermuth Environmental, Antidegradation Analysis (see Appendix I).

metamorphosed sedimentary rocks of the Log Cabin Mine Roof Pendant (west of the site), but has not been active within the Holocene age and is concealed in the site area.

Two water production wells are in operation on the project site including one well that was installed in 1984, and a second well that was installed during December 2017. Groundwater stabilized at water supply Well #1 at a depth of 340'; at Well #2, groundwater stabilized at a depth of 345 feet. The vadose zone thickness is therefore estimated to be between 340 and 380 feet thick. An aquifer pump test was performed on Well #1 in June 1992. Pump test results indicated that groundwater occurred under unconfined conditions at a depth of about 340'. In addition, the aquifer testing indicated the presence of a recharge boundary. Aquifer Transmissivity (T) before the boundary was calculated to be about 15,600 gallons per day per foot (gpd/ft). After adjusting for the influence of the boundary condition, aquifer T was calculated to be about 31,800 gpd/ft.

5.2.4 REGULATORY SETTING

5.2.4.1 Federal Regulations

Clean Water Act. The Clean Water Act (CWA, 1972) is the primary federal law that governs and authorizes water quality control activities of the Environmental Protection Agency (EPA). EPA is the federal agency responsible for water quality management, and EPA water quality regulations are published in the Code of Federal Regulations, Volume 40. The CWA sets water quality standards, permit and discharge monitoring requirements, and tools to manage polluted runoff with the goal to restore and maintain the chemical, physical, and biological integrity of surface waters. EPA has delegated to California the authority to implement and oversee most CWA implementation.

Water Quality Criteria & Standards. CWA §303 requires states to adopt water quality standards for all surface waters of the US. The standards consist of designated beneficial uses for surface water bodies, and criteria that protect the designated uses. §304(a) requires EPA to publish advisory water quality criteria that reflect the latest scientific understanding of impacts to health and welfare; where multiple uses exist, water quality standards must protect the most sensitive use. §303(d) mandates creation of a list of waterbodies and associated pollutants.

National Pollutant Discharge Elimination System Permit Program (NPDES). The NPDES permit program regulates municipal & industrial discharges to surface waters. NPDES permits generally identify effluent and receiving water limits for pollutants; prohibitions on discharges not allowed under the permit; and actions required of the discharger (industrial pretreatment, pollution prevention, self-monitoring, etc.). The prohibitions and limitations for wastewater treatment plants are intended to maintain public health and safety, protect receiving water resources, and safeguard designated beneficial uses. In 1990, EPA established NPDES permit requirements for municipal and industrial stormwater discharges. The program is implemented by the Regional Boards; Mono County is part of Lahontan Region 6, as discussed further under State Regulations.

Section 401 Water Quality Certification or Waiver. CWA §401 requires applicants for a §404 permit (to discharge dredged or fill material into waters of the US) to obtain a certificate stating that the fill is consistent with state water quality standards and criteria. In California, the authority to grant water quality certification or waive the requirements is delegated by the SWRCB to the nine regional boards.

Federal Antidegradation Policy. This policy directs states to adopt a statewide policy with the following primary provisions: (1) water quality standards to protect existing in-stream uses; (2) protection of high water quality waters (i.e., better than required) unless the state finds that allowing lower water quality is necessary for important local economic or social development; and (3) protection of waters of exceptional recreational or ecological significance.

Safe Drinking Water Act (SDWA). EPA administers the Safe Drinking Water Act (Public Law 93-523), to regulate contaminants that pose a public health threat and constituents that alter the aesthetic quality of the water (taste, appearance etc.). SDWA regulations apply to treated water supplies delivered to a distribution system. Maximum allowed contaminant levels (MCLs), as well as the process for setting these standards, are reviewed triennially. EPA has delegated to the California Dept. of Public Health (CDPH) the responsibility for administering California's drinking-water program. CDPH is accountable to EPA for program implementation and for adopting standards and regulations

that as or more stringent than those developed by EPA. Applicable state primary and secondary MCLs are set forth in CCR Title 22 (Division 4, Chapter 15, Article 4), discussed more fully under the discussion of State Regulations.

§303(d) Impaired Waters List. CWA §303(d) requires states to develop lists of water bodies that would not attain water quality objectives even after routine treatment by municipal and industrial point source dischargers. The state is required to develop a total maximum daily load (TMDL) for contributing pollutants in 303(d) water bodies. TMDL is the amount of loading the water body can receive and still comply with water quality objectives. Also required is a plan to reduce total loading of the identified pollutant(s) to meet water quality objectives. The TMDL must include an analysis demonstrating the link between loading reductions and attainment of water quality objectives. EPA must either approve a state's TMDL or issue its own. NPDES permit limits for listed pollutants must comply with the waste load allocation prescribed in the TMDL. Mono Lake is not on the 303(d) list of impaired water bodies.

Federal Emergency Management Agency (FEMA). FEMA administers the National Flood Insurance Program (NFIP) which offers subsidized flood insurance to communities that comply with the FEMA objective to limit development in floodplains; Mono County is a participant in the NFIP. FEMA also issues Flood Insurance Rate Maps (FIRMs) to identify land areas that are subject to flooding, provide flood information and identify flood hazard zones. FEMA sets flood protection design standards with a minimum protection level for a flood that would occur, on average, once in 100 years (the '100-year flood'). NFIP participants must also meet mandated floodplain management criteria. FEMA is also responsible for updating the FIRMs in conjunction with the local agencies that participate in the NFIP.

National Flood Insurance Program (NFIP). The NFIP was created through the National Flood Insurance Act of 1968 with three fundamental purposes: to better indemnify individuals for flood losses through insurance; to reduce future flood damages through State and community floodplain management regulations; and to reduce federal expenditures for disaster assistance and flood control. Although the Act originally allowed provision of subsidized flood insurance for existing structures, FEMA later adopted regulations to make the provision of flood insurance contingent on local adoption of floodplain regulations.

Executive Order 11988 (Floodplain Management). Executive Order 11988 addresses floodplain issues related to public safety, conservation, and economics. It generally requires federal agencies operating in a floodplain (i.e. constructing, permitting, or funding a project in a floodplain) to avoid incompatible floodplain development, comply with NFIP standards and criteria, and restore and preserve natural and beneficial floodplain values.

Flood Disaster Protection Act (FDPA). The FDPA of 1973 was developed to address shortcomings of the NFIP, with new provisions prohibiting Federal assistance in the delineated floodplains of non-participating NFIP communities. The changes also mandated that participating communities carry flood insurance for all acquisitions or developments in Special Flood Hazard Areas, with standards for improvements, construction, and development.

Disaster Relief Act of 1974 and Stafford Act of 1988. The Disaster Relief Act of 1974 expanded federal assistance (preparedness, grants, disaster declarations, disaster relief and loans) to individuals, states, and local communities recovering from disasters. FEMA was subsequently established in 1979, and in 1988, Congress passed the Robert T. Stafford Disaster Relief and Emergency Assistance Act, to improve the efficiency of state and federal-level involvement. The Stafford Act provides statutory authority for most Federal disaster response activities (especially as they pertain to FEMA and FEMA programs) and includes disaster housing and community development programs unique to FEMA, as well as relief programs administered by Housing and Urban Development Department (HUD).

U.S. Army Corps of Engineers (USACE). USACE oversees dams, canals and flood protection in the US, but also manages public works projects world-wide. USACE issues permits, under CWA §401 and §404, for the discharge of dredged or fill material into waters of the US, including wetlands, and for water supply projects that involve instream construction, such as dams and diversion structures. USACE also is responsible for flood control planning and assisting state and local agencies with the design and funding of local flood control projects. The determination of whether an area is a wetland, and applicable permit requirements, is made by the appropriate Corps office; Mono County is part of the Southern California Area Office located in Palmdale. The Corps uses 3 wetlands characteristics (vegetation, soil and hydrology) to make wetland determinations; all three characteristics must be present.

Federal Agency Climate Change Adaptation Planning. The 2010 Progress Report of the Climate Change Adaptation Task Force recommended that agencies integrate adaptation into routine planning to optimize resource investment and ensure that Federal programs remain effective in a changing climate. The Council on Environmental Quality (CEC) issued implementing instructions in March 2011, including a requirement that agency-specific climate change adaptation plans be published by June 2012, guided by the National Action Plan for freshwater resources.

Flood Control Act of 1936. The Flood Control Act authorized civil engineering projects such as dams, levees, dikes, and other flood control measures through the USACE and other Federal agencies. It is one of a number of Flood Control Acts passed on a regular basis by Congress. FCA 1936 placed Federal flood control investigations and improvements under jurisdiction of the War Department; The Dept. of Agriculture oversees watersheds, waterflow retardation, and soil erosion prevention. In whole, this Act established a major federal commitment to protect people and property on roughly 100 million acres. Since 1936, Congress has authorized USACE to construct hundreds of miles of levees, flood walls, channel improvements and reservoirs, an infrastructure rivaled only by the highway system.

The Federal Energy Regulatory Commission (FERC). FERC is an independent federal agency that regulates the interstate transmission of electricity, natural gas, and oil, reviews proposals to build liquefied natural gas terminals and interstate natural gas pipelines, and licenses hydropower projects. The Energy Policy Act of 2005 gave FERC numerous additional responsibilities for regulation, review and/or approval of (a) transmission and wholesale sales of electricity in interstate commerce; (b) certain mergers and acquisitions and corporate transactions by electricity companies; (c) transmission of natural gas for resale in interstate commerce; (d) interstate pipeline transportation of oil; (e) siting and abandonment of interstate natural gas pipelines and storage facilities; (f) siting applications for some electric transmission projects; (g) safe operation and reliability of LNG terminals; (h) private, municipal, and state hydroelectric projects; (i) high voltage interstate transmission system; and (j) energy markets. Regulatory requirements are enforced through civil penalties and other means.¹⁸ FERC has issued three licenses in the Mono Basin (Rush Creek, Lee Vining Creek and Mill Creek); these licenses establish parameters within which SCE must operate.

5.2.4.2 State Regulations

Sustainable Groundwater Management Act of 2014 (SGMA). The SGMA is a framework for sustainable management of groundwater supplies by local authorities, with a limited role for state intervention only if necessary to protect the resource. The Act requires the formation of local groundwater sustainability agencies (GSAs) to assess conditions in their local water basins and adopt locally-based management plans. The Act allows a 20-year time frame for GSAs to implement the plans and achieve long-term groundwater sustainability. It protects existing surface water and groundwater rights and does not impact current drought response measures. Designed to ensure the reliability of future water supplies, the SGMA is part of a larger, comprehensive water plan for California that includes investments in water conservation and recycling, expanded water storage, safe drinking water, wetlands and watershed restoration. The legislation creates a process and timeline for local authorities to achieve sustainable management of groundwater basins, and also provides tools, authorities and deadlines to take the necessary steps to achieve the goal.

Assembly Bill 162 (AB 162). This bill requires that General Plan Land Use Elements identify and annually review areas that are subject to flooding as identified in FEMA maps or by the Department of Water Resources (DWR). The bill also requires that the Conservation Element identify rivers, creeks, streams, flood corridors, riparian habitat, and land that may accommodate floodwater for groundwater recharge and stormwater management, and that the Safety Element provide information about flood hazards and establish comprehensive goals, policies, and objectives to protect the community from the unreasonable risks of flooding.

Assembly Bill 70 (AB 70). AB 70 requires a local government to share in the state's liability for flood damages when that local agency's actions increased the state's exposure to flood damages (i.e., as a result of approving new development without considering flood risks). AB 70 imposes the shared liability on the basis of "regulatory liability" wherein local governments have liability only if they fail to do something the law requires. AB 70 gives discretion to the courts to require a city or county to contribute a fair and reasonable share of the property damage (but not including

¹⁸ FERC Website: <http://www.ferc.gov/>.

personal injury damages) caused by a flood if certain conditions are met. The contribution amount is tied to the extent to which the city or county has increased the state's exposure to liability.

State Water Resources Control Board (SWRCB). SWRCB (the 'State Board') and 9 Regional Water Quality Control Boards have primary responsibility for protecting water quality in California. SWRCB sets policy for implementing state and federal laws and regulations, and the Regional Boards adopt and implement Water Quality Control Plans (Basin Plans) to address regional variations in water quality, beneficial uses, and water quality problems. Mono County is in the Lahontan Region (LRWQCB), which extends from the Oregon border to the northern Mojave Desert and includes all of California east of the Sierra crest. Most waters of the North Lahontan region (including Mono County) drain into closed basins that were previously part of Lake Lahontan. Waters of the South Lahontan Basin drain into closed basin remnants of prehistoric lakes. Other state agencies with jurisdiction over water quality regulation include the Dept. of Public Health, Dept. of Pesticide Regulation, CDFW, and the Office of Environmental Health & Hazard Assessment.

California Government Code (CGC). The Senate and Assembly bills identified above have resulted in various changes and additions to the California Government Code. Key sections require that revised safety elements must include maps of any 200-year flood plains and levee protection zones within the planning area; lands having inadequate flood protection (as determined by FEMA or DWR) must be excluded from land identified as suitable for urban development within the planning area. In Mono County, FEMA has prepared a 200-year floodplain map for Tri-Valley area.

Potential Flooding-Dam Inundation Act. This act requires owners of dams to prepare maps showing potential inundation areas in the event of dam failure. A dam failure inundation zone is different from a flood hazard zone under the National Flood Insurance Program (NFIP). NFIP flood zones are areas along streams or coasts where storm flooding is possible from a "100-year flood." In contrast, a dam failure inundation zone is the area downstream from a dam that could be flooded in the event of dam failure due to an earthquake or other catastrophe. Dam failure inundation maps are reviewed and approved by the California Office of Emergency Services (OES). Sellers of real estate within inundation zones are required to disclose this information to prospective buyers

Porter-Cologne Water Quality Control Act. The Porter-Cologne Act is California's statutory authority for the protection of water quality. Under the act, the state must adopt water quality policies, plans, and objectives that protect the state's waters for the use and enjoyment of the people. The act obligates the SWRCB and RWQCBs to adopt and periodically update Basin Plans, required by both the CWA and Porter-Cologne Act, to establish beneficial uses, water quality objectives, and implementation programs for each of the 9 regions in California. The act also requires waste dischargers to notify the RWQCBs of their activities by filing of reports of waste discharge (RWDs), and authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements (WDRs), NPDES permits, §401 water quality certifications, and others. RWQCBs have authority to waive RWD and/or WDR requirements for broad categories of "low threat" discharge activities with minimal potential for adverse water quality effects.

Water Quality Control Plan for the Lahontan Basin ('Basin Plan'). The Lahontan region includes over 700 lakes, 3,170 miles of streams and 1,581 square miles of ground water basins, with 12 major watersheds (known as "hydrologic units") in the North Lahontan Basin and 3 major surface water systems (Mono Lake, Owens River, and Mojave River watersheds) in the South Lahontan Basin. Most high elevation waters have very good or excellent quality, though soils and waters of the Sierra Nevada have low buffering capacity for acids and the lakes and streams are sensitive to acidification due to deposition of pollutants from urban areas. Many desert waters have naturally high concentrations of salts and minerals (such as arsenic and selenium), and these threats to beneficial uses can be aggravated by geothermal and agricultural discharges, ground water overdraft (which concentrates salts), and disposal of stormwater under conditions where it is unlikely to receive adequate treatment by soils and vegetation. LRWQCB notes the need for careful consideration of the relationships between water quality and water quantity in future planning due to projected population increases and associated demands for water, possible future water shortages (due to drought, climate change, and water contamination by toxics), and increasing awareness of the environmental values associated with natural water volumes in streams, lakes, wetlands and ground water aquifers. The Basin Plan contains narrative and numeric water quality objectives for physical properties (e.g., temperature, dissolved oxygen, turbidity and suspended solids), biological constituents (e.g., coliform bacteria), and chemical constituents of concern including inorganic parameters and trace metals and organic compounds. Water quality objectives for toxic priority pollutants are included in the Basin Plan and the California Toxics Rule (see below). LRWQCB works with the Sierra Business

Council on the Rivers and Ranches Project, a water quality improvement project for private lands impacted by grazing operations (see discussion of the Sierra Business Council under Local Regulations).

California Toxics Rule. In 2000, EPA set numeric water quality criteria for priority toxic pollutants and other water quality standards to be applied to waters in the state of California. EPA took this step based on a determination that numeric criteria are necessary in California to protect human health and the environment. The rule fills a gap in California water quality standards that was created in 1994 when a state court overturned the state's water quality control plans containing water quality criteria for priority toxic pollutants. Since that time, the State has been without numeric water quality criteria for many priority toxic pollutants required by the Clean Water Act. These federal criteria are legally applicable in the State of California for inland surface waters, enclosed bays and estuaries for all purposes and programs under the Clean Water Act.

State Nondegradation Policy. In 1968, the SWRCB adopted the Nondegradation Policy as a means to maintain the high-quality waters in California. The Nondegradation Policy states that the disposal of wastes into state waters shall be regulated so as to achieve the highest water quality consistent with maximum benefit to the people of the state and so as to promote the peace, health, safety, and welfare of the people of the state. The policy prescribes the following: Where the existing quality of water is better than required under existing water quality control plans, such quality would be maintained until it has been demonstrated that any change would be consistent with maximum benefit to the people of the state and would not unreasonably affect present and anticipated beneficial uses of such water. Any activity which produces waste or increases the volume or concentration of waste and which discharges to existing high-quality waters would be required to meet waste discharge requirements which would ensure (1) pollution or nuisance would not occur and (2) the highest water quality consistent with the maximum benefit to the people of the state would be maintained.

California Water Conservation Act. Senate Bill X7-7, enacted in 2009, requires all water suppliers to increase water use efficiency. The legislation is divided into two sectors -- Urban Water Conservation and Agricultural Water Conservation. For urban areas, the legislation goal is to reduce per capita water use by 20% by the end of 2020, with interim goals and enforcement tools to achieve this reduction. Agricultural suppliers are required to adopt water management plans by the end of 2012, to update those plans by the end of December 2015, and every 5 years thereafter, with enforcement tools to achieve the planned reductions. An urban water supplier is defined as a water supplier (publicly or privately owned), that provides more than 3,000 AF of water annually at wholesale for potable municipal purposes; an agricultural water supplier is a supplier (public or private) that provides water to 10,000 or more irrigated acres (excluding recycled water) and includes distributions for resale to customers. The act applies to regional water resources including stormwater, recycled water, desalination from brackish water, and conjunctive use of surface water and groundwater to maintain safe yield.

Title 22. Water quality standards are enforceable limits that identify the designated beneficial uses of water and establish numeric or narrative criteria to protect those beneficial uses. The Porter Cologne Act identifies municipal and domestic supply as a "beneficial use" that must be protected against water quality degradation. Maximum contaminant levels (MCLs) adopted by CDPH pursuant to the California Safe Drinking Water Act, are set forth in CCR Title 22, Div. 4, Ch. 15 (Domestic Water Quality and Monitoring). CDPH is also responsible for secondary drinking water standards, established primarily for reasons of consumer acceptance (i.e., taste). Drinking water MCLs apply to water supply systems at the point of customer use (e.g. home, office, etc.), and are enforced by CDPH and Mono County Health Dept. California MCLs are directly applicable when they are specifically referenced in the Basin Plan as water quality objectives. In such cases, MCLs become enforceable by the State and Regional Water Boards. Regional Water Boards may also apply more stringent limits to protect all beneficial uses.

Outstanding National Resource Waters (ONRWs). ONRWs are US waters with such high quality that they are designated as an outstanding National resource. ONRWs include waters of the National and State parks and wildlife refuges, and waters of exceptional recreational or ecological significance. As an ONRW, ONRW waters are afforded the greatest protection under the Clean Water Act, through implementation of federal Antidegradation policy (40CFR131.12) which prohibits lowering of water quality in an ONRW except for activities that result in temporary and short-term water quality change. Mono Lake is one of only two ONRWs in California (Lake Tahoe is the other).

Consumer Confidence Reports. CCR Title 22 requires all public water systems to prepare a Consumer Confidence Report for distribution to customers and to the DHS. The Report provides information about the quality of potable water provided by the water system. It also includes information on water sources, any contaminants detected in the water, the maximum contaminants levels set by regulation, violations and actions taken to correct them, and opportunities for public participation in decisions that may affect the quality of the water provided.

California Department of Health Services (DHS). The DHS Division of Drinking Water and Environmental Management regulates public water systems, certifies drinking water treatment and distribution operators, and provides support for small water systems including subsidized funding for water system improvements under the State Revolving Fund ("SRF") and Proposition 50 programs. The Drinking Water Program also oversees water recycling projects, permits water treatment devices, supports and promotes water system security, and oversees the Drinking Water Treatment and Research Fund for MTBE and other oxygenates.

Irrigated Lands Regulatory Program. Water discharges from agricultural operations in California include irrigation runoff, flows from tile drains, and stormwater runoff. These discharges can affect water quality by transporting pollutants, including pesticides, sediment, nutrients, salts, pathogens, and heavy metals, from cultivated fields into surface waters. Many surface water bodies are impaired because of pollutants from agricultural sources. Groundwater bodies have suffered pesticide, nitrate, and salt contamination. The Irrigated Lands Regulatory Program (ILRP) was initiated in 2003 to regulate agricultural discharges and prevent such discharges from impairing receiving waters.

California Department of Water Resources (DWR). DWR is responsible for preparation of the California Water Plan, management of the State Water Project (SWP), regulation of dams, provision of flood protection, and other functions related to surface water and groundwater resources. These other functions include helping water agencies prepare their UWMPs, which are discussed in §4.13 "Public Services and Utilities."

Recycled Wastewater Requirements. Wastewater recycling in California is regulated by CDPH under CCR Title 22, Division 4. The intent of these regulations is to ensure protection of public health associated with the use of recycled water. Title 22 regulations establish acceptable levels of constituents in recycled water for a range of uses and stipulate means for ensuring reliability in the production of recycled water.

5.2.4.3 Local Regulations

Sierra Business Council. In collaboration with LRWQCB and UC Davis, the Sierra Business Council has established the Rivers and Ranches Project^{19 20} to monitor water bodies that may be impacted by grazing operations on private lands, and to help landowners implement management practices that reduce pollutant discharges to surface waters. Participating watersheds in Mono County include Walker River and the Owens River. Project activities include microbial source tracking and monitoring of enteric pathogens and bacterial indicators to identify pollution sources, and collaboration with landowners to provide financial and technical assistance for implementation of sustainable grazing management practices.

Mono County Environmental Health Department. The Environmental Health Department provides programs for all environmental health disciplines. Services include planning, inspections, enforcement, and public education in the regulation of food establishments, sewage disposal facilities, water systems, well construction, swimming pools, recreational health facilities, occupied housing, underground storage facilities, solid waste facilities, land use development, rabies and vector control, and the management of hazardous wastes and materials.

Public Works Land Clearing, Earthwork and Drainage Facilities Ordinance. This ordinance (known as the Mono County Grading Ordinance) regulates development activities to prevent erosion and damage to off-site property.

¹⁹ Sierra Business Council, <http://sierrabusiness.org/what-we-do/projects/336-rivers-and-ranches-project>

²⁰LRWQCB website: http://www.swrcb.ca.gov/rwqcb6/publications_forms/publications/prop84fs.pdf

5.2.5 SIGNIFICANCE CRITERIA

Appendix G of the California CEQA Guidelines offer the following criteria for determining the significance of impacts to hydrology and water quality. A project would have a potentially significant impact on hydrology if it would:

- a) Violate any water quality standards, with a water quality control plan, or sustainable groundwater management plan, or otherwise substantially degrade surface or groundwater quality.
- b) Violate any wastewater treatment or discharge requirements or require new wastewater treatment facilities.
- c) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume, or a lowering of the local groundwater table level that would impact the production rate of nearby wells. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?
- d) Substantially alter drainage patterns in a manner that would result in substantial erosion, siltation, flooding or runoff or exceed existing or planned drainage systems.
- e) Place housing or structures in a 100-year flood hazard area as mapped on a Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, or impede flood flows.
- f) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.
- g) Expose people or structures to inundation by seiche, tsunami, or mudflow.

5.2.6 ENVIRONMENTAL IMPACTS AND MITIGATING POLICIES AND ACTIONS

IMPACT 5.2(a): Would project implementation result in a violation of water quality standards, or water quality control plan, or sustainable groundwater management plan?

LESS THAN SIGNIFICANT WITH MITIGATION. Approval and implementation of the Tioga Workforce Housing project would result in a variety of activities (grading, excavation, removal of vegetation cover, and related construction activities) that have potential to increase runoff, erosion, and sedimentation and thereby adversely impact water quality. Because the project disturbance area exceeds one acre, it would be subject to the requirement for preparing and implementing a Storm Water Pollution Prevention Plan (SWPPP) under the General Permit for Discharges of Storm Water Associated with Construction Activity. Construction activities subject to this permit include clearing, grading and ground disturbance (such as stockpiling and excavation). The SWPPP details site perimeters, drainage patterns, structures, lots, roadways, and storm water collection and discharge points, and lists the Best Management Practices (BMPs) that will be used to protect storm water runoff. The SWPPP also provides visual and chemical monitoring programs to respond if one or more BMPs fail (a sediment monitoring plan is also required where the site discharges directly to a water body on the 303(d) list for sediment, which would not apply to the Tioga project). Section A of the Construction General Permit describes the elements that must be contained in a SWPPP.²¹

In its comments on the NOP, LRWQCB requested that the EIR identify site specific water quality standards (based on beneficial uses and water quality objectives) and use those standards as significant thresholds for impacts. The LRWQCB noted that the site is in Mono Hydrologic Unit 601.00, and overlies Mono Valley Groundwater Basin No. 6-g. Table 5.2-3 (below) identifies the water quality objectives for certain water bodies in the Mono Hydrologic Unit (note that Table 5.2-1 in the baseline discussion listed the designated beneficial uses of surface waters in the Mono Hydrologic Unit).

²¹State Water Resources Control Board: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html

TABLE 5.2-3. Water Quality Objectives for Certain Water Bodies, Mono Hydrologic Unit
(annual average value/90th percentile value)

Surface Waters	Total Dissolved Solids (TDS)	Chloride (Cl)	Sulfate (SO ₄)	Fluoride (F)	Boron (B)	NO ₃ -N (Nitrate as Nitrogen)	Total N (Total Nitrogen)	PO ₄ Orthophosphate Dissolved
Mono Lake	76,000/ 80,700	17,700/ 18,000	11,000/ 12,000	48/ 52	348/ 3555	37/ 47	--	66/ 75
June Lake	200/ 225	--	--	--	--	--	0.3/ 0.5	0.06/ 0.08
Reversed Ck. (Gull Lk inlet)	130/ 160	--	--	--	--	0.1/ 0.1	0.4/ 1.0	0.24/ 0.34
Gull Lake	120/ 140	--	--	--	--	--	0.3/ 0.8	0.11/ 0.17
Reversed Ck. (Silver Lk inlet)	100/ 130	--	--	--	--	0.1/ 0.1	0.2/ 0.4	0.16/ 0.35
Rush Creek (SCE inlet)	41/ 60	--	--	--	--	0.1/ 0.1	0.1/ 0.2	0.02/ 0.07
Silver Lake	45/ 60	--	--	--	--	--	0.1/ 0.2	0.06/ 0.09
Rush Ck. (Grant Lk inlet)	58/ 70	--	--	--	--	0.1/ 0.1	0.2/ 0.2	0.07/ 0.09
Grant Lake	37/ 46	2.0/ 4.0	4.0/ 8.0	0.10/ 0.20	0.05/ 0.08	--	0.4/ 0.9	0.07/ 0.15

Water Quality Impacts. On a long term basis, many activities and developments allowed or proposed under Tioga Specific Plan would have potential to impact waters of the state. Concerns would center on the introduction into state waters of constituents associated with urban runoff (sediments, petroleum hydrocarbons, pesticides, fertilizers, and some heavy metals including lead, zinc, and copper) that tend to accumulate during dry months, and are often carried in comparatively high concentrations early in the wet season (i.e., the “first flush” of storm events).

In its comments on the NOP, LRWQCB made special note of the adverse impacts of hydromodification, including stream channel instability, degraded water quality, changed recharge processes, degraded aquatic habitat, and potential separation of a stream channel from its floodplain. LRWQCB recommended use of “Low Impact Development” (LID) strategies to minimize these adverse effects. LID strategies focus on practices that mimic natural runoff processes through infiltration, evapotranspiration and use of stormwater to protect water quality and aquatic habitat (collectively known as “green infrastructure”). LID principles include the preservation or recreation of natural landscape features, minimizing impervious acreage, and development of green site drainage (i.e., with bioretention facilities, rain gardens, vegetated rooftops, rain barrels and/or permeable pavements). These practices facilitate the maintenance (or restoration) of the watershed's hydrologic and ecological functions.

Mono County is a participating agency in the comprehensive Inyo-Mono Integrated Regional Water Management Plan. Additionally, as noted in the baseline discussion, Mono County has adopted Low Impact Development standards as an Appendix of the General Plan Land Use Element. The standards include multiple options as summarized below:

- Maintain natural onsite flows of water as much as possible;
- Manage runoff and excess water onsite,
- Use of rain gardens to filter pollutants and thereby manage pollutant loads;
- Use of channels and swales to convey excess water for onsite treatment and to separate roads and pedestrian paths;
- Divert runoff into onsite filtration or retention basins;
- Maintain pervious surface area to avoid an increase in net runoff volumes;
- Regularly maintain and repair drainage and erosion control features;

- Restabilize eroded slopes;
- Minimize road widths, rights of way, and layout; incorporate traffic calming features (e.g. curvilinear design);
- Use compact cluster design layouts that preserve open space and natural vegetation and minimize heat loss;
- Preserve mature vegetation;
- Minimize grading to reflect natural contours;
- Incorporate passive solar energy techniques to optimize solar exposure.

Compliance with the Low Impact Development regulations is optional. However, the ordinance provides incentives to encourage use of the LID standards. The incentives for use of LID standards include:

- *Minimum Lot Size Flexibility:* Minimum lot sizes may be reduced for projects with Open Space/Cluster design.
- *Use of Open Space:* Trails, pedestrian paths and LID techniques may be used inside of dedicated open space.
- *Road Widths:* Road widths may be minimized to reduce paving costs and increase developable land area, provided such reduction is not incompatible with fire equipment access requirements.
- *Use of Pervious Materials:* Areas paved with pervious materials count at 75% (v. 100%) in the lot coverage calculation.

The project incorporates a number of the County's voluntary LID standards, as listed in Table 5.2-4.

TABLE 5.2-4. Low Impact Development Features of the Tioga Workforce Housing Project	
NATURAL DRAINAGE CONTROLS	Onsite flows will be carried in drainage conveyance facilities located along slopes and collection elements will be sited in natural depressions.
ONSITE FLOW RETENTION	Runoff and excess water will be maintained onsite up to the required 20-year storm design standard.
INFILTRATION	Use of rock swales & collection features to enhance filtration of pollutants.
SEPARATION OF ROAD AND PATH RUNOFF	Channels and/or swales will be used to create a separate between roads and pedestrian paths.
ROAD DESIGN	Road improvements will be the minimum required for public safety and emergency access, and will continue to feature traffic calming features including curvilinear design, low speed limits, posted turn restrictions, high visibility internal signage,
CLUSTER DESIGN	Onsite uses will feature compact cluster design layouts that preserve open space and natural vegetation, and minimize energy costs.
VEGETATION RETENTION	Mature vegetation will be preserved, and native bitterbrush vegetation lost to fire will be replanted and irrigated until established.
SCREENING	The layout of proposed uses, and the design of grading contours, will minimize offsite visibility of constructed elements.

In addition to the design elements above, a Best Management Practices/Low Impact Development program will be developed to minimize the short-term impacts of construction as well as the long-term impacts associated with the use of project facilities by visitors, and the onsite residency of an estimated 300 future workforce housing occupants.

Impacts to Mono Lake as an Outstanding National Resource Water Body. As noted in the baseline discussion, Mono Lake and Lake Tahoe are the only water bodies in California identified in the *Lahontan Regional Water Quality Control Plan* as Outstanding National Resource waters. No water quality deterioration is permitted under this designation. Mono Lake is identified in the *Basin Plan* as a water body of poor chemical quality, noting that “some waters with poor chemical quality may support important ecosystems (e.g., Mono Lake).”²²

Mono County, responsible for drainage standards, does not specify further controls for Mono Lake, but follows general drainage law in requiring that new projects maintain pre-project conditions in terms of runoff rate and water

²² LRWQCB, *Basin Plan*, Chapter 3 (Water Quality Objectives) page 3-15.

quality. Consistent with LRWQCB requirements, the County uses a standard that focuses on containment of 'first flush' (the surface runoff from the first storm or storms of the season). Due to the accumulation of pollutants over the dry season months, first flush stormflows typically carry pollutant loads that are more concentrated than runoff during later stages of a storm, particularly where the drainage area contains a high proportion of impervious surfaces. The County standard is that, *"Drainage collection, retention, and infiltration facilities shall be constructed and maintained to prevent transport of the runoff from a 20-year, 1-hour design storm from the project site. A 20-year, 1-hour design storm for the Mammoth Lakes area is equal to 1.0 inch (2.5 cm) of rainfall."*²³

The Mono County Department of Public Works notes that the potential for increased salinity levels may be another factor weighing against strict limits on inflows to Mono Lake. Consistent with County recommendations, the project will incorporate sediment traps and filtration devices, and detention basins will be designed to accommodate the increase in flows associated with the project proposal; all other flows will be allowed to enter drainages that flow to Mono Lake. The increase in runoff will be calculated (using a regression analysis) as the difference between historic runoff and total runoff on the new construction and newly paved project areas. To stay within historic limits and avoid damage to existing drainage channels, the outfall will be designed to work within the existing channels and culverts. **The mitigation measures provided below would reduce the potentially significant project impacts on water quality to less than significant levels.**

Groundwater Management Planning. As noted in the baseline discussion, the Sustainable Groundwater Management Act requires the establishment of groundwater sustainability agencies to manage water supplies to anticipate drought and climate change, and ultimately enhance reliability under varied weather conditions. The Act mandates that Counties must manage 'high' and 'medium priority' basins through groundwater sustainability plans (to be adopted by January 31, 2022), and encourages that low and very low priority basins also be managed under the sustainability plan. Using identified ranking criteria, the Department of Water Resources (DWR) has assigned a priority status to each of Mono County groundwater basins. Mono Basin is classified as a 'Very Low Priority Basin.' To date, no Mono County basin has been identified as 'high priority,' nor are any basins subject to critical overdraft conditions. Impacts would be **less than significant**, and no mitigation is required.

MITIGATION MEASURES – WATER QUALITY

MITIGATION HYDRO 5.2(a-1) Slope Restoration and Monitoring: A Revegetation Plan shall be prepared as described in Measure BIO 5.3(a-1). This Plan shall include a map of all temporarily disturbed areas in the Project and shall outline how all temporary impacts to water resources and upland areas will be restored (recontoured) to approximate pre-project grade and drainage conditions. The Plan shall provide performance criteria and measures, and adaptive management procedures to be taken in the event hydrologic goals are not being met. Annual reports of monitoring results prepared for transmittal to Mono County prior to December 1 shall include evaluation of drainage performance relative to Plan criteria, and photographs of drainage features, for a period of no less than three years.

MITIGATION HYDRO 5.2(a-2) Buffer Zone and Exclusion Fencing: Buffer areas shall be identified and exclusion fencing shall be installed to protect surface water resources outside of the project area, and to prevent unauthorized vehicles or equipment from entering or otherwise disturbing surface waters outside the project area. Construction equipment shall be required to use existing roadways to the extent possible.

MITIGATION HYDRO 5.2(a-3) Minimal Vegetation Clearing: Vegetation clearing shall be kept to a minimum. Where feasible, existing vegetation shall be mowed so that after construction, the vegetation can reestablish more quickly and thereby help mitigate the potential for storm water impacts.

²³ Correspondence from Paul Roten, P.E., Sr. Engineer, Mono County Public Works Dept., 24 July 2018. Note: this is a conservative standard: the NOAA Point Precipitation Frequency Estimate for a 25-year, 60-minute storm event in Lee Vining is 0.907" of rainfall with a 90% confidence interval ranging from 0.753-1.10." https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html.

MITIGATION HYDRO 5.2(a-4) Spill Prevention and Response: A Spill Prevention and Response Plan shall be prepared that outlines project best management practices to prevent hazardous material spills, and the steps to contain and cleanup a hazardous material spill should one occur.

MITIGATION HYDRO 5.2(a-5) Onsite Storm Flow Retention: The project shall incorporate features to remove sediment from stormwater before it is discharged from the site. The project shall retain runoff from new impervious surfaces, and surfaces disturbed during construction. Retention shall be achieved by directing runoff to drywells or landscaped areas that provide infiltration. Sediment removal and retention systems shall be designed to accommodate all runoff resulting from a 20-year storm event of 1-hour duration. It must be demonstrated that the stormwater system is designed in such a way that when the retention capacity is exceeded, runoff leaves the site in keeping with pre-project drainage patterns, and will not cause the design capacities of any downstream drainage facilities to be exceeded.

IMPACT 5.2(b): Would implementation of the proposed Tioga Workforce Housing Project violate any wastewater treatment or discharge requirements or require new wastewater treatment facilities?

LESS THAN SIGNIFICANT. The Tioga Workforce Housing project proposal incorporates installation of a new Orenco Systems AdvanTex AX-Max package wastewater treatment plant (WWTP). The new package wastewater treatment plant will replace the existing septic system for all wastewater treatment.

LRWQCB policy concerning package treatment plants is set forth in *Basin Plan* Chapter 4. The policy emphasizes the importance of daily maintenance by a certified plant operator to avoid significant problems with water quality and waste discharge compliance, nuisance conditions and odors. The operator must be certified in California for all appropriate process classifications and LRWQCB must be notified of operator identity. Further, package plants must be owned or controlled by a public agency or private entity with adequate financial and legal resources to assume responsibility for waste discharges; this requirement recognizes that the owner is ultimately responsible for plant performance, and also fully responsible for operational oversight (adding capacity and/or renovations as needed, maintaining supplies, supervising operator performance and securing outside assistance when required).

LRWQCB approval of wastewater treatment plants requires that discharges comply with a maximum total nitrogen level of 10 mg/l and other criteria including design for peak daily flow estimates, odor controls, adequate storage for waste sludge, duplicate onsite equipment components for failure response, compliance with individual waste disposal system requirements for leach field disposal, compliance with all current Regional Board standards, and other requirements where applicable.

All package treatment plants are subject to LRWQCB individual waste discharge requirements. The requirements identify effluent limitations, and outline monitoring and reporting requirements. Recycling is recognized as an important resource in water-limited regions, as outlined in the 1977 State Board "Policy with Respect to Water Reclamation in California" and the related "Action Plan for Water Reclamation in California." The policy directs the regional board to encourage and promote reclamation where consistent with beneficial use designations and water quality objectives. Regional Board approval of reclamation proposal is granted only after determining that the project will not compromise water quality²⁴ and public safety. Waste discharge requirements for the proposed Tioga package wastewater treatment plant will be governed by requirements set forth in State Water Resources Control Board Order WQ 2014-0153-DWQ.²⁵

The proposed onsite AX-Max WWTP system is comprised of individual containerized and fully plumbed treatment components ("tanks"). Each component consists of an entire treatment system (treatment, recirculation, discharge) built inside an insulated fiberglass tank ranging from 14' to 42' in length. The tanks will be installed underground

²⁴ Note: the Water Code allows issuance of water recycling requirements to projects that violate only the salinity objectives.

²⁵ SWRCB: https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2014/wqo2014_0153_dwq.pdf

approximately 50 feet from the northwest corner of the hotel. An onsite certified operator will be retained to manage the system, and Orenco (designed of the system) will provide 24/7 real-time telemetry monitoring via a dedicated phone line or Ethernet connection.

Subsurface irrigation would be accomplished via a Geoflow Subsurface Drip System. The drip system will connect directly to the AX-Max treatment system with both an outflow supply line and a separate flush return line. The drip line is made of flexible ½" polyethylene tubing (with an antibacterial coating on the inside). Factory-installed drippers are spaced evenly along the tubing; a pump will be included in the system to circulate the supply.

The drip line would be placed 6-10" below surface. Effluent is pumped on a time-activated dose cycle through a self-cleaning filter out to the dripfield. At the end of each cycle, system flows will return to the treatment tank in a closed loop that is regularly flushed. Quality of the irrigation water will be the same as the quality of the tank effluent. Treated effluent would be distributed to a subsurface irrigation system during the late spring, summer and fall months (7 to 8 months of the year) through a Geoflow subsurface drip irrigation system.

Upon installation of the new wastewater treatment system, the existing septic tank will be decommissioned and the existing leachfield will be removed to construct the hotel. A new shallow leachfield will be constructed north of the hotel, as well as a new winter disposal leachfield to be located east of the workforce units. The winter leachfield will be used only for disposal of treated effluent during months when effluent flows are at a minimum and the subsurface irrigation system is suspended due to freezing conditions. Leachfield size will be determined by LRWQCB requirements, based on the application rate for the treated wastewater effluent. Soil percolation on the project site is very fast (1 minute per inch or less), and the project engineers anticipate that LRWQCB may allow an effluent application rate on the order of 10 gallons per square foot per day which would require a leach field area of 2,200 square feet to accommodate the anticipated 22,000 gpd maximum winter daily wastewater generation rate.

Note that the Concept Plan shows an alternate winter leachfield location in the vicinity of the shallow leachfield (north of the hotel). The alternate winter leachfield site would be used instead of the proposed winter leachfield site if the SWRCB Division of Drinking Water requires additional separation between the winter leachfield and the water supply wells that are located east of US 395. The Site Context Map (Exhibit 3-3, in the Project Description) shows the location of (a) the existing and proposed sanitation system elements, (b) the proposed shallow leachfield and the winter leachfield, and (c) the alternate winter leachfield.

In compliance with LRWQCB, leachfield percolation rates will meet all applicable LRWQCB procedures and standards, including a requirement for a minimum 40 foot separation distance from the anticipated level of high groundwater. LRWQCB has indicated that one or more groundwater monitoring wells may be required to monitor the immediate impact of discharges. This requirement would be imposed, if applicable, through the LRWQCB Waste Discharge Permit (WDR) process if the proposed Tioga Workforce Housing project is approved.

Project Water Supplies: Water supplies for the project site are obtained from groundwater pumped through two wells (including one well that was constructed during 2017) that are located on project land east of US 395. Anticipated water demands for the previously approved uses is estimated to be 12,835 gpd (about 5.9 AF) for the winter period from November through March, and about 23,800 gpd (about 15.6 AF) for the high season months of April through October. Total annual water demand for the approved uses is estimated to be about 21.5 AFY.

Water supply for the proposed Workforce Housing project would also come from the two wells located east of US 395. Future water demands (including the proposed Workforce Housing Project) are estimated to be 22,000 gpd (about 10.2 AF) for the period from November through March. For the period from April through October, water demands are estimated at 40,800 gpd (about 26.8 AF). Total annual water demand for all uses would be about 37 AFY, and consumptive use is assumed to be negligible. Total annual demands for the proposed project alone (not considering previously approved elements) would be about 15.5 AFY.

The daily flow of 40,800 gpd is estimated as maximum day demand for purposes of sizing the package wastewater treatment plan. Irrigation is expected add 50% to this demand to a WWTP, which would yield an estimated 'worst case'

Maximum Day demand of 60,000 gpd. As noted, most of the irrigation demand will be met through the subsurface irrigation system using treated effluent from the package plant.

The construction of groundwater production wells is a ministerial action in Mono County, and does not require permitting. Once installed, however, the wells are subject to regulation based on the scale and type of existing uses. The two groundwater wells are currently classified by the Mono County Health Department as a 'Transient Non-Community Water System.' If the proposed workforce housing project is approved, the existing permit will require revision to a Non-Transient Non-Community Water System or a Community Water System permit. Information required at that time would include 'TMF' verification (i.e, a demonstration of technical, managerial and financial capability), as well as water quality parameters and verification of compliance with the applicable state and federal water system classification requirements, as well as the maximum day demand provided above for source supply, and the water quality parameters provided in the Antidegradation Analysis (Appendix I).²⁶ The 1993 EIR and the current Subsequent EIR would fulfill CEQA compliance requirements for permit classification changes.

Antidegradation Analysis: LRWQCB requested that the SEIR provide an antidegradation analysis for the proposed project. The antidegradation policy requires that the quality of existing high quality waters of the state must be maintained, even when the quality is higher than required to protect beneficial uses, unless it can be demonstrated that the water quality changes will be of benefit to California residents and will not unreasonably impact beneficial uses. Absent these conditions, water quality goals are set by the background water quality concentrations. With respect to Mono Lake, the *Basin Plan* objective is further clarified as follows: *"The Regional Board generally considers "natural high quality water(s)" to be those waters with ambient water quality equal to, or better than, current drinking water standards. However, the Regional Board also recognizes that some waters with poor chemical quality may support important ecosystems (e.g., Mono Lake).*

The third part requires that the water quality of any designated 'outstanding national resource' be maintained and protected; no permanent or long term reduction in water quality is allowable. Mono Lake (along with Lake Tahoe) has been designated as an Outstanding National Resource Waters, and is therefore subject to the highest level of water quality protections. Although identified as an Outstanding National Resource, and although no water quality deterioration is permitted, Mono Lake is specifically identified in the *Basin Plan* as a water body of poor chemical quality: *"The Regional Board generally considers "natural high quality water(s)" to be those waters with ambient water quality equal to, or better than, current drinking water standards. However, the Regional Board also recognizes that some waters with poor chemical quality may support important ecosystems (e.g., Mono Lake)."*²⁷

Consistent with the LRWQCB request and ONRW requirements, an Antidegradation Analysis has been prepared for the project by Wildermuth Environmental Inc. ('WEI'). The full report, provided as DSEIR Appendix I, includes all assumption and calculations used for the analyzed scenarios. Results are summarized below (note that baseline and groundwater conditions were described in §5.2.3.6).

To assess both the direct and cumulative project impacts on water quality, two scenarios were evaluated in the Antidegradation Analysis: 1) project buildout under the 1993 Project Approvals ('Approved Project') and 2) project buildout under the Proposed Project (Proposed Project).

The Basin Plan objective for TDS is 500 milligrams per liter (mg/l) and for nitrate the objective is 10 mg/l. Based on recent water quality measurements, TDS and nitrate concentrations in the project water supply wells are estimated to be about 200 mg/l and 0.2 mg/l. The TDS concentration in wastewater produced for the Approved and Proposed Project scenarios was assumed equal to the existing Tioga water supply TDS, plus a TDS waste increment; the analysis assumes a TDS waste increment of 250 mg/l for both scenarios. The total nitrogen concentration in septic tank discharges to groundwater is assumed to be fully nitrified prior to reaching groundwater, and is assumed to be 30 mg/l for the

²⁶ Correspondence from Jon Drodz, Mono County Environmental Health Specialist, 23 May 2019.

²⁷ LRWQCB Basin Plan (p. 3-15): https://www.waterboards.ca.gov/lahtontan/water_issues/programs/basin_plan/docs/ch3_wqobjectives.pdf

Approved Project, and 10 mg/l for the Proposed Project. Package plant performance for BOD, TSS, T-N and other constituents shall meet the secondary treatment standards established by USEPA.

Upgradient of the project site, groundwater flows in a southwest to northeast direction in a defined bedrock channel. Wastewater from the Project will be discharged into this groundwater flow system. Because there are few wells with groundwater level data in the project area, WEI estimated groundwater flows in the site vicinity by multiplying the width of the valley opening (about 4000', see Appendix I) by the saturated thickness of the aquifer penetrated by wells #1 and #2 (about 250') to determine the cross-sectional areas of the aquifer. Hydraulic conductivities were determined by dividing the 1992 T values by the saturated aquifer thickness penetrated by wells 1 and 2. The groundwater gradient in the area was calculated using two methods, and flow was then calculated using an equation.²⁸ The resulting groundwater flow calculations are summarized in Table 5.2-5. Note that no losses in nitrate or TDS concentrations were assumed as the wastewater percolates through the vadose zone to the saturated zone; this assumption is conservative and results in overestimation of TDS and nitrate impacts to groundwater.

TABLE 5.2-5. Projected Impacts from the Discharge of Project Wastewater (mg/l)		
	TDS	Nitrate Nitrogen
Basin Plan Objective (to protect beneficial uses)	500	10
Baseline Concentration	200	0.20
Assimilative Capacity without Project	300	9.80
Project Ambient with Approved Project Elements	202 – 208	0.43-1.12
Assimilative Capacity remaining with Approved Project	298– 292	9.57 – 8.88
Assimilative Capacity used by Approved Project	0.63 – 2.57%	2.30% - 9.37%
Project Ambient with Proposed Project Elements	203 – 213	0.33 – 0.72
Assimilative Capacity with Proposed Project	297 – 287	9.67 – 9.28
Assimilative Capacity used by Proposed Project	1.08 - 4.40%	1.30 - 5.28%

From the groundwater impact computations (provided in Appendix I) and the project impacts presented in Table 5.2-5 above, the analysis concluded that groundwater discharges approaching the project site from the south west are projected to range from about 700-2,850 AFY, with TDS and nitrate concentrations of about 200 mg/l and 0.2 mg/l respectively. Without the project, there is about 300 mg/l of assimilative capacity for TDS and 9.8 mg/l of assimilative capacity for nitrate.

Under the **Approved Project** scenario, after receiving about 21.6 AFY of wastewater:

- The TDS concentration in groundwater will increase and range between 202-208 mg/l (using between approximately 0.63%-2.57% of the pre-Project assimilative capacity for TDS); and
- The nitrate concentration in groundwater will increase and range between 0.43-1.12 mg/l (using between ~ 2.30%-9.37% of the pre-Project assimilative capacity for nitrate).

²⁸ The equation used by WEI was $Q=kiA$, where Q = flow, k = hydraulic conductivity, i = hydraulic gradient, and A = saturated cross-sectional area of the aquifer

Under the **Proposed Project** scenario, after receiving about 37 AFY of wastewater:

- The TDS concentration in groundwater will increase and range between 203-213 mg/l (using between approximately 1.08%-4.40% of the pre-Project assimilative capacity for TDS); and
- The nitrate concentration in groundwater will increase and range between 0.33-0.72 mg/l (using between ~ 1.30%-5.28% of the pre-Project assimilative capacity for nitrate).

Based on the projected TDS and nitrate impacts outlined above, and the conservative assumptions and calculations provided in Appendix I, answers to the three-part questions in the Antidegradation process are provided below:

1. ***Will the discharge lower baseline water quality?*** **YES.** The baseline TDS concentration is about 200 mg/l, and the TDS concentration is projected to increase 2 to 8 mg/l under the Approved Project and 3 to 13 mg/l under the Proposed Project. The baseline nitrate nitrogen concentration is about 0.2 mg/l, and the nitrate nitrogen concentration is projected to increase 0.23 to 0.92 mg/l under the Approved Project and 0.13 to 0.52 mg/l under the Proposed Project.
2. ***Is the water quality better than necessary to support beneficial uses?*** **YES.** The baseline water quality is better than necessary to support beneficial uses. The water quality impact of the Proposed Project on groundwater, relative to the Approved Project, is a slight increase in TDS concentration (water quality degradation) and a slight decrease in nitrate concentration (water quality improvement), and beneficial uses will remain fully protected.
3. ***Is the water body an Outstanding Natural Resource Water?*** **NO.** Although Mono Lake is a designated Outstanding Natural Resource Water, the receiving water body for wastewater discharges from the approved and proposed project element is groundwater underlying Lee Vining Creek; the groundwater underlying Lee Vining Creek is not an ONRW.

The analysis concludes that the wastewater impact to groundwater for TDS and nitrate for the Approved and Proposed Projects will utilize a small fraction of the available assimilative capacity, the absolute impacts are small, and beneficial uses are fully protected. With the Proposed Project, less than ten percent of the total assimilative capacity for TDS and nitrate will be used by the Project. The nitrate impacts to groundwater with the Proposed Project will be less than the Approved Project because the existing septic tank system will be replaced with a package treatment plant that will limit the nitrogen concentration in the discharge to groundwater to 10 mg/l.

Information contained in the Antidegradation Analysis indicates that project impacts will be **less than significant**. However, the Lahontan Regional Water Quality Control Board will have final authority to determine whether to allow the proposed action based on the information provided in the Antidegradation Analysis; their decision will be made after the CEQA process is completed.²⁹ In preliminary review comments, LRWQCB has indicated that Water Reclamation Requirements for Recycled Water Use, Order WQ 2016-0068-DDW, or Individual Water Reclamation Requirements may be required by the State Water Resources Control Board Division of Drinking Water. LRWQCB has also indicated that discharges from the package treatment plant will likely be regulated by General Waste Discharge Requirements for Small Domestic Wastewater Treatment Systems (Order WQ 201400153-DWQ).³⁰ The proposed subsurface reclamation system may require that the State Water Resources Control Board Division of Drinking Water (DDW) issue Water Reclamation Requirements for Recycled Water Use (per Order WQ 2016-0068-DDW) or Individual Water Reclamation Requirements may be required.

LRWQCB further noted that the project will require either DDW approval of a Title 22 Engineering Report, or a letter from DDW indicating that the project does not need to satisfy Title 22. The Title 22 review would occur following EIR certification, if the project is approved. As noted previously, the Concept Plan designates an alternative winter leachfield in the vicinity of the shallow leachfield (north of the hotel). The alternative winter leachfield would be used instead of the

²⁹ Under the Local Agency Management Program (LAMP), Mono County Community Health Department has jurisdiction for sewage discharges up to 10,000 gpd. Since project discharges would exceed this volume, the jurisdictional authority will rest with LRWQCB.

³⁰ Correspondence from Dr. Woonhoe Kim, Water Resource Control Engineer, 19 April 2019.

proposed winter leachfield site (located east of the workforce housing) if the Title 22 review results in a requirement for additional separation distance between the package treatment plant leach field and the existing water supply wells.

Compliance with General Plan Policies: The Mono County General Plan Land Use Element Mission statement identifies the provision of high quality services as a key component of the Countywide Vision. This priority is reflected in the adopted Countywide Land Use Policies. Goal 1 is to “*Maintain and enhance the environmental and economic integrity of Mono County while providing for the land use needs of residents and visitors.*” This goal is supported by Objective 1.A (“*Accommodate future growth in a manner that preserves and protects the area's scenic, agricultural, natural, cultural and recreational resources and that is consistent with the capacities of public facilities and services*”) and Policy 1.A.2 (“*Assure that adequate public services and infrastructure are available to serve planned development*”). The three actions listed for Policy 1.A.2 are as shown below:

- **General Plan Countywide Action 1.A.2.a.** Require that necessary services and facilities, including utility lines, are available or will be provided as a condition of approval for proposed projects.
- **General Plan Countywide Action 1.A.2.b.** Require that new development projects adjacent to existing communities be annexed into existing service districts, where feasible.
- **General Plan Countywide Action 1.A.2.c.** Through permit conditions and mitigation measures, require development projects to fund the public services and infrastructure costs of the development. In accordance with State law (GC §53077), such exactions shall not exceed the benefits derived from the project.

For several reasons, the applicant is not proposing to annex into the Lee Vining Public Utilities District (LVPUD) for water or sanitation services. The Tioga project site is separated from LVPUD water and sanitation facilities by Lee Vining Creek; new conveyances across Lee Vining Creek would be required in order to extend the PUD water and sanitation facilities to serve the Tioga project. Construction of the conveyances would be subject to potentially significant environmental issues, and separate review under CEQA. The LVPUD treatment facility consists of a 3-tank septic system with 5 percolation ponds. The peak water and sanitation system demands associated with the Tioga project (including approved and proposed elements) would more than double existing demands within the LVPUD service area, which had 100 sewer service connections as of 2009.³¹ Thus an extension of PUD facilities to serve the Tioga project site would require expansion of the LVPUD system as a whole, again with potentially significant environmental ramifications and CEQA review requirements. The proposed Tioga package treatment plant incorporates a subsurface irrigation system that would be eliminated if the site were served by the PUD, requiring use of potable water supplies for irrigation on the Tioga site. Finally, the 2009 Municipal Services Review (MSR) prepared by the Local Agency Formation Commission (LAFCO, op cit.) notes that LVPUD has no long-term planning documents or other reports to indicate how it will meet future water and sewer demands in Lee Vining. The above considerations indicate that annexation to the Lee Vining PUD would be infeasible at this time.

MITIGATION MEASURES – WATERWATER TREATMENT

HYDRO 5.2(b-1) Wastewater Treatment: Upon installation of the new wastewater treatment system the existing septic tank will be properly decommissioned, and the existing leachfield will be used only for disposal of treated effluent during the winter months when effluent flows are at a minimum and the subsurface irrigation system is suspended due to freezing conditions. Leach field size will be determined by LRWQCB requirements, based on the application rate for the treated wastewater effluent.

HYDRO 5.2(b-2) Leachfield Percolation Standards: Percolation rates for the new leachfield shall be determined in accordance with procedures prescribed by LRWQCB. Where the percolation rates are faster than 5 MPI, the minimum distance to anticipated high groundwater shall be no less than 40 feet.

³¹ Mono County LAFCO website: https://www.monocounty.ca.gov/sites/default/files/fileattachments/local_agency_formation_commission_lafco/page/3562/leevingpublicutilitydistrict_02.2009.pdf.

HYDRO 5.2(b-3) Treatment Standards: The package plant shall be designed to produce a treated secondary denitrified effluent achieving a total nitrogen concentration of 10 mg/L. The treatment plant's performance goal (e.g., BOD, TSS, T-N, coliform, etc.) shall meet the US EPA secondary treatment standards.

HYDRO 5.2(b-4) Title 22 Compliance: Operation of the proposed subsurface drip irrigation system will require either an approved Title 22 engineering report from Division of Drinking Water (DDW), or a letter from DDW stating that the project does not need to satisfy Title 22 criteria; the alternative leach field location shown on the Tioga Workforce Housing Concept Plan shall replace the proposed leachfield location if required for Title 22 Compliance.

IMPACT 5.2(c): Would implementation of the proposed Tioga Workforce Housing Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level that would impact nearby wells? Would sufficient water supplies be available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

LESS THAN SIGNIFICANT WITH MITIGATION. Numerous comments on the Notice of EIR Preparation requested analysis of the potential impact of project water demand impacts on surrounding wells and water features. In response, a well pump test was conducted during the summer of 2017 by Sierra Geotechnical Services, Inc. (SGSI). The SGSI analysis was subsequently peer reviewed by Resource Concepts, Inc. Results of the pump test and peer review are summarized in this section; SEIR Appendix E1 provides a complete copy of the original 2017 SGSI analysis, Appendix E2 provides a copy of the Supplemental Technical Memorandum prepared by SGSI in March 2019 to reclassify an earlier mitigation measure (for a well pump video survey) as a recommendation; Appendix F presents a complete copy of the RCI Peer Review assessment, and Appendix G provides SGSI's response to the Peer Review.

The Tioga site is served by two water wells, both located on the portion of parcel 2 that is east of US 395; one of the wells was constructed in 1984, and the second well was installed during the summer of 2017 (subsequent to the pump test). The SGSI pump test measured conditions in the original well, and also included monitoring of water levels in a nearby observation well (the 'Winston Well'). The 1984 well was previously tested by Kleinfelder during 1992 studies conducted for the Tioga Inn Specific Plan EIR. The 1992 test had 3 steps: the first two steps were pumped continuously for 2 hours, and the third step was pumped continuously for just under 22 hours, with average pumping rates of 38, 91 and 132.5 gallons per minute (gpm). The initial pre-test static water level (SWL) was 339 feet below ground surface, and the calculated specific well capacities were 11.14 gallons per minute per foot of water level drawdown (gpm/ft ddn), 9.00 gpm/ft ddn, and 7.52 gpm/ft ddn respectively. Based on the 1992 test results, Kleinfelder recommended a final pumping rate of 400 gpm.

The test conducted during 2017 was a constant rate pumping test during which both the Tioga well and the offsite well were equipped with a pressure transducer to record water level changes before, during and after the test. Results indicated a pretest SWL of 351.5' below the wellhead reference point (brp). After 24 hours of continuous pumping at an average rate of 102 gallons per minute, a maximum pumping water level depth of 388.9 ft brp was recorded, for a maximum water drawdown level of 37.4 feet. Based on test results, SGSI concluded that the specific capacity of the well for the 24-hour test period was 2.73 gpm/ft ddn, which was significantly lower than the specific capacities calculated during the 1992 tests by Kleinfelder. The well transducer in the observation well recorded no changes in water levels, and there were no adverse field observations concerning water clarity, entrained air, and/or sand content in the Tioga well. A final water level recovery measurement was recorded by SGSI approximately 24 hours after the test concluded; the final water level measurement in the Tioga well as 352.2 ft brp, which was 0.2 feet deeper than the pretest measurement. Because the maximum was slightly lower at the end of the test than the beginning, cascading water conditions occurred and can be anticipated to occur in the future during normal well operation (particularly during extended periods of pumping). Based on test results, SGSI concluded that the well is capable of pumping at a sustained rate of 100 gpm (even with the cascading effect) without impacting Lee Vining water supply wells or the springs that feed Mono Lake.

Mono County submitted the SGSI report to Resource Concepts, Inc. (RCI) for an independent peer review. The RCI evaluation concluded that the SGSI analysis was reasonable and technically sound. The peer review noted, however, that the SGSI report did not discuss potential interaction between Lee Vining Creek and the underlying aquifer, and thus it was not possible to determine if or how much stream depletion might occur from Lee Vining Creek due to project water demands.

To address this unanswered question, SGSI subsequently undertook additional analyses (see Appendix G). The supplemental review noted that flows in Lee Vining Creek are controlled chiefly by SCE and LADWP releases from upstream reservoirs (see Table 5.2-2). Minimum water flows in the Creek are set by and mandated under Decision D1631; SWRCB Order 98-05. Currently, minimum and maximum flows are required between 25 to 35 cfs, depending on time of year and snowpack.

To estimate the potential effect of project-related groundwater production on Lee Vining Creek, SGSI performed the calculation presented in Table 5.2-6 below. Note that the calculation is conservative in that it does not account for variables (such as distance from the creek, geology, transmissivity or usage) that would reduce the estimate of potential impacts on the creek.

TABLE 5.2-6. Potential Effect of Project Groundwater Production on Lee Vining Creek
Assumed Flow Rates <ul style="list-style-type: none"> 102 gpm constant rate flow from Tioga Well. 25 cfs daily required minimum flow.
Daily Effect <ul style="list-style-type: none"> 102 gpm x 60 min x 24 hours = 146,850 gpd. 146,850 gpd = 0.23 cfs 0.23cfs/25cfs = 0.9 percent daily usage
Annual Effect <ul style="list-style-type: none"> 146,850 gpd X 365 days = 53,600,250 gpy 25 cfs = 16,154,761 gpd = 5,896,487,765 gpy 53,600,250gpy/589,648,740gpy = 0.9 percent yearly usage

Based on the values shown in Table 5.2-6, SGSI concluded that the potential for stream depletion on Lee Vining Creek from pumping of the well would be less than 1% per year, and that the potential would be further reduced by factors (distance, geology, transmissivity, and usage) that were not considered in the calculations. Based on these considerations, potential impacts associated with the adequacy of water supplies to serve the proposed project were found to be less than significant, provided mitigation measures (including groundwater level monitoring and a well pump video survey) were implemented as outlined in the 2017 Technical Memorandum. The project applicant subsequently installed a second water supply well adjacent to the original well. SGSI issued a supplemental memorandum (see Appendix E2) that reclassified one of the earlier mitigation measures (the well pump video survey) as a recommendation. Based on the reviews conducted, it is concluded that project impacts on groundwater supplies would be **less than significant** with implementation of the mitigation measure outlined below. Implementation of Recommendation 5.2(c-3) below would increase the life span of the older well, but would not be required to reduce impacts to less than significant levels; this measure is included as an optional item and will not be included with the final EIR Mitigation Monitoring and Reporting Program.

MITIGATION MEASURE – GROUNDWATER AND SAND CONTENT MONITORING

MITIGATION HYDRO 5.2(c-1). Groundwater Level Monitoring: The applicant shall provide Mono County Public Health Department with monthly measurements and recordings of static water levels, airlift pumping water levels, pumping rates and pumped volumes for the onsite wells. The monthly measurements shall be provided to the County for at least the first year to establish a baseline; monitoring shall continue on at least a quarterly basis thereafter.

MITIGATION RECOMMENDATIONS FOR OLDER WELL-MONITORING AND VIDEO SURVEY

MITIGATION HYDRO 5.2(c-2). Well Monitoring for Sand Content: Monitoring for possible pumping of sand may also be performed on a semi-annual basis at the discretion of the applicant.

MITIGATION HYDRO 5.2(c-3). Well Pump Video Survey: To determine the degree of corrosion, the buildup of organic material and/or precipitates in the perforated intervals, and the current depth of the sediment fill in the bottom of the casing, the well pump may be removed and a video survey performed at the discretion of the applicant.

IMPACT 5.2(d): Would implementation of the proposed Tioga Workforce Housing Project alter drainage patterns in a manner that would result in substantial erosion, siltation, flooding or polluted runoff, or exceed the capacity of existing or planned drainage systems?

LESS THAN SIGNIFICANT IMPACT.³² As noted in the baseline discussion (§5.2.3.2), Mono Lake is identified in the *Basin Plan* as an Outstanding National Resource waterbody. Further, the *Basin Plan* states that waters throughout most of the Inyo-Mono region are of very high quality, with limited potential for contamination compared to other parts of the state; water-quality issues in the planning area generally result from naturally-occurring minerals.

Although identified as an Outstanding National Resource, and although no water quality deterioration is permitted, Mono Lake is specifically identified in the *Basin Plan* as a water body of poor chemical quality. Mono County Public Works Department notes although LRWQCB has not established specific standards for Mono Lake, discussion in the *Basin Plan* points to a goal of limiting runoff into Mono Lake in order to prevent increased salinity levels. For this reason, and consistent with Mono County goals, the drainage system for this project will allow runoff above the 20-year storm flow volume to continue to the lake but only after passing through a sediment trap and filtration device, storing only the increased runoff in a detention basin (the increased runoff is the difference between current runoff and future runoff with the newly paved roads and building areas). Also per Mono County requirements, the outfall has been designed to work within existing channels and culverts.

The Mono County Public Works Department requires that projects maintain existing conditions with respect to runoff rate and quality, and in some instances Mono County requires that drainage facilities are designed to catch First Flush pollutants. First flush containment typically collects the types of surface contaminants and sediments that accumulate between storms, particularly during the dry season. The first flush standard, which would apply to the Tioga Project, requires that, "Drainage collection, retention, and infiltration facilities shall be constructed and maintained to prevent transport of the runoff from a 20-year, 1-hour design storm from the project site." As shown in the project Concept Drainage Analysis (Appendix J) a 20-year, 1-hour design storm for the Lee Vining Mammoth Lakes area is equal to 0.84" of rainfall.³³

The stormwater retention system proposed for the project utilizes engineering design based on the Town of Mammoth Lakes' 1984 Storm Drain Design Manual. The system is designed to accommodate uses now proposed (as analyzed in the current EIR) as well as the previously-approved but unbuilt hotel and promontory restaurant. Retention volume calculations are based on storm water volume less storm water infiltration. Onsite soils are sandy, and a conservative infiltration rate of 5 minutes per inch was used to calculate retention volumes. The resulting retention volume calculations include 11,246 cubic feet for the workforce housing and restaurant components, plus 9,947 cubic feet for the hotel. The report notes that if the restaurant is constructed separate from the housing, separate retention basins will be installed for each use. Three-48" storm drain pipes will be installed for the hotel (with a total basin length of 167'), and 3-48" pipes will be installed for the workforce housing (with a total basin length of 188 feet). Storm drain pipes will be perforated. The project Drainage Plan is provided in Exhibit 5.2-1 on the following page.

³² Discussion in this section is based on a Concept Drainage Analysis prepared by Triad Holmes Associates for the Tioga Inn Revised Specific Plan (see Appendix J) and communication with Paul Roten, Senior Engineer, Mono County Public Works, 24 July 2018.

³³ Point Precipitation Frequency Estimates, National Oceanic and Atmospheric Administration (NOAA) Atlas 14, Vol. 6, Version 2.

[illegible]

Runoff treatment will be accomplished in four bioswales that will be located in landscaped areas of the parking lot. The bioswales will be constructed in accordance with standard LID design, and planted with drought-tolerant plant species. Other means of treatment may include installation of oil removal inserts into the inlets, or a separate oil treatment unit.

MITIGATION MEASURES – DRAINAGE

WQ 5.2(d) (Drainage): No significant impacts have been identified, and no mitigation measures are required.

IMPACT 5.2(e): Would implementation of the proposed Tioga Workforce Housing Project place housing or structures in a 100-year flood hazard area as mapped on a Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

LESS THAN SIGNIFICANT IMPACT. As noted in the baseline, FEMA Flood Insurance Rate Maps show a majority of the Tioga project site as an 'Area of Minimal Flood Hazard.' The convenience store and hilltop residences are classified as Zone D (Area of Undetermined Flood Risk).³⁴ All of the proposed project elements would be located inside the designated area of minimal flood hazard.

Note that the existing water storage tank is located in the Zone D area of undetermined flood risk. FEMA defines the Zone D designation as an area where no analysis of flood hazards has been conducted. As part of the project proposal, the existing water storage tank will be demolished and replaced by a new tank in the same area, but slightly to the east, on a site that the FEMA map shows as an 'Area of Minimal Flood Hazard.' The above information indicates that project approval and implementation would not place housing or structures in a 100-year flood hazard area; impacts are *less than significant*, and no mitigation is required.

MITIGATION MEASURES – FLOOD HAZARDS

WQ 5.2(e) (Drainage): No significant impacts have been identified, and no mitigation measures are required.

IMPACT 5.2(f): Would implementation of the proposed Tioga Workforce Housing Project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

LESS THAN SIGNIFICANT IMPACT. The Tioga Workforce Housing site is downstream of several dams along the Lee Vining Creek system, including dams located on Ellery Lake, Saddlebag Lake and Tioga Lake. Water from all three dams is released to generate hydropower at the Poole power plant operated by SCE. Before the dams were constructed, peak flows in Lee Vining Creek would reach up to 650 cfs; dam storage has reduced maximum peak flow below Ellery Lake to 475 cfs.³⁵ Since 1941, LADWP has directed water from Lee Vining Creek into the Los Angeles aqueduct system; the diversion dam is located just upstream from the Lee Vining Ranger Station. Diversions resulted in nearly dry stream conditions, until a 1986 court order mandated continuous low flows.

³⁴ FEMA, Flood Map Service Center, <https://msc.fema.gov/portal/search>.

³⁵ Mono Basin Research website: <https://www.monobasinresearch.org/data/mbrtdframes.htm>

The Mono County Emergency Operations Plan notes that failure of any of the dams located in Mono County has the potential to cause flooding, and the Multijurisdictional Local Hazards Mitigation Plan indicates that average annual flow in Lee Vining Creek is 49,000 AFY. However, even during the floods of 1997, when peak flow in Lee Vining Creek reached 700 cfs (about 507,500 AFY), the flows caused only minor damage to LADWP's aqueduct system.³⁶

In the event of dam failure, floodwaters would flow along Lee Vining Canyon, which flows northwest of and roughly parallel to SR 120 in the vicinity of the Tioga project site. The Tioga site is located at an elevation several hundred feet higher than Lee Vining Creek in this reach, and would not be impacted by flooding from Lee Vining Creek.

The above considerations indicate that the project would have a low potential to expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a dam. Impacts are **less than significant**, and no mitigation is required.

MITIGATION MEASURES – DAM FAILURE FLOODING

WQ 5.2(f) (Flooding): No significant risk of flooding from failure of a levee or an impoundment has been identified, and no mitigation measures are required.

IMPACT 5.2(g): Would implementation of the proposed Tioga Workforce Housing Project expose people or structures to inundation by seiche, tsunami or mudflow?

POTENTIALLY SIGNIFICANT AND UNAVOIDABLE (MUDFLOWS). Seiches are earthquake-generated waves that occur in enclosed or restricted bodies of water such as lakes and reservoirs. Much like the sloshing of water in a bucket when shaken or jarred, seiches can overtop dams and pose a hazard to people and property. The *Mono County Safety Element* states that there is no available evidence that seiches have occurred in Mono County lakes and reservoirs. In its comments on the General Plan Draft EIR, however, the Mono Lake Committee notes that although no large and damaging seiches have occurred in Mono County Lakes and reservoirs, small seiches (often one to two tenths of a foot in amplitude) are common on Mono Lake during windstorms. Mono Lake is currently at an elevation of about 6,400 feet above sea level, while the Tioga project site elevation is approximately 6,800' at its lowest point. Due to the differences in elevation, the Tioga project would not be exposed to inundation by seiches.

Tsunamis are unusually large sea waves that are produced by an undersea earthquake (also known as a 'seaquake') or undersea volcanic eruption. All of Mono County is separated from the Pacific Ocean by several hundred miles and an intervening mountain range (the Sierra Nevada) and not at risk of a tsunami. Impacts pertaining to seiche and tsunami are **less than significant**, and no mitigation is required.

Mudflows involve very rapid downslope movement of saturated soil, sub-soil, and weathered bedrock. The 2006 Multi-Hazard Plan indicates that potentially hazardous mudflows occur every year in the eastern Sierra County, and can occur in areas with a slope of 15% or more. The 2012 Mono County Safety Element references a 2012 FEMA study that examined County areas of special flood hazard. However, the study did not provide thorough information regarding alluvial fans and mudflow hazards, and the County has identified a significant need to update the flood hazard maps to correct these deficiencies. Large mudflows, such as the one that occurred in 1989 in the Tri-Valley area, can be destructive, particularly at the mouths of canyons.

Mudflows can also be triggered by volcanic eruptions, which in Mono County have ranged from small to cataclysmic. When an eruption does break out, its impact will depend on the location, size, and type of eruption as well as wind

³⁶ Mono County Multijurisdictional Local Hazard Mitigation Plan, October 2006:
https://monocounty.ca.gov/sites/default/files/fileattachments/planning_division/page/10087/adopted_haz_plan.pdf

direction. An eruption during winter months could melt heavy snow packs, generating mudflows and locally destructive flooding. Volcanic hazards are not considered to be one of the most prevalent natural hazards in Mono County due to the uncertain timing and frequency of such an event and ongoing monitoring. However, Lee Vining is located in an area of known volcanic risk, and thus potentially subject to mudflows associated with the rapid melting of heavy snowpacks during a volcanic eruption. Large mudflows, such as the one that occurred in 1989 in the Tri-Valley area, can be destructive, particularly at the mouths of canyons such as Lee Vining canyon.

The US Geological Survey (USGS) operates the Long Valley Observatory to monitor the Long Valley Caldera; the observatory provides a warning system to alert residents of potential threats. Although the chance of a volcanic eruption in any given year is very small, and although the eruption itself would likely be comparatively small, USGS does anticipate that future eruptions will occur in the Long Valley area. The potential for adverse impacts resulting from a volcanic eruption (and associated mudflows if in winter) is therefore considered to be ***potentially significant and unavoidable***.³⁷

MITIGATION MEASURES – SEICHE AND MUDFLOW

WO 5.2(g-1) (Seiche and Tsunami): No significant risk of seiche or tsunami has been identified, and no mitigation measures are required.

WO 5.2(g-2) (Mudflow): A small but significant potential exists for damaging mudflows on the project site resulting from volcanic eruptions during winter months and associated snowmelt. USGS monitors the Long Valley Caldera for volcanic earthquakes (which often provide an initial sign of volcanic unrest³⁸), and may provide early warning of impending eruptions. Additionally, the previously presented Mitigation Measure GEO 5.1(a-2) will attenuate risk through the installation of desilting basins, rip rap and other measures to minimize mudflows and earthflows. However, ***no mitigation measures have been identified*** to reduce the risks of eruption-related mudflows to less than significant levels. Exposure of people and structures to mudflows from winter volcanic eruptions is therefore considered to be a ***significant and unavoidable impact*** of project approval.

5.2.7 SIGNIFICANCE AFTER MITIGATION

Potential project impacts associated with hydrology, water quality, groundwater and surface water supplies, and wastewater treatment, would be reduced to less than significant levels through adoption and implementation of the mitigation measures identified above. Impacts associated with water quality, drainage, flooding, seiche and tsunami would be less than significant, and no mitigation is required. The potential impacts associated with mudflow resulting from winter volcanic eruptions are identified in this EIR as significant and unavoidable impacts of project implementation.

³⁷ U.S. Geological Survey Fact Sheet 073-97, Version 1.1 <https://pubs.usgs.gov/dds/dds-81/Intro/facts-sheet/futureeruptions.html>

³⁸ USGS Volcanic Hazards Program, *Seismic Monitoring at Long Valley Caldera, 2015*: https://volcanoes.usgs.gov/volcanoes/long_valley/monitoring_earthquakes.html.

TIOGA WORKFORCE HOUSING DRAFT SUBSEQUENT EIR



SECTION 5.3 BIOLOGICAL RESOURCES

5.3.1 INTRODUCTION AND SUMMARY

Discussion in this section is drawn from a Biological Assessment prepared for this project by Dr. James Paulus. The complete Biological Assessment is provided as Appendix I to this Draft Subsequent EIR. The assessment addresses a wide range of issues, including the many topics raised in NOP comment letters including requests that the report consider local and regional habitat types with an updated list of plant and animal species, that landscaping be comprised of drought-resistant native materials, that the report consider a wildlife corridor that crosses the eastern end of the site, that restoration plans be prepared by qualified individuals, verification that the project will comply with the Migratory Bird Treaty Act and other applicable laws, consideration of wildlife in Lee Vining Canyon with mitigations to minimize impacts of increased human use, and provide an updated wildlife study that considers potential project-related changes in mule deer use. Key findings in this section are summarized below.

SUMMARY OF PROJECT IMPACTS AND MITIGATION MEASURES FOR BIOLOGICAL RESOURCES

<u>IMPACT BIO 5.3(a):</u>	<u>POTENTIAL IMPACTS ON CANDIDATE, SENSITIVE OR SPECIAL STATUS SPECIES</u>
Mitigation BIO 5.3(a-1):	Shrubland revegetation
Mitigation BIO 5.3(a-2):	Fencing for rockcress protection
Mitigation BIO 5.3(a-3):	Pre-disturbance bird survey
Mitigation BIO 5.3(a-4):	Pre-disturbance badger survey
Mitigation BIO 5.3(a-5):	Pet enclosure(s), pet leashing, eviction for noncompliance
Significance:	Less than Significant with Mitigation.
<u>IMPACT BIO 5.3(b):</u>	<u>POTENTIAL IMPACTS ON RIPARIAN OR OTHER SENSITIVE NATURAL COMMUNITIES</u>
Mitigation:	Less than Significant; no mitigation required
Significance:	Less than Significant
<u>IMPACT BIO 5.3(c):</u>	<u>POTENTIAL IMPACTS ON WETLAND RESOURCES</u>
Mitigation:	Less than Significant; no mitigation required
Significance:	Less than Significant
<u>IMPACT BIO 5.3(d):</u>	<u>POTENTIAL IMPACTS ON WILDLIFE MOVEMENT OR NURSERY SITES</u>
Mitigation BIO 5.3(d-1):	Shielding of night-lighting
Mitigation BIO 5.3(d-2):	Burn area revegetation
Mitigation BIO 5.3(d-3):	Corridor along US 395 to be free of barriers, bright signs, new structures (1 exception)
Mitigation BIO 5.3(d-4):	Design of Waste Receptacles to prevent access by bears and ravens
HUD Mitigation BIO 5.3(d-5):	Grant application for development of deer passage in tandem with safe pedestrian/cycling access from site to Lee Vining
Significance:	Less than Significant Direct Impacts; SIGNIFICANT & Potentially Unavoidable Cumulative Impacts related to unsafe deer crossings
<u>IMPACT BIO 5.3(e):</u>	<u>POTENTIAL IMPACTS ON LOCAL POLICIES OR ORDINANCES</u>
Mitigation:	Less than Significant; no mitigation required
Significance:	Less than Significant
<u>IMPACT BIO 5.3(f):</u>	<u>POTENTIAL IMPACTS ON HABITAT CONSERVATION PLANS</u>
Mitigation:	Less than Significant; no mitigation required
Significance:	Less than Significant

5.3.2 BASELINE BIOLOGICAL RESOURCES ON THE PROJECT SITE

The project site is located at the base of the steeply sloping Sierra Nevada eastern flank, where the mountainous terrain transitions to the Mono Basin. The site is entirely east of the riparian forest corridor along Lee Vining Creek. No tributaries to Lee Vining Creek occur in the study area, and there are no natural channels that exhibit bed and banks or other evidences that flows are conveyed in the study area.

Because the project, coupled with existing and previously-approved project elements, will substantially fill in the parcels lying west and south of US 395, the habitat areas that occur in adjacent highway Caltrans Right-of-Way corridors (areas will not be directly impacted) will become ecologically isolated. These areas were therefore added to the study area for biological resources that may be impacted by the project.

Project area soils are mainly granitic sands and gravels. The steepest site slopes, found near the planned restaurant and near the existing hilltop housing units, are often stony and sometimes densely covered by relic lakeshore cobbles. Soils on the project area have been strongly influenced by local volcanic activity, which is evident throughout the site as significant deposits of pumice-based sands and gravels.

The highly traveled SR 120 and US 395 function to some degree as ecological barriers to wildlife use of the study area's northern and western portions. At present, a relatively unaltered ecological connection to the expansive Mono Basin shrublands appears to be maintained only at the portion of the study area that lies east and north of US 395. Slopes of the southern portion of the study area, away from the highways, also retain some sense of open space. Changes that have occurred since 1993 in this southern area include substantial increases in daily human activity, new night lighting and landscape irrigation, increased noise, new food subsidies for wildlife that attract predators and increase roadkills, the presence of domestic animals including dogs, and large-scale removal of native vegetation by a wildfire in Lee Vining Canyon around and on the site.

5.3.2.1 Existing Vegetation

Available literature was reviewed and local agency staff were interviewed to develop a list of potentially occurring special status plant and animal species at the site, as detailed below. Findings obtained during studies previously conducted at this location by biologists M. Bagley and T. Taylor (1992) were incorporated into the current review. Lists of the potentially occurring special status plants and animals, and sensitive plant communities of the Lee Vining area, were also provided by Mono County (2015). Field studies were performed in May and June 2017. The review of potentially occurring special status species was performed prior to field work in 2017 and subsequently repeated in November 2018. Potentially occurring special status species that as of November 2018 are known to occur (or have occurred) within 15 miles of the project and in habitats that are similar to those currently provided within the project area were included in the current investigation.

Study Area Plant Communities and Species

Plants and plant communities that currently exist in the study area are relatively undisturbed, or are slowly recovering from wildfire that occurred nearly twenty years ago or, in very limited areas, exhibit evidence of having been mechanically disturbed/devegetated. A list of special status plant species that may occur in the habitats available at the project site was compiled, based on a review of regional data, published regional floras, and botanical surveys performed for nearby projects; results are shown in Table 5.3-1. The literature review also included a June 2018 search of the CNDDDB records, and Consortium of California Herbaria records for the Western Mono Basin (north to Conway Grade). Potentially occurring plant species were considered to be "special status" if they have state or federal status as rare, threatened or endangered, or are included in the CNDDDB list of special plants, or are listed by CNPS in their inventory of sensitive California plants, or are included in the most recent Sensitive plant list prepared by Inyo National Forest.

TABLE 5.3-1. Special Status Plant Species that Potentially Occur at the Project Site. ¹						
Scientific Name Common Name Life Form	Rank or Status				Typical Habitat	Flowering Period
	USFS	CDFW	CNPS	NDDB		
<i>Allium atrorubens</i> var. <i>atrorubens</i> Great Basin onion bulbiferous perennial			2B.3	S2	scrub, woodland, sandy or rocky	May-June
<i>Astragalus monoensis</i> Mono milkvetch herbaceous perennial	S	R	1B.2	S2	open gravel or pumice soils	June-August
<i>Boechnera bodiensis</i> Bodie Hills rockcress herbaceous perennial	NL	NL	1B.3	S3	sagebrush scrub	June-July
<i>Boechnera cobrensis</i> Masonic rockcress herbaceous perennial	NL	NL	2B.3	S3	sagebrush scrub	June-July
<i>Chaetodelpha wheeleri</i> Wheeler's dune broom herbaceous perennial	NL	NL	2B.2	S2	sandy scrub, often alkaline	May- September
<i>Cusickiella quadricostata</i> Bodie Hills cusickiella herbaceous perennial	NL	NL	1B.2	S2	sagebrush scrub, often clay soil	May-June
<i>Eremothera boothii</i> ssp. <i>boothii</i> Booth evening primrose herbaceous annual	NL	NL	2B.3	S2	sagebrush scrub	April- September
<i>Eriastrum sparsiflorum</i> few-flowered woollystar herbaceous annual	NL	NL	4.3	S4	open scrub, sandy	May-July
<i>Lupinus duranii</i> Mono Lake lupine herbaceous perennial	S	NL	1B.2	S2	open scrub, pumice	May-August
<i>Mentzelia torreyi</i> Torrey blazing star herbaceous perennial	NL	NL	2B.2	S2	sagebrush scrub	June-August
<i>Streptanthus oliganthus</i> Masonic Mountain jewelflower herbaceous perennial	S	NL	1B.2	S3	xeric woodland, rocky slopes	June-July
<i>Tetradymia tetrameres</i> dune horsebrush shrub	NL	NL	2B.2	S2	sagebrush scrub, dunes	May- September
<i>Thelypodium integrifolium</i> ssp. <i>complanatum</i> foxtail thelypodium herbaceous perennial	NL	NL	2B.2	S2	sagebrush scrub, xeric woodland	June-August

¹ Flowering period data is from CNPS. None of these species are federally listed. A key to rank or status symbols follows the table. NL = not listed.

TABLE 5.3-1. Special Status Plant Species that Potentially Occur at the Project Site.¹

<i>Thelypodium milleflorum</i> many-flowered thelypodium herbaceous perennial	NL	NL	2B.2	S ₃ ?	sagebrush scrub, rocky	April- August
<i>Viola purpurea</i> ssp. <i>auraea</i> golden violet herbaceous perennial	NL	NL	2B.2	S ₂	sandy sagebrush scrub	April-June
<p>Rank or status, by agency:</p> <p>USFS = US Forest Service, Inyo National Forest, Bishop Office (2013): S = Sensitive List.</p> <p>CDFW = California Department of Fish and Wildlife listings under the Native Plant Protection Act and the California Endangered Species Act (CDFW, 2018a): R = Rare.</p> <p>CNPS = California Native Plant Society listings (CNPS, 2001, 2018): 1B = rare and endangered in California and elsewhere, 2B = rare, threatened or endangered in California, but more common elsewhere, 4 = plants of limited distribution in California – watchlist species.</p> <p>Threat Code extensions: .1 is Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat), .2 is Fairly endangered in California (20-80% of occurrences threatened), .3 is Not very endangered in California (< 20% of occ's threatened or no current threats known).</p> <p>CNDDDB = California Natural Diversity Data Base rankings (CDFW, 2018b): S₁ is < 6 occurrences or < 1000 individuals or < 1000 acres, S₂ is 6-20 occurrences or 1000-3000 individuals or 2000-10000 acres, S₃ is 21-100 occurrences or 3000-10000 individuals or 10000-50000 acres, S₄ is apparently secure in California. ? indicates CNDDDB uncertainty in status.</p>						

This review was initially performed in April 2017 immediately prior to field surveys. When repeated in November 2018, two changes in status or known species distribution were identified resulting in the addition of few-flowered woollystar and Bodie Hills rockcress to the search list (Table 5.3-1). The 2018 literature review and CNDDDB records search indicate that 15 special status plant species and the sensitive plant community Mono Pumice Flats occur within 15 miles of the project and in habitats that bear some resemblance to those available in the project area. Previously documented occurrences of special status plant species or sensitive communities within the study area were not found in CNDDDB records or other available literature, including the 1993 Final EIR review of the Tioga Inn project. This does not signify special status species absence; it merely is evidence that none have been reported.

Potentially occurring special status plant species (Table 5.3-1) exhibit an herbaceous perennial or shrub growth habit, except the annual herbs Booth's evening primrose and few-flowered woollystar. The perennials would be expected to be bearing leaves and flowers at the time of the May-June surveys, and some would be expected to be exhibit developing fruits. The expected phenologies of the annuals Booth's evening primrose and few-flowered woollystar would be bearing leaves, flowers, and mature fruits. These annuals are the only special status species that have some likelihood to occur in mechanically disturbed habitats. None of the potentially occurring plant species is federally listed or a candidate for listing. Mono milkvetch is state listed as Rare. Mono milkvetch is endemic to the Mono Lake Basin and a few other nearby depressions where vegetation is sparse and nutrient-poor, pumice gravel soil is present.

Vegetation Inventory

An inventory of plant species and vegetation community types present in the entire study area was completed using transect-style field surveys conducted on May 17-21 and June 4-5, 2017. Buffer areas (Figure 1) were included in the search for special status populations. All plant species encountered along wandering transects spaced at 50 feet intervals were identified to the level of taxa that was sufficient to determine special-status species presence or absence. Any species that were not at once recognized were keyed by the consulting botanist using The Jepson Manual. The methods that were employed comply with CDFW guidelines for floristic survey. May and June fall within the potentially occurring

species' flowering periods. The documented high diversity of occurring plant species, especially among native annuals that established high abundances, suggests that the complete flora was represented well at the time of survey, due to favorable climate during the early portion of the growing season in 2017.

Species composition including non-native presence was recorded along the transects. Plant communities were separated for mapping by using shifts in the frequencies of dominant species to define associations, which then were grouped within the upland shrublands Alliance types defined by Sawyer, *et al.*, (2009). Boundaries mapped at burn scar edges were abrupt. Boundaries otherwise were clearly discernible in the field, but changes in the relative frequencies of shrub dominants among the occurring associations were typically not abrupt. Each mapping unit was characterized based upon rapid belt transect counts to estimate the relative frequencies of dominants, and ocular estimation ($\pm 10\%$) of total cover and average height.

Plant communities

Plant community boundaries were identified within the entire 67.8 acres of the four affected parcels, and within 13.5 acres at adjacent Caltrans ROW areas (Exhibit 5.3-1). Vegetation cover in an undisturbed condition remains throughout most the study area where conversion to elements of Tioga Inn has not been already implemented. This cover appears as upland scrub of varying species compositions, with a canopy that is consistently dominated by native shrubs.

In 1992, local cover was described using the classification of "uniform scrub", prior to any Tioga Mart construction. Since then, notable changes (apart from elements of the Tioga project) include widening of US 395 to four lanes, which necessitated slope recontouring in the Caltrans ROW, and complete vegetation removal in the eastern margin of the site that occurred when wildfire burned much of lower Lee Vining Canyon in May 2000 (see Figure 5.3-1). These areas currently support some native scrub species, but the recovering canopy is less uniform. As of 2017, most warrant classification as alliances that distinctly differ from those found in undisturbed portions of the site. In the burn zone especially, the slowly recovering vegetation is now of low diversity, and usually dominated by invasive, non-native grasses. The contiguous fire scar extends 3000-4000 feet southward and eastward, and about two miles westward into Lee Vining Canyon. In comparison to the relatively uniform and undisturbed vegetation that was found in 1992, the scars represent the likely most significant change: nearly two decades of ongoing contrast at the landscape level. The project area has become isolated in a landscape where the vegetation cover's ability to provide resources and other ecological functions has become significantly reduced.

Pumice-dominated soils were encountered frequently along vegetation survey transects. No strictly pumice-associated plant communities occur (these types are considered uncommon). There are no scrub canopy openings that feature flats or internally drained basins, nor any species assemblages that are dominated by western needlegrass or Parry rabbitbrush, as would be expected if the sensitive community Mono Pumice Flat occurs.

Big Sagebrush Scrub

Big sagebrush is dominant or co-dominant throughout the majority of the study area. Three Big Sagebrush Scrub alliances were mapped in June 2017 (Table 5.3-2), distinguishing stands where big sagebrush was the only dominant shrub in the canopy from stands that are co-dominated by antelope bitterbrush or by yellow rabbitbrush at somewhat lesser frequencies. Big Sagebrush Scrub canopies on average are 2-3 feet tall and provide 20-30% absolute living cover.

Absolute live cover provided where Big Sagebrush Scrub has re-established within the wildfire scar is a comparably patchier 1-10%. The community's height also is reduced, averaging 1-2 feet in the wildfire scar mainly due to the increased prevalence of low-statured yellow rabbitbrush. Big Sagebrush Scrub is a common and widespread plant community that occurs throughout Mono County and the Great Basin.

Within the study area, yellow rabbitbrush distribution as a canopy co-dominant is restricted to slopes that were revegetated by wildfire in 2000. Rubber rabbitbrush and desert peach, which are typically minor shrub canopy components, also have become established at higher relative frequencies in burned areas. However, bitterbrush recruitment subsequent to burning has been consistently low, and this shrub's frequency within the wildfire scar is now consistently less than 1% of the total living shrub canopy.

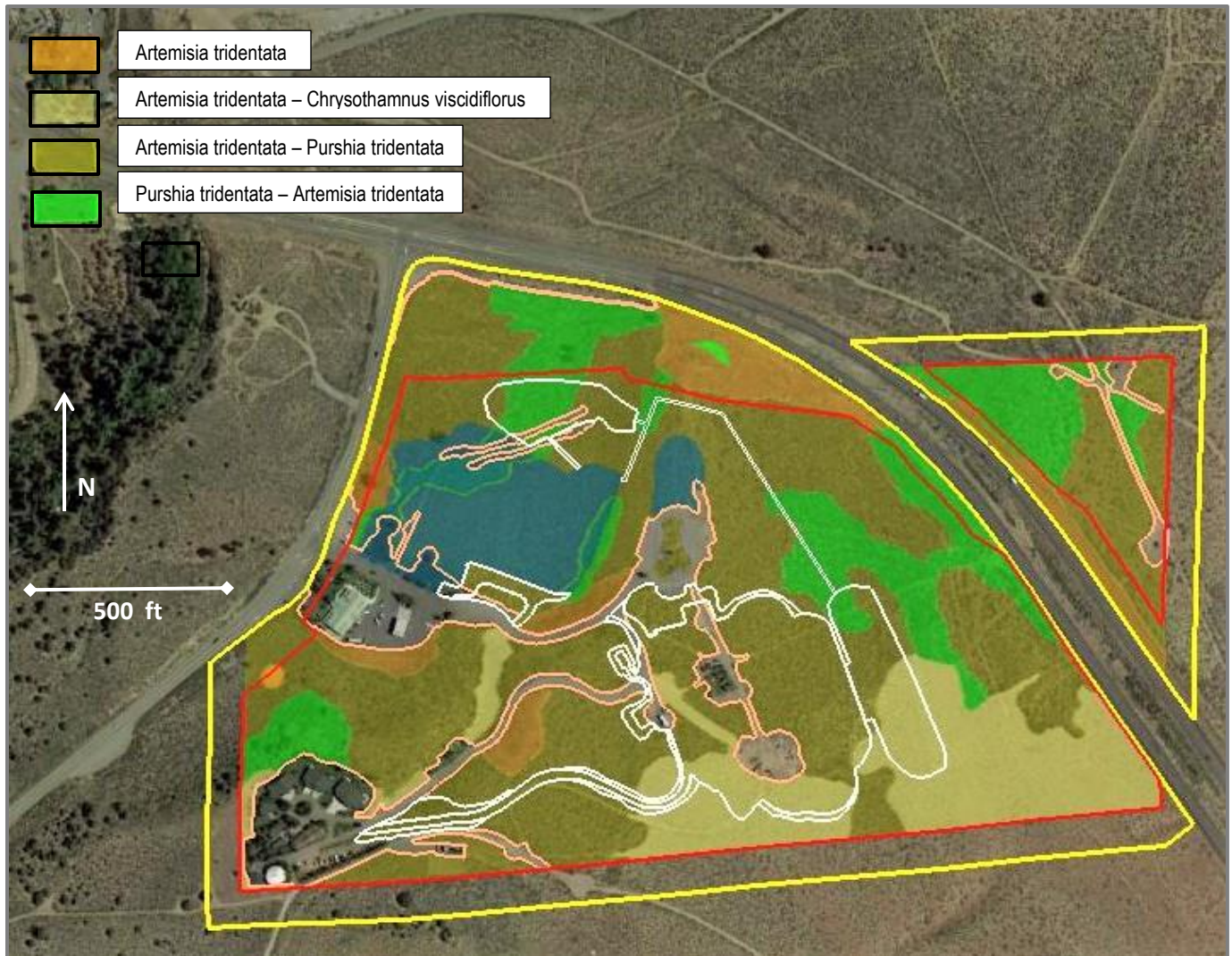


FIGURE 5.3-1. Plant communities that occur within private lands where workforce housing and associated infrastructure at the Tioga Inn development have been proposed. [Existing site improvements are shown in pink outlines, the locations of previously approved but as yet unbuilt project elements (hotel and restaurant) are shaded blue, and the vegetation that will be permanently or temporarily displaced by the proposed project is shown in white outlines.]

Table 5.3-2. Project Area Plant Communities that were Mapped during 2017.²

Holland name and CDFW classification number	Alliance and primary association names	acreage in study area
Big Sagebrush Scrub 35.110.02	Big Sagebrush Shrubland <i>Artemisia tridentata</i>	5.3
Big Sagebrush Scrub 35.110.07	Big Sagebrush Shrubland <i>Artemisia tridentata</i> - <i>Purshia tridentata</i>	41.6

² Four parcels that may be affected by the project include 10.8 acres that have been converted to houses, roads, and other impervious or devegetated surfaces. Community names are cross-referenced to the CDFG classification and Sawyer, *et al.* Alliance classification. * are designated "sensitive" by CDFW (CDFG, 2010).

Big Sagebrush Scrub 35.110.12	Big Sagebrush Shrubland <i>Artemisia tridentata</i> - <i>Chrysothamnus viscidiflorus</i>	11.0
Great Basin Mixed Scrub 35.200.00*	Bitterbrush Shrubland <i>Purshia tridentata</i> - <i>Artemisia tridentata</i> - <i>Salix exigua</i>	0.1
Great Basin Mixed Scrub 35.200.02*	Bitterbrush Shrubland <i>Purshia tridentata</i> - <i>Artemisia tridentata</i>	12.5

Trees are a minor component of the native vegetation, occurring in Big Sagebrush Scrub as scattered Jeffrey pines or singleleaf pinyon. The only other trees that were noted within the study area are the numerous sapling to mature-sized quaking aspen that have been planted into irrigated landscape areas around existing roads and buildings. Riparian zone dominant trees that are present within the nearby Lee Vining Creek riparian zone are otherwise absent from the habitat occupied by Big Sagebrush Scrub, which is entirely upland in character. Native pines near 10% canopy closure only in one small patch north of the existing hilltop housing, in a steeply sloping area where relatively high floral diversity including one special status plant species was observed (see Special Status Plant Species). The current project will not directly impact any native trees.

Herbaceous species were present in abundance throughout Big Sagebrush Scrub in 2017. The most conspicuous annuals were several species of cryptanthas, bicolored phacelia, blazing stars, pussypaws, and summer snowflakes, adding cheatgrass in the wildfire scar. Native perennial herbs include scattered populations of rockcress, and the upland habitat-adapted Douglas' sedge in pumice gravel soil. Hard fescue, a non-native perennial grass, attains up to 70% cover among the shrubs nearest some existing roadways, but only under applied irrigation. It has spread relatively sparsely into nearby native scrub. Perennial grasses otherwise comprised no more than 5%, and most often less than 1% of total vegetative cover.

Great Basin Mixed Scrub

Shrublands elsewhere in the study area (Figure 5.3-1) were classified as Great Basin Mixed Scrub. This vegetation escaped wildfire in 2000. No examples of seral return to this type were found within the 14.8 acres of mapped fire scar. The presence of bitterbrush as the most important component of the cover distinguishes Great Basin Mixed Scrub from the surrounding Big Sagebrush Scrub. In contrast to Big Sagebrush Scrub, it exhibits denser cover, greater height, and more uniform stand maturity. Great Basin Mixed Scrub and areas that are separated here as Big Sagebrush Scrub alliances were previously classified as Great Basin Sagebrush Scrub using an older system; differences in naming do not indicate a known substantial change in stand characteristics since the 1993 EIR. Great Basin Mixed Scrub is considered Sensitive by CDFW. There has been a regional trend toward loss of this community due to wildfires in Mono County.

Total living cover in Great Basin Mixed Scrub, which generally was classifiable as an antelope bitterbrush – big sagebrush alliance in the study area, was 30-40% in June 2017. Average height was 3-4 feet. Bitterbrush distribution is uniform, appearing dense, with individuals occasionally reaching a height of 10 feet. Ecotones with Big Sagebrush Scrub are diffuse but visibly evident, becoming abrupt only at fire scar edges. In 2017, native annual and perennial herbs and grasses observed to be abundant in Big Sagebrush Scrub were equally represented in the Great Basin Mixed Scrub understory, but the overall observed diversity was lower.

One isolated occurrence of Great Basin Mixed Scrub located between the site of the restaurant and the southern edge of US 395 (Figure 5.3-1) is locally unusual due to the presence of sandbar willow in the shrub canopy. Sandbar willow and big sagebrush are the co-dominant species with antelope bitterbrush. This alliance is not found elsewhere within the study area. The occurrence is mid-slope within a large area (about 2.3 acres) that was revegetated and re-contoured to accommodate US 395 widening in the early 2000's. Sandbar willow is considered to be facultatively adapted to wetlands habitat conditions. Its presence likely signals that an area of groundwater accumulation was intercepted during recontouring. The willow stems at this occurrence may represent a single, clonally reproducing individual, which in 2017 exhibited poor vigor and some dieback. There were no indications that would suggest this assemblage signals the presence of seasonal or even ephemeral artesian spring flow, as there were no surface moisture changes, ponding

depressions, animal trails, or incised discharge and outflow areas indicating spring function, despite local precipitation prior to the survey that during October 2017 through May 2018 neared 200% of the normal annual amount.

Special Status Plant Species

Few-flowered woollystar were detected at two locations north of US 395, among extensive annual woollystar populations that included spotted woollystar, and also diffuse woollystar. Plants bearing the stalked glands expected of *E. sparsiflorum* were not found among several that were checked south of US 395. There is some possibility that the local population does not extend south of US 395 in the study area. Recent separation of *E. signatum* from *E. sparsiflorum* has led to the formerly considered common *E. sparsiflorum* being added to CNPS' watchlist for species that currently are considered limited in distribution at least within California, having no current known threats to continued existence in the state. Few-flowered woollystar, which apparently is secure from extinction in California has no additional legal status under the state or federal Endangered Species Acts.

One distinct population of Masonic rockcress was found near the northern edge of the existing workforce housing, on the steep slope between the housing and the existing gas station (see Exhibit 5.3-2). Individuals were found in relatively open Big Sagebrush Scrub as well as in partial shade cast by Jeffrey pines in denser Great Basin Mixed Scrub. It was possible to map the extents of this population with good accuracy, as the plants' rosettes are distinctive and most individuals were blooming at the time of survey. A total of 132 individuals were found in an area of 1.2 acres on May 19, 2018. Masonic rockcress identification and separation from other rockcress species occurring within the study area was based in large part on the plants exhibiting relatively small, white petals (consistently < 8 mm), and spreading-descending fruits borne on glabrous pedicels, a combination of characteristics that is not expected of other locally occurring *Boechea* species.

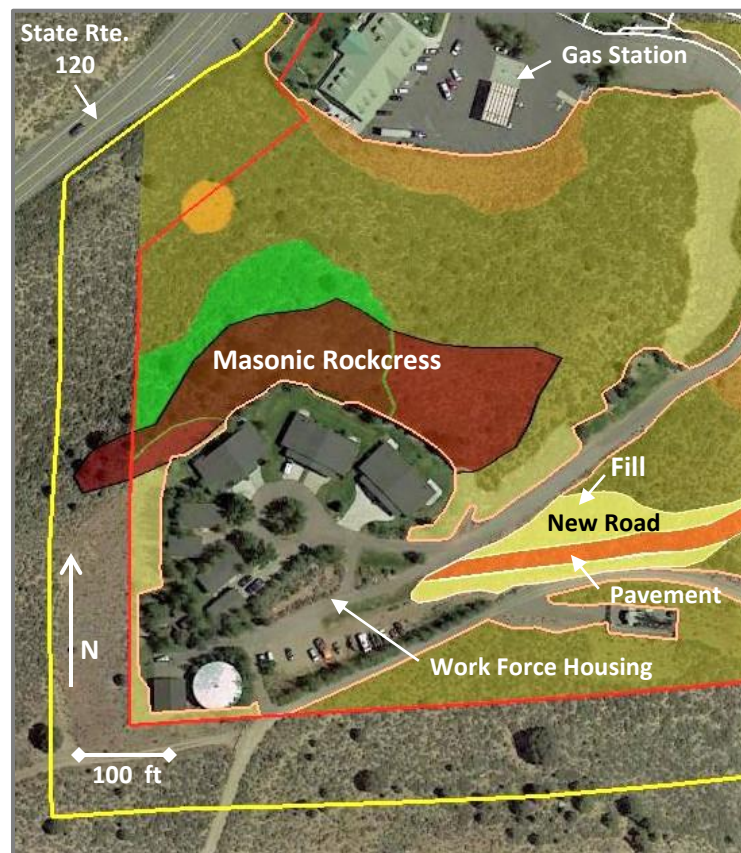


EXHIBIT 5.3-2. Onsite Extent of the Single Masonic Rockcress Population (in the southwestern corner of the study area). The project will approach to within 100' of the current population extent.

No other populations of special status plant species were found. Other species observed in 2017 are considered locally and regionally common in uplands habitats. No members of the distinctive genera *Allium*, *Chaetodelpha*, *Cusickiella*, *Eremothera*, *Streptanthus*, *Tetradymia*, or *Viola* were found during the May-June survey. All occurring species were identified by Dr. Paulus, a locally experienced botanist, to the level of taxa necessary to distinguish common species from potentially occurring special status species. In all, 86 species including 8 non-native species, representing 22 plant families, were encountered in 2017.

Non-Native Plants (Weeds)

Non-native plants are prominent in the study area, especially in areas that have been mechanically disturbed and in the wildfire scar. Non-natives that are restricted to roadsides and other highly disturbed areas are in the minority. Hard fescue is a perennial landscape grass that historically was applied near developed portions of the study area, likely for slope stabilization. In recent decades, it has spread only slightly out beyond the reach of overhead irrigation, and likely would not persist if irrigation ceased for one or two growing seasons. Hornseed buttercup, and common knotweed populations are currently abundant but their distributions are restricted to roadsides along SR 120 and US 395.

Except for hard fescue, these and all other non-native species present in the study area are considered to have become firmly established all along the alignment of US 395 in the Lee Vining area and elsewhere in Mono County. Because there is no foreseeable plan or method to control populations associated with the public transportation corridors that abut and cross through the study area, it is very likely that any control efforts applied to seek eradication of the existing weed populations within the study area would be ultimately frustrated by a constant and unmanageable restocking of the weed seedbank.

TABLE 5.3-3. Non-Native Species Observed in the Survey Area in 2017.

Non-Native Species			Weed Rating
	cheat grass	<i>Bromus tectorum</i>	Cal-IPC High
	tansy mustard	<i>Descurainia sophia</i>	Cal-IPC Limited
	redstem filaree	<i>Erodium cicutarium</i>	Cal-IPC Limited
†	hard fescue	<i>Festuca trachyphylla</i>	
†	hornseed buttercup	<i>Ranunculus testiculatus</i>	
†	common knotweed	<i>Polygonum aviculare</i>	
	Russian thistle	<i>Salsola tragus</i>	Cal-IPC Limited USDA Noxious list C
	tumble mustard	<i>Sisymbrium altissimum</i>	
† indicates species present only at roadsides and within other recently disturbed locations. Other species are found throughout the study area in native upland habitats or in irrigated (landscaped) habitats. Weed rating is potential invasiveness as rated by the California Integrated Plant Council, and federally recognized noxious weed rating (USDA, 2010).			

Five of the eight non-native species that were found in 2017 have already invaded into plant communities of the relatively less disturbed portions of the study area, and so are becoming members of the upland assemblage. The project has some potential to cause the further spread of tansy mustard, Russian thistle, redstem filaree, and tumble mustard, which currently are present in sparse numbers generally near existing study area developments and the adjacent public transportation corridors. All are annual species that produce abundant, easily transported seed. Some of these species are considered noxious or invasive by the California Department of Food and Agriculture or California Invasive Plant Council. The naturalized annual cheat grass has invaded American West landscapes totaling millions of acres. This grass is associated with increased fire spread and frequency in native shrublands. Its abundance in the study area in 2017 was far greater than any other species, native or non-native, and it has locally attained a distribution that encompasses the entire study area and the nearby landscape.

Vegetative return or succession to the condition of self-sustaining Big Sagebrush Scrub or Great Basin Mixed Scrub appears to be delayed or patchily arrested in areas with the heaviest cheat grass infestation. This condition was

observed within much of the study area mapped (Figure 5.3-1) as seral Big Sagebrush Scrub, especially where *Artemisia tridentata*-*Chrysothamnus viscidiflorus* alliance stands have developed. This species was present in 1992 at relatively low abundance. In the 18th growing season following fire, the cheat grass population now remains far more robust than any other species that has colonized the burned area. The 2017 survey found that cheat grass forms nearly pure stands of up to 2 acres in the wildfire scar, which are assumed to be (slowly) transitioning to native scrub (studies describing long-term response monitoring of this problem in the Mono Basin could not be found). Such patches would be classifiable as Non-Native Annual Grassland in more permanent contexts in central California.

5.3.2.2 Existing Wildlife

Literature Review – Special Status Animal Species

Based upon the available uplands scrub vegetation types identified within the Tioga Inn study area habitats, there are eight special status animal species that have some potential to den, nest or otherwise have a presence in the area and possibly be affected by the project (Table 5.3-4). Long-eared owl, although not listed in CNDDDB records for the region, was added due to recent reporting of an individual near the western shore of Mono Lake, about two miles north, where a young individual was seen perching in a mesic willow stand adjacent to Hwy 395 in June 2012 (Caltrans, 2012).

The Parker Meadows population of the greater sage grouse Bi-State DPS is known to use riparian meadow habitat within five miles of the study area for breeding and chick-rearing. Nest sites are chosen in scrub vegetation having isolation from human activity and predators, and sufficient density to provide concealing cover, a setting that is absent from the study area. Movement from Parker Meadows into on-site and nearby habitats in support of early chick-rearing (conservatively, mid-March through late August) is unlikely, as there are no moist, insect-filled meadows that chicks could utilize. No meadows that would be suitable for young chick maintenance occur between the project site and the nearest moist Parker Meadows habitat, a distance of 2.2 miles.

TABLE 5.3-4. Special Status Wildlife Species that may Occur in the Proposed Site.			
Species status is defined below, NL = not listed.			
SPECIES	STATUS		HABITAT
	State	Federal	
Birds			
<i>Asio otus</i> long-eared owl (nesting)	SSC	NL	sagebrush scrub
<i>Centrocercus urophasianus</i> greater sage grouse (nesting, leks)	SSC	BLM = S USFS = S	sagebrush scrub
<i>Spizella breweri</i> Brewer's sparrow (nesting)	NL	BCC	sagebrush scrub
Mammals			
<i>Brachylagus idahoensis</i> pygmy rabbit	SSC	BLM = S USFS = S	dense sagebrush scrub, loamy soil
<i>Eumops perotis californicus</i> western mastiff bat	SSC	BLM = S	roosts in crevices, buildings
<i>Lepus townsendii townsendii</i> white-tailed jackrabbit	SSC	NL	sagebrush scrub
<i>Myotis yumaensis</i> Yuma myotis	NL	BLM = S	roosts in crevices, buildings near water
<i>Taxidea taxus</i> American badger	SSC	NL	sagebrush scrub
<i>Vulpes vulpes necator</i> Sierra Nevada red fox	Thr	USFS = S	all habitats
Rank or status, by agency:			
State = CDFW listings under the state Endangered Species Act (CDFW, 2018a, 2018d).			

Thr = Threatened
 SSC = Species of Special Concern
Federal = USFWS under the federal Endangered Species Act (CDFW, 2018d).
 BCC = Birds of Conservation Concern,
 BLM = S Species is considered Sensitive by Bureau of Land Management,
 USFS = S Species is considered Sensitive by U.S. Forest Service.

Brewer's sparrows forage and nest in open sagebrush habitat, which is present in much of the undeveloped portion of the study area. While somewhat difficult to distinguish visually from other potentially occurring sparrows of the genus *Spizella*, their calls while establishing breeding territories in early spring are distinctive. Nests are constructed in larger, relatively densely foliated shrubs. The local nesting season for all bird species has been conservatively defined as the period February 15 – September 15.

Pygmy rabbit, a CDFW Species of Special Concern due to limited distribution and loss of sagebrush habitat, are locally widespread in the Mono Basin. Study area scrub vegetation averages 20-40% total cover, attaining the 50% or greater cover that is most likely to support pygmy rabbit in Mono County only in larger Great Basin Mixed Scrub stands near US 395. Pygmy rabbits are distinguished from locally occurring mountain cottontail and black-tailed jackrabbit by clear size differences both for individuals and for the fecal pellets they produce. While their colonial burrow systems are typically found within "islands" of suitably dense cover, pygmy rabbits are known to be adaptable to a wide variation in sagebrush cover and height, and can even occur in willow, bitterbrush, or rabbitbrush-dominated scrub in the Mono Lake area, as long as the soil is deep and loamy enough for burrowing.

Western mastiff bats forage over a wide variety of habitats. Yuma myotis bats are comparably restricted to habitats over and very near surface waters. Western mastiff bats have been detected over riparian habitat along Lee Vining Creek, less than four miles upstream from where it passes near the study area. Yuma myotis have been detected at the Mono Lake shore. These colonial bats may use structures with suitable crevices, especially buildings that are not regularly used by humans, for day roosting or natal colony establishment. There are no caves or culverts within the study area that could harbor roosting or breeding bats, but there are existing structures that would be removed within the area where new work force housing is proposed.

Western white-tailed jackrabbit, American badger, and Sierra Nevada red fox are highly mobile animals. Western white-tailed jackrabbit populations are in serious decline throughout their distribution in North America. Adult western white-tailed jackrabbits are generally solitary and, unlike pygmy rabbits, do not spend time underground in burrows and so are less vulnerable to construction-related soil disturbance. American badger are predators that characteristically excavate the burrows of small mammalian prey. Their typical prey species include Beechey ground squirrel, which were found to be widely present within the study area in 2017. While considered active all year, American badgers may also spend long periods in resting torpor underground, and also raise litters in underground dens. Sierra Nevada red fox, which are state listed as Threatened, are often considered to be very rare animals restricted to high elevations, generally much higher than the 6940' average elevation of the study area. However, a relatively recent occurrence documented within sight of the study area (an individual killed while trying to cross US 395 near Lee Vining Creek) is evidence that lower elevation habitats may be used in the local environment. Denning has been documented in rock fall settings but it is possible that the poorly understood Sierra Nevada red fox sometimes uses enlarged earthen burrows.

The study area provides no aquatic habitat for regionally occurring special status fish, amphibians, or mollusks. Nesting riparian birds including willow flycatcher (state and federally listed as Endangered) and yellow warbler (CDFW Species of Special Concern and USFWS Bird of Conservation Concern) would not be present. At its closest, riparian vegetation at Lee Vining Creek is located 900 feet from the area that will be disturbed by project construction. Bald eagles have been known to winter in small numbers along the western shore of Mono Lake and have been observed perching at the mouth of Lee Vining Creek. While they may forage along Lee Vining Creek and over the study area's scrub vegetation, it is very unlikely that eagles or other large raptors would nest in the study area because the forested habitat and large trees where nests are typically built are absent. The nearest large trees occur in the overstory of the narrow Lee Vining Creek riparian forest corridor. Peregrine falcons were re-introduced to upper Lee Vining Creek Canyon in 1988; however, none have subsequently appeared in CNDDDB records for the Mono Basin region, and there are no cliff habitats within the study area that could be used by this species or by prairie falcons for nesting.

Methods Used to Survey for Special Status Animal Species

Upland scrub throughout the survey area was surveyed for the presence of enlarged or networked (warren) burrows that potentially could be occupied by special status mammals. On May 17-21 and June 4-5, 2017, the GPS coordinates (± 1 meter) of all such burrows, apparently occupied or not, were recorded while walking parallel, wandering survey transects. Transects were spaced at intervals of 50 feet across the entire study area (Figure 2). Signs of recent wildlife use were recorded at each burrow. All species that were identified through sightings or by studying sign while walking transects were recorded.

Occurring birds were inventoried during plant and wildlife transect surveys. Directed surveys were also performed to determine which populations were using project area habitats for nesting. Beginning at dawn on the successive mornings of May 21- 24, 2017, on-site breeding populations were identified and mapped where possible, based upon observations of territorial display and calling, and repeated flight to a likely suitable nest site. All large trees, as well as the existing wireless telecommunications tower and power transmission poles in the area, were checked during the 2017 field surveys for large stick nest structures attributable to raptors. Existing buildings (some with bird feeding stations) that are located in and near the project area were checked for bird nests or exhibitions of nesting behavior. During the evening hours of May 21, the aerial habitat where new work force housing has been proposed was surveyed for bat presence. Existing buildings in this area were subsequently checked for crevice habitat that could be occupied by day-roosting bats or used as natal sites, and guano accumulations that could signal current use.

Wildlife on the Project Site

A diverse assemblage of wildlife species was indicated by direct observation or inferred from sign found in native scrub habitats remaining within the study area. Highest native diversity was found among the birds, with 25 species total and four identified as breeding including the special status taxon Brewer's sparrow (see Special Status Species, below). Occurring lizards, which were consistently identified as the common species sagebrush lizard, were abundant throughout the study area in 2017. Mammals were identified mainly through characteristic sign and in the case of burrowing mammals by burrow size and configuration. Tracks indicated that mule deer continue to frequent the area, as reported by Taylor. Mule deer have been regularly observed among the existing housing during spring and summer months, foraging at irrigated lawns.

Birds in particular have become adapted to the availability of foraging "habitat" and nesting opportunities provided by the existing Tioga Inn food vending and housing facilities. Common ravens and California gulls spend much time on-site, especially in the western portion of the study area. Potential nesting sites for ravens occur in the study area in the form of scattered trees, a telecommunications tower with no deterrents installed, and power transmission poles, but no raven or raptor nests were found in 2017. House sparrow, a non-native species, was found only in the human-built environment, nesting there also in 2017 at both the store and the hilltop housing. One kestrel pair was observed foraging in the study area, later using a nest box attached to a housing unit that overlooks the gas station.

Special Status Animal Species

Brewer's sparrows were the only special status birds that were observed during biological resources surveys conducted in May and June 2017. No owls or owl packets were seen during evening surveys or upon searching structures and trees. Sage grouse were absent on all survey dates.

It is possible, although unlikely, that greater sage grouse foraging adults enter the area incidentally when using the suitably vegetated Mono Basin sagebrush habitats that occur off-site across US 395 to the north and east. However, the locally extensive destruction of sagebrush by wildfire, with only sparse re-growth, has altered much of the terrain abutting the study area with regard to utility for sage grouse. Furthermore, pine trees, buildings, light poles, and overhead power pole lines are already present. Scattered trees and other relatively lofty perch positions are thought to deter grouse use, because their predators gain advantage in such situations. If foraging grouse enter the area, it would be most likely to occur during over-wintering (late August through mid-March), in order to access exposed sagebrush re-growth for food and cover.

Brewer's sparrows exhibited territorial behavior throughout the eastern and northeastern portions of the property, including the areas where new housing and a road have been proposed. Aggressively calling birds responded to recorded call playbacks by approaching or calling, and the boundaries of individual territories could be roughly mapped after some observation of site fidelity and patterned posting (see Exhibit 5.3-3). Green-tailed towhee were the only other birds that exhibited typical breeding territorial behaviors during surveys of native scrub habitats in the study area. On May 21-24, the observed breeding behaviors did not include definite patterns of return flights that would suggest nest construction or brooding had begun. It appeared that breeding territories were being established within or overlapping into every scrub vegetation type that was identified within the study area. Some included areas of wildfire scar where native shrubs remain sparse. The density and abundance of potential nesting sites identified in 2017 in and near where the native vegetation will be removed indicates that nesting populations of Brewer's sparrows, green-tailed towhees, and other migratory birds may be negatively affected by the project. Construction could cause nest abandonment or failure prior to fledging due to mechanical nest destruction. There may be substantial increases in parent harassment and nest predation if construction occurs during the breeding season. Residents of the new housing may release domestic dogs and cats into the unfenced environment surrounding the project, leading to significantly increased ongoing predation of nests and adult birds.



EXHIBIT 5.3-3. Approximate Study Area Arrangement of Dense Brewer's Sparrow Breeding Territories. May 21-24, 2017. Green-tailed towhee were also observed exhibiting territorial breeding behaviors in this same general area, where the vegetation is dominated by sparse to dense sagebrush and other upland shrubs. Seven separate potential nesting locations were mapped (blue polygons).

American badger were the only special status mammals that were evidenced as recently or currently using project area habitats. Burrowing activity was observed in Big Sagebrush Scrub and Great Basin Mixed Scrub habitats in and very near where the project will cause soil and vegetation disturbance (Figure 5.3-4). Bats were commonly observed foraging over

the project area during early morning and evening surveys. However, no evidence of bat colony roosting or the establishment of satellite roosts was found when the existing structures within the project area were searched for habitable crevices and guano accumulations. Burrows found on the property with larger diameter openings were invariably ascribed to Beechey ground squirrel. A few had been widened by predatory digging, which likely had occurred during both 2016 and 2017. Due to the presence of large, parallel claw marks made while widening squirrel burrow openings, the predatory activity was assigned to American badger. Sign at these burrows did not include tracks, neonatal scat, or other indications of recent occupation for denning by larger mammalian predators such as badger or Sierra Nevada red fox. Rockfall habitat that may be more typical for special status fox denning does not occur within the study area or nearby.

No rabbit warren areas or subcanopy forms that would indicate larger lagomorph presence were detected during transect surveys. Friable, loamy soils that are generally present where warrens have been found locally are not present except the lowest elevations of the study area near US 395. Scrub stands with greater than 50% cover were not present, and patch-sized areas of such density are very uncommon, so searching each dense area thoroughly was possible. Rabbit pellets observed in the study area were consistent with the presence of mountain cottontail rabbit, a common species. The sizes of these pellets (9-10 mm) was not consistent with the 4-6 mm diameter that would be expected if pygmy rabbit were present, or with the 10-11 mm diameter that would be expected of western white-tailed jackrabbit.

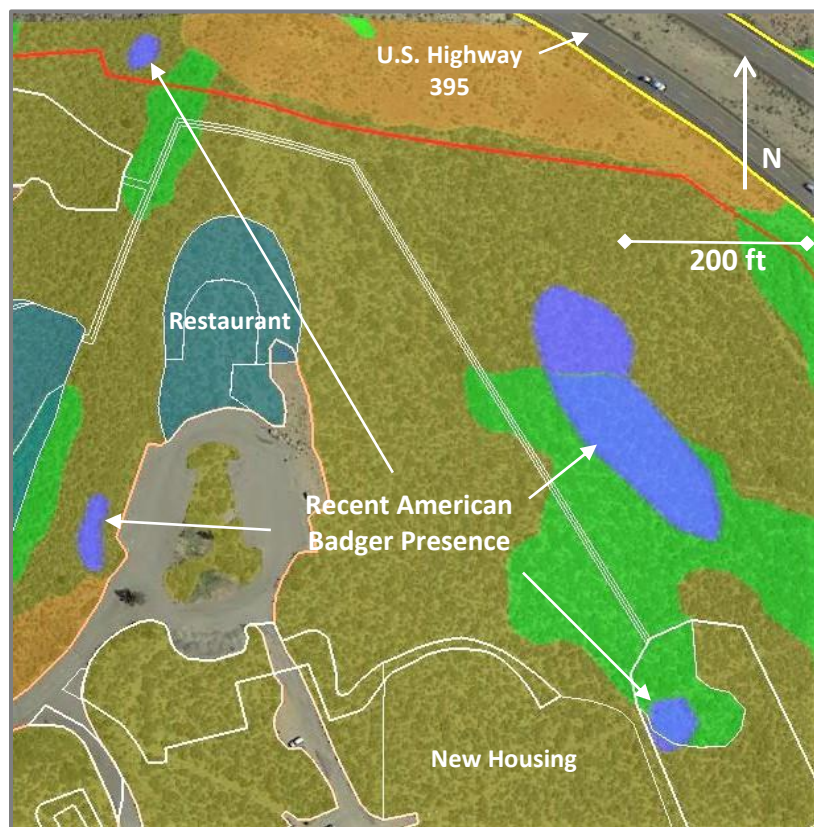


EXHIBIT 5.3-4. Four locations where recent widening of Beechey ground squirrel burrows was attributed to foraging activity by American badger. The activity is thought to have occurred during the period 2016 to as recently as early 2017.

American badger are highly mobile and adaptive animals. It is unlikely that the removal of a small area of potential foraging habitat will significantly affect the local population. Direct impact to a new residence burrows and to badgers that may be day-denning in enlarged rodent burrows can be avoided if the project footprint and corridors for construction equipment access are checked for newer rodent burrows excavation or other signs of predatory digging. The holes and excavated dirt piles created by badgers are large and conspicuous, so impact to individuals due to ground disturbance can be readily avoidable if the pre-survey is conducted immediately prior to the start of soil disturbance.

Mule Deer

Mule deer are considered important harvest species by the CDFW. Mule deer herds in Mono County are defined by their pattern of movement between summer and winter ranges. Lee Vining Canyon in the vicinity of the Tioga Inn project site is used for migration by a significant fraction of the Casa Diablo Herd. Detailed, repeated-measures study of the magnitude and spatial patterns of deer movement both in and near the project area has identified a traditional migration corridor that passes within one-half mile to the south. The project area and nearby slopes are not within an identified migrational holding area, but it is known that summer residency is normal in lower Lee Vining Canyon. It is possible that some deer use the remaining habitat at Tioga Inn for spring and fall migration during the periods April to June and October to November, and for foraging during summer residency. Studies in support of the original EIR for Tioga Inn found that the project area, in contrast to the identified migration corridor, is not highly used and itself “is of little importance” as a migration corridor. At that time, the perception of a diminished pattern of deer use in the project area was attributed to disturbance caused by on-site tourists and the lack of required concealing cover.

It is reasonable to assume that deer use of the project area has not increased either for migratory passage or for summer residency in the interval since the prior on-site study. As in 1992, deer trails were not found during thorough survey of the entire property in 2017. Deer sign was scattered, and only one individual was seen in the project area. More generally, negative impacts to the available habitat have brought about changes that do not favor deer use. Uniform scrub dominated by bitterbrush, as described on-site in 1992, has been displaced and has become highly fragmented due to prior phases of Tioga Inn development. Habitat that has become degraded due to wildfire extends well off-site, and concealing cover provided by the pinyon woodland of upper slopes adjacent to the project has not recovered. The grouping of occupied residences located near US 395 at a distance of 2500’ outside of the study area has expanded, potentially creating new restrictions for wildlife access to the project site from the south. US 395 has been expanded and widened, now presenting a divided, four-lane barrier to wildlife movement to and from the study area. The disturbed and increasingly isolated habitat in and immediately adjacent to the site appears now to only marginally provide for the requirements of mule deer that reside in the area or that pass through during migration.

5.3.3 REGULATORY SETTING

The regulatory setting sections describes relevant federal, state, and local laws, regulations and policies pertaining and applicable to environmental impacts within the Planning Area.

5.3.3.1 Federal Regulations

Federal Endangered Species Act (ESA). The USFWS administers the Federal ESA. The ESA provides a process for listing species as either threatened or endangered, and methods of protecting listed species. The ESA defines as “endangered” any plant or animal species that is in danger of extinction throughout all or a significant portion of its known geographic range. A “threatened” species is a species that is likely to become endangered. A “proposed” species is one that has been officially proposed by the USFWS for addition to the federal threatened and endangered species list. Per §9 of the ESA, “take” of threatened or endangered species is prohibited. The term “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. Take can include disturbance to habitats used by a threatened or endangered species during any portion of its life history. The presence of any federally threatened or endangered species in a project area generally imposes severe constraints on development, particularly if development would result in “take” of the species or its habitat. Under the regulations of the ESA, the USFWS may authorize “take” when it is incidental to, but not the purpose of, an otherwise lawful act.

Federal Clean Water Act-§404. The USACE administers CWA §404. This section regulates the discharge of dredge-and-fill material into waters of the U.S. USACE has established a series of nationwide permits that authorize certain activities in waters of the US, if a proposed activity can demonstrate compliance with standard conditions. Normally, USACE requires an individual permit for an activity that will affect an area equal to or in excess of 0.5 acre of waters of the US. Projects that result in impacts to less than 0.5 acre can normally be conducted pursuant to one of the nationwide permits, if consistent with the standard permit conditions. USACE also has discretionary authority to require an EIS for projects that result in impacts to an area between 0.1 and 0.5 acre. Use of any nationwide permit is contingent on the activities having no impacts to endangered species.

Clean Water Act - §401. Per §401 of the CWA, “any applicant for a Federal permit for activities that involve a discharge to waters of the State, shall provide the Federal permitting agency a certification from the State in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the Federal CWA.” Thus applicants must apply for and receive a §401 water quality certification from the RWQCB before the USACE will issue a §404 permit. §404 Nationwide Permits (NWP) are required for discharge of any dredged or fill material into waters of the United States.

Waters of the United States. Waters of the U.S., as defined in CFR §328.3, include all waters or tributaries to waters such as lakes, rivers, intermittent and perennial streams, mudflats, sand-flats, natural ponds, wetlands, wet meadows, and other aquatic habitats. Frequently, waters of the US, with at least intermittently flowing water or tidal influences, are demarcated by an ordinary high water mark (OHWM). The OHWM is defined in CFR §328.3(e) as the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. In this region, the OHWM is typically indicated by the presence of an incised streambed with defined bank shelving. In 2010 the USACE South Pacific Division issued a Regional Supplement to the USACE Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region, one of a series of Regional Supplements to the USACE Wetland Delineation Manual designed to provide technical guidance and procedures for identifying and delineating wetlands that may be subject to CWA §404 or §10 of the Rivers and Harbors Act. The Supplement applies to the Western Mountains (including the Sierra Nevada), Valleys, and Coast Region portions of, California and 11 other western states.

Migratory Bird Treaty Act. The Migratory Bird Treaty Act (MBTA) protects all common wild birds found in the US except the house sparrow, starling, feral pigeon, and resident game birds (e.g. pheasant, grouse, quail, and wild turkey); each state manages resident game birds separately. The MBTA makes it unlawful for anyone to kill, capture, collect, possess, buy, sell, trade, ship, import, or export any migratory bird including feathers, parts, nests, or eggs. USFWS has formulated a list of suggested conservation measures for migratory birds as part of their Migratory Bird Program. The citation for this program’s website has been added to the listing of referenced materials.

5.3.3.2 California Regulations

California ESA. CDFW administers the California ESA. The State of California considers an “endangered” species one whose prospects of survival and reproduction are in immediate jeopardy. A “threatened” species is one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the absence of special protection or management. A “rare” species is one present in such small numbers throughout its portion of its known geographic range that it may become endangered if its present environment worsens. The rare species designation applies to California native plants. State threatened and endangered species are fully protected against take, as defined above. The term “species of special concern” is an informal designation used for some declining wildlife species that are not state candidates for listing. This designation does not provide legal protection but signifies that these species are recognized as sensitive by CDFW.

California Fish and Game Code §1600 to §1603. The California FCFG Code mandates that “it is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds, without first notifying the department of such activity.” CDFW jurisdiction includes ephemeral, intermittent, and perennial watercourses, including dry washes, characterized by the presence of hydrophytic vegetation, the location of definable bed and banks, and the presence of existing fish or wildlife resources. Furthermore, CDFW jurisdiction is often extended to habitats adjacent to watercourses, such as oak woodlands in canyon bottoms or willow woodlands that function as part of the riparian system. Historic court cases have further extended CDFW jurisdiction to include watercourses that seemingly disappear, but re-emerge elsewhere. Under the CDFW definition, a watercourse need not exhibit evidence of an OHWM to be claimed as jurisdiction. However, CDFW does not regulate isolated wetlands (those that are not associated with a river, stream, or lake).

California Fish & Game Code - §3503 & §3511. The CDFG administers the California Fish and Game Code (CFG Code). There are particular sections of the CFG Code that are applicable to natural resource management. For example, §3503 of the CFG Code states it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird that is protected under the MBTA. CFG Code §3503.5 further protects all birds in the orders Falconiformes and Strigiformes, birds of prey such as hawks and owls, and their eggs and nests from any form of take. CFG Code §3511 lists fully protected bird species where the CDFG is unable to authorize the issuance of permits or licenses to take these species.

and road portions of the Tioga Inn project (i.e., elements that were not proposed in 1993) will cause another 6.5 acres of new, permanent habitat conversion and 5.0 acres of temporary revegetation and soil disturbance, as shown in Table 5.3-5. Operation of the new workforce housing facilities could have impacts that will reach beyond the construction footprint, mainly due to expected changes and increases in human activity.

TABLE 5.3-5. Summary of Acreages Impacted by Tioga Workforce Housing Project			
	Type of Impact		Total
	Permanent (Acres)	Temporary (Acres)	
Current Converted	10.5	0.1	10.6
Has Prior Approval	4.7	1.4	6.1
Newly Proposed	6.5	5.0	11.5
Total	21.8	6.4	28.2

The acreages shown in Table 5.3-5 include (a) developed areas of the site that have previously been converted to paved or otherwise revegetated surfaces (existing store and gas station, roads and parking, workforce housing) based on the 1993 approvals, (b) areas where the 1993 development approvals have been obtained but the disturbance to native vegetation have not yet occurred (hotel, restaurant), and (c) areas of current native vegetation cover where new project elements are now proposed (new workforce housing, new road, new wastewater treatment/subsurface irrigation water and septic disposal system, ancillary features). Impacts that are associated with revegetation and soil disturbance have been grouped either as permanent (conversion to buildings and other impermeable surfaces, conversion to non-native landscaping) or as temporary (areas subject to planting and restoration to native habitat).

The temporary impacts recognize that installation of the wastewater treatment and subsurface irrigation components will require removal of vegetation, but may benefit native plant cover in some areas due to long-term irrigation using effluent from the proposed new wastewater treatment and subsurface irrigation system. At the same time, impacts to existing plant communities associated with the construction of new housing and other buildings and roads will permanently reduce their acreage (see Table 5.3-5), and may diminish their current ecological functions, such as support of existing special status plant populations.

As noted in the baseline discussion, candidate, sensitive, or special status species that may occur on this site include the few-flowered woollystar, Masonic rockcress, Brewer's sparrows, American badger and mule deer. The few-flowered woolly star was detected at two locations north of US 395, and is on the CNPS watchlist for species that are limited in distribution in California, but there are no current known threats and this species has no additional legal status under the state or federal Endangered Species Acts. Additionally, a distinct population of Masonic rockcress is located near the hilltop residences. As of June 2017, the population consists of 132 plants occurring in the southwestern corner of the study area, with scattered individuals elsewhere on the site. The proposed Workforce Housing project will approach to within 100 feet of the current population extent.

Construction-related direct impacts to the occurring Masonic rockcress population are very unlikely, but the emplacement of the new road will approach to within 100 feet. The annual few-flowered woollystar population is very unlikely to be affected by the removal of a small area of potential habitat (in 2017, plants were found near but not within the area where vegetation will be displaced by the project).

Shrublands in the project area are relatively undisturbed, long-standing and well-developed, unlike shrublands in the surrounding areas which have failed to recover due mainly to the 2010 wildfire. The project will temporarily disturb 1.1 acres of shrublands dominated by bitterbrush with a lesser presence by co-dominant big sagebrush, a plant community type that is considered sensitive by the State of California. This disturbance will be required in order to install a leach field for the proposed new housing. Permanent conversion of native vegetation (6.5 acres) will occur only where the regionally common community type Big Sagebrush Scrub is dominant. In addition, 3.9 acres of Big Sagebrush Scrub temporary disturbance will occur.

As noted, Brewer's sparrows were the only special status birds that were observed during the surveys of May and June 2017. No owls or owl packets were seen, and sage grouse were absent on all survey dates. Brewer's sparrows exhibited

territorial behavior throughout the eastern and northeastern portions of the property, and it appeared that breeding territories were being established in or overlapping into every scrub vegetation type identified on the site (including areas in the wildfire scar).

The density and abundance of potential nesting sites identified in 2017 in and near where native vegetation will be removed indicates that nesting Brewer's sparrows, green-tailed towhees, and possibly other birds may be negatively affected by the project. Construction could cause nest abandonment or failure prior to fledging due to mechanical nest destruction. There may be substantial increases in parent harassment and nest predation if construction occurs during the breeding season.

Domestic pets, especially dogs and cats, are expected with the new housing tenancy. It is unrealistic to expect that these animals will be restrained, and wandering pets potentially will be an important new predatory limitation that is imposed on the environment stretching for some distance beyond the project footprint. Cats, for example, could extirpate the breeding Brewer's sparrow population that currently appears to utilize scrub just outside the project area to the north and east. Dogs could harass terrestrial wildlife including American badger and mule deer, and cause increased crossings and potential for collision at US 395.

Nesting birds are protected under CDFW code and by Migratory Bird Treaty provisions, and construction can be routinely halted in order to avoid nest destruction or abandonment if it is scheduled to occur during the locally recognized nesting period. Surveys that would be intended to minimize or avoid the potential for impacts to nesting birds would be effective only if they are performed immediately prior to the start of the disturbance, by a biologist who is qualified and knowledgeable of local avifauna.

Surveys conducted in 2017 found recent sign of burrowing by American badger, which is a CDFW Species of Concern. It is possible that individuals will den temporarily or while raising young within the project area, occupying enlarged burrows such as those found in 2017. Badgers are highly mobile animals as adults, and can escape construction-related direct impacts. Burial of natal den areas would be fatal for young badgers but can be avoided if surveys to detect badger presence are conducted immediately prior to the start of project ground-disturbing activities.

MITIGATION MEASURES – SPECIAL STATUS SPECIES

MITIGATION BIO 5.3(a-1) (Shrubland Revegetation): Proponent shall prepare a Revegetation Plan for the purpose of returning all areas that are temporarily disturbed by the project to a condition of predominantly native vegetation. Mono County will review this plan for approval within 60 days of the start of project construction. The revegetation plan will, at a minimum, include locally derived seed or plants from the following list of species, in order to emulate remaining Great Basin Mixed Scrub on-site: Jeffrey pine, single-leaf pinyon, antelope bitterbrush, big sagebrush, mountain mahogany, desert peach, wild buckwheat (*Eriogonum microthecum*, *E. fasciculatum*, or *E. umbellatum*), yellow rabbitbrush, silvery lupine, chicalote, basin wildrye, and any of the regionally common needlegrasses. The Plan must also include methods and timing for planting, supplemental inputs including plant protection and irrigation using treated sewage effluent, success criteria that include a return to at least 50% of pre-project native vegetation cover within five years, and a monitoring and reporting program that includes annually collected revegetation progress data, data and trends summary, and photographs for transmittal to Mono County prior to December 1 of each of the first five years following project construction (or until all success criteria are attained.) Monitoring data collection and reporting shall be performed by a qualified botanist who has been approved by Mono County.

MITIGATION BIO 5.3(a-2) (Rockcress Protection): The construction contractor shall be required to install temporary fencing along the western edge of the existing roadway where it approaches the Masonic rockcress population, in order to prevent accidental damage due to incursion by equipment. Fencing shall remain in place through the completion of all construction phases.

MITIGATION BIO 5.3(a-3) (Nesting Birds): A pre-disturbance nesting bird survey shall be conducted within seven days prior to the start of vegetation and ground-disturbing project activities, by a qualified biologist, if construction is scheduled to begin during the period March 15 – August 15. All potential nesting habitat within 200 feet (passerine birds) or 600 feet (raptors) from the project-related disturbance limits will be included in the survey. Survey results will be

reported to CDFW, Bishop, Mono County, and to the construction foreperson within 24 hours of survey completion, in order to formulate avoidance measures. Appropriate measures (at a minimum including nest buffering and monitoring) will be decided in consultation with CDFW on a nest-by-nest basis.

MITIGATION BIO 5.3(a-4) (Badger Survey): A pre-disturbance denning badger survey shall be scheduled within three days prior to the start of vegetation and ground-disturbing project activities. The survey will be performed by a qualified biologist. The survey will include the entire area where disturbance will occur, as well as buffers of 100 feet in all directions. Survey results will be reported to CDFW, Bishop, Mono County, and to the construction foreperson within 24 hours of survey completion, in order to formulate avoidance measures. Unless modified in consultation with CDFW, active dens will be buffered by a minimum distance of 100 feet, until the biologist finds that den occupation has ended.

MITIGATION BIO 5.3(a-5) (Pet Enclosure, Pet Leashing, Eviction for Noncompliance): Tenants wishing to have pets shall be required to construct and pay for a fenced enclosure, as approved by property management, to prevent their pet(s) from entering undeveloped portions of the property and (unfenced) adjacent lands. The tenancy agreement for all units will include a common rule requiring the leashing of all pets whenever they exit the housing units or fenced enclosure. Enforcement of the enclosure and leashing requirements shall continue through the life of the project. The penalty for violation of this regulation shall include eviction following two advisory noncompliance notices by the housing manager.

IMPACT BIO 5.3(b): Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural plant community identified in local or regional plans, policies, regulations or by the CDFW or USFWS?

LESS THAN SIGNIFICANT. The project study area is located east and outside the riparian forest corridor that follows Lee Vining Creek's perennial flow. No tributaries to Lee Vining Creek occur on the site, and the site contains no natural channels that exhibit bed and banks or other evidences of flows (seasonally or otherwise). No impacts are foreseen, and no mitigation measures are required.

MITIGATION MEASURES – EROSION

BIO 5.3(b) (Riparian Resources): No significant impacts to riparian resources have been identified, and no mitigation measures are required.

IMPACT BIO 5.3(c): Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

LESS THAN SIGNIFICANT IMPACT. One isolated occurrence of Great Basin Mixed Scrub located between the site of the restaurant and the southern edge of US 395 is locally unusual due to the presence of sandbar willow in the shrub canopy. Sandbar willow and big sagebrush are the co-dominant species with antelope bitterbrush. This alliance is not found elsewhere in the study area. The occurrence is mid-slope within an area of about 2.3 acres that was revegetated and re-contoured to accommodate US 395 widening in the early 2000's. Sandbar willow is considered to be facultatively adapted to wetlands habitat conditions. There were no indications that this assemblage signals the presence of seasonal or even ephemeral artesian spring flow, as there were no surface moisture changes, ponding depressions, animal trails, or incised discharge and outflow areas indicating spring function, despite local precipitation prior to the survey that during October 2017 through May 2018 neared 200% of the normal annual amount. No impacts are foreseen, and no mitigation measures are required.

MITIGATION MEASURES – WETLANDS

BIO 5.3(c) (Wetlands): No significant wetlands impacts have been identified and no mitigation measures are required.

IMPACT BIO 5.3(d): Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

SIGNIFICANT AND POTENTIALLY UNAVOIDABLE ADVERSE IMPACT. Domestic pets, especially dogs and cats, are expected with the new housing tenancy. It is unrealistic to expect that these animals will be restrained, and wandering pets potentially will be an important new predatory limitation that is imposed on the environment stretching for some distance beyond the project footprint. Cats, for example, could extirpate the breeding Brewer's sparrow population that currently appears to utilize scrub just outside the project area to the north and east. Dogs could harass terrestrial wildlife including American badger and mule deer, and cause increased crossings and potential for collision at US 395.

Mule deer were observed on-site, and their tracks or droppings were seen in all habitat types. The project incrementally narrows one possible route that deer of the Casa Diablo Herd could use to move into and out of Lee Vining Canyon during migration. Effective closure will be somewhat more extensive, given that the new housing and increased tourist visits will add noise, necessitate night lighting, and introduce free-roaming pet dogs to the habitat formerly available for relatively unobstructed deer use. Meanwhile, forage and concealing cover availabilities have declined since 1992, when detailed study concluded that on-site deer use is generally low and ancillary to a major movement corridor that is located well off-site to the south and east.

It is possible that the mortality of deer that enter the property could be increased as a result of project effects that increase crossings of the highways, especially the 4-lane US 395. Collision, especially along US 395, is considered one of the main causes of deer mortality in Mono County. CDFW has developed specific plans for deer herd management that emphasize the importance of designing projects with a minimum of new barriers to migration are emplaced. The proposed project will create a significant new physical barrier to deer movement. Housing and tourism-based facility operations will increase daily human activity, and generate noise and new night lighting. Domestic dogs off-leash will tend to harass wildlife and drive deer onto roadways. Provided below are measures that would reduce potential impacts to less than significant levels.

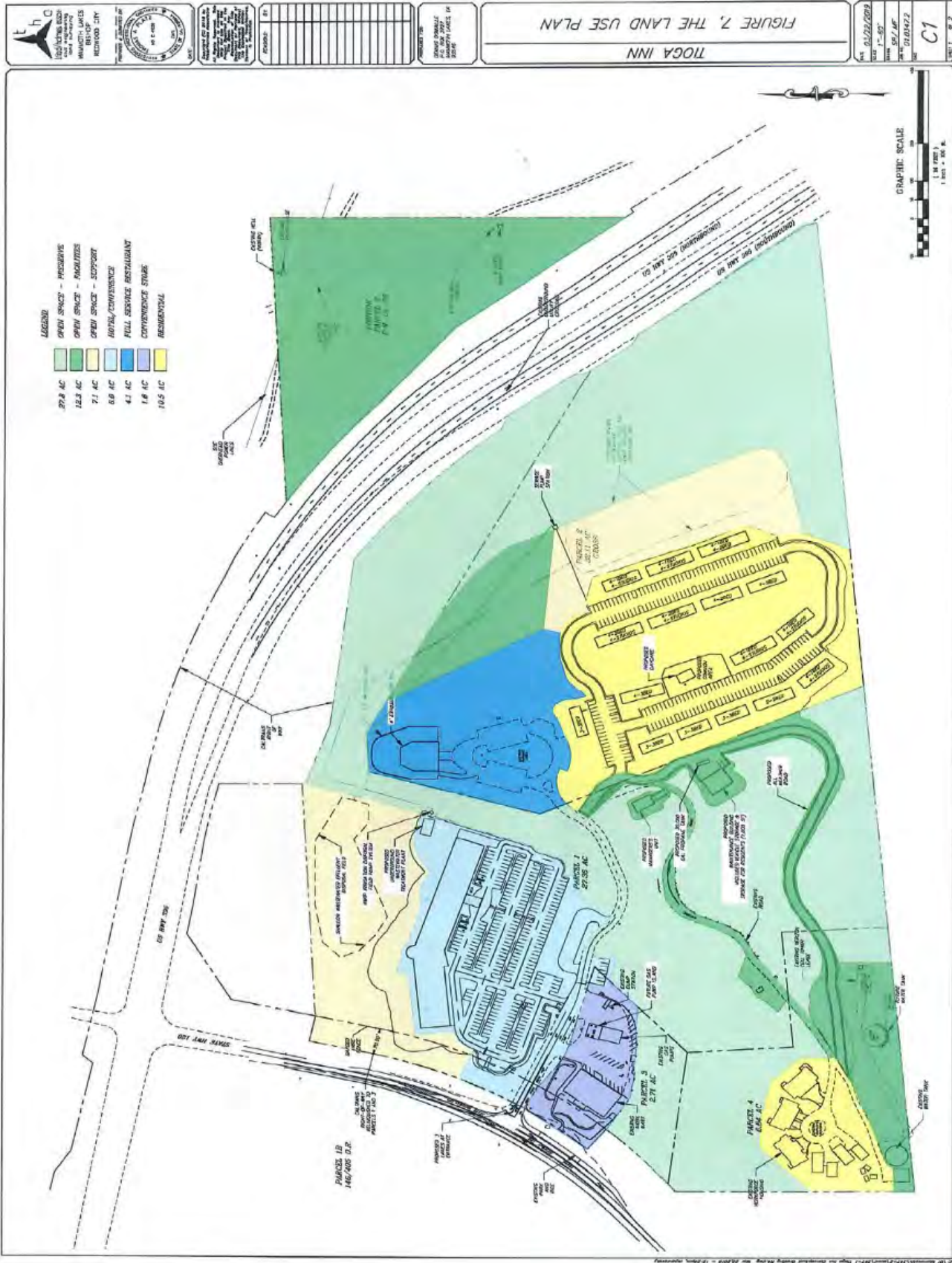
Other wildlife, including locally occurring coyote and bears, could be subject to increased mortality due to highway crossings if the new project residences and facilities create an attraction such as a dependable or even occasional food source. Attractions could include household garbage, domestic pets, or stored food items. Diligent exclusion is the only effective means to avoid creating an attractive but dangerous new resource for opportunistic wildlife. As can be seen in Appendix I, the Biological Assessment included a mitigation measure that would establish a protected corridor, redesignated FROM Open Space-Facilities TO Open Space-Preserve, between US 395 and all project elements. The corridor location would be as illustrated very generally in Exhibit 5.3-5 below.



EXHIBIT 5.3-5. Corridor to be maintained as Open Space.

Before release of the Draft SEIR, these mitigation recommendations were incorporated into the project proposal resulting in a changed Land Use and Open Space Plan as shown in Exhibit 5.3-6 below.

EXHIBIT 5.3-6. OPEN SPACE PLAN.



Designation of the protected corridor as 'Open Space-Preserve' indicates that uses in this area shall consist of improved or undisturbed landscaped areas consisting of native materials, wherein physical development will (with the exception of one reclaimed water pump station) be limited exclusively to underground utilities as well as any existing improvements and prior entitlements; note that the projected corridor applies only to lands owned by the project applicant and outside of the approved hotel and restaurant uses. As noted in the Biological Assessment, this protected corridor in tandem with the Pet Kennel and Pet Leashing requirements in Mitigation Measure 5.3-(a-5) will redirect deer movements to the east and south of the new housing area (rather than back across highways) and reduce potential project impacts to *less than significant levels*.

Note that implementation of the protected corridor will not be sufficient to reduce cumulative project impacts on deer migration that are associated with regional transportation and development improvements. The cumulative impacts can be mitigated only through the creation of a dedicated deer passageway, as outlined below in Mitigation Measure BIO 5.3(d-5). Because there is no assurance that efforts will be successful to obtain funding for a deer passageway, this cumulative impact is considered *significant and potentially unavoidable*.

MITIGATION MEASURES – MIGRATORY AND RESIDENT SPECIES

MITIGATION BIO 5.3(d-1) (Shielding of Night Lighting): Night lighting shall be shielded and in compliance with Chapter 23, Dark Sky Regulations, of the General Plan to maintain at existing levels the degree of darkness along the corridor of undeveloped vegetation between Tioga Inn developments and US395. Deer movements across the highway during spring will be facilitated by keeping this corridor open (no linear barriers, no brightly lit signs, no future revegetation or project development) so that movements will be deflected to the east and south of the new housing area rather than back across the highway.

MITIGATION BIO 5.3(d-2) (Burn Area Restoration): All areas burned in 2000 within the property (14.8 acres, minus acres that are permanently converted to approved Tioga Specific Plan facilities) will be seeded using locally collected bitterbrush (*Purshia tridentata*), at a rate of 4 pounds/acre pure live seed. In addition, diverse shrubs and grasses with available locally collected seed (acceptable species are: antelope bitterbrush, big sagebrush, mountain mahogany, desert peach, wild buckwheat (*Eriogonum microthecum*, *E. fasciculatum*, or *E. umbellatum*), yellow rabbitbrush, silvery lupine, chicalote, basin wildrye, and any of the regionally common needlegrasses) will be spread, bringing the total application rate to 10 pounds/acre. Seeding will be performed just prior to the onset of winter snows in the same year that project construction is initiated. If, after a period of five growing seasons has passed, a qualified botanist finds that total live cover provided by native shrub and grasses has not increased to 20% above that measured at adjacent (unseeded) burn scar areas, then the entire burn area will be seeded again as described above.

MITIGATION BIO 5.3(d-3) (Protected Corridor along US 395): Mule deer mortality along US 395 adjacent to the project site can be minimized by ensuring that the corridor between US 395 and all Tioga project elements (including the hotel, the full-service restaurant, and the workforce housing) remains entirely free of linear barriers, brightly lit signs, and new surface structures (excepting one new above-ground sewage/reclaimed water pump control structure with no more than 100' feet of building area), with no future revegetation of native plant materials. This mitigation measure applies only to lands owned by the project applicant and outside of the approved hotel and restaurant uses.

Mitigation BIO 5.3(d-4) (Waste Receptacles): All waste receptacles will be designed to prevent access by ravens and bears. Signs will be clearly posted informing of the need to secure trash, pets, and stored food from wildlife access. Rental agreements will include restriction against storage of trash or unsecured food items outside residences (including in vehicles) for any length of time.

Mitigation BIO 5.3(d-5) (Deer Passage; Cumulative Impact Mitigation Measure): Caltrans installation of a deer passage along the US 395 culvert at Lee Vining Creek would significantly reduce the frequency of unsafe deer crossings in the project area, and associated collision hazards to deer and to motorists. Caltrans has installed deer crossings at other streams along the migratory portion of US 395, with significant benefits. If the Tioga Workforce Housing Project is approved, the applicant intends to collaborate with Mono County Community Development Department to submit a Sustainable Communities grant application under the Rural Innovation Project Area (RIPA) program. A priority use of program funds, if awarded, will be to develop a safe pedestrian and cycling access route between the project area and

the community of Lee Vining. This access route will be designed to incorporate a deer passage along the US 395 culvert at Lee Vining Creek.

IMPACT BIO 5.3(e): Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

LESS THAN SIGNIFICANT. The *General Plan Conservation and Open Space Element* identifies a series of critical issues, opportunities and constraints that apply to biological resources in Mono County, as outlined in Table 5.3-6.

TABLE 5.3-6. Biological Resource Issues, Opportunities and Constraints identified in the Mono County Conservation and Open Space Element of the General Plan	
1	Mono County's fish and wildlife populations and plant communities contribute substantially to the tourist based economy, recreation, and aesthetic enjoyment of the county's resources. These resources are important not only for their direct and indirect benefits to residents and visitors, but also for their inherent ecological value.
2	The biological resources in the county contribute to the local economy in several ways. Fishing, hunting, sightseeing, numerous recreational activities, agriculture and grazing are all directly dependent on the natural resources in the county.
3	The protection and enhancement of natural habitats is a critical element in preserving and restoring the long-term existence of local wildlife. Riparian woodlands, wetlands, migration corridors, sagebrush steppe, and wintering and summering grounds are recognized as critical, highly localized wildlife habitat. Increased recreational use in the county and increased development, particularly in areas outside existing community areas, creates potential impacts to the long-term sustainability of fish and wildlife populations and plant communities through degradation of resources and increased conflicts between wildlife and humans.
4	The cumulative impacts of increased development and recreational usage on natural habitats and local wildlife are a major concern. In particular, the cumulative impacts of development on deer herds and sage grouse are a concern throughout the county.
5	Resource management agencies have given special status to a number of plant and animal species that are known or expected to occur in the county. In addition, a number of locally significant species have been identified. The protection of these species is a concern.
6	Endangered and threatened species, and their associated listings under the Endangered Species Act (ESA), are becoming a greater concern in Mono County. These species are valuable to Mono County, directly contributing to the local economy and recreational aspects, and representing healthy natural resources and landscape that is critical to quality of life.
7	ESA listings often cause an immediate fear of overregulation and a sense that community needs are incompatible with species conservation. However, Mono County has recently been successful cooperating with conservation partners to preclude a listing because of adequate species protection, demonstrating human activity can be compatible with species conservation. Even when the County does not directly participate in conservation efforts, utilizing best-available science to meet both conservation and community needs is in the County's best interest.
8	A number of agencies are involved in wildlife resource management in the county, including the USFS, BLM, CDFW, and the US Fish and Wildlife Service. Each of these agencies has jurisdiction over certain aspects of the protection and enhancement of wildlife habitat and local wildlife populations. The County must work with these agencies and other agencies that are responsible for other areas of resource management, such as the Natural Resource Conservation Service (NRCS), Lahontan Regional Water Quality Control Board, and the USACE.
9	The protection and enhancement of streams, wetlands, and riparian areas is a critical element in preserving and restoring water quality and water supply, and addressing ecological functions such as erosion, sedimentation, fire risk, and wildlife habitat. Increased development, recreation, and water development and/or extraction has the potential to impact the long term health of these ecological communities.

The *Conservation Element* also provides goals, policies and actions to resolve identified constraints and opportunities. Table 5.3-7 lists goals, objectives and policies that are relevant to the proposed Tioga Workforce Housing project.

**TABLE 5.3-7. Biological Resource Protection Policies of the Mono County
Conservation and Open Space Element of the General Plan**

Goals, Objectives and Policies	Project Status
GOAL 2. Maintain an abundance and variety of vegetation, aquatic and wildlife types in Mono County for recreational use, natural diversity, scenic value, and economic benefits.	
Objective 2.A. Maintain and restore botanical, aquatic and wildlife habitats in Mono County.	
Policy 2.A.1. Development projects shall avoid potential significant impacts to animal or plant habitats or mitigate impacts to a level of non-significance, unless a statement of overriding considerations is made through the EIR process.	Mitigation measures are provided in §5.3-6 of this DSEIR to reduce potential project impacts on plant and animal habitats to less than significant levels.
Policy 2.A.2. Protect and restore threatened and endangered plant & animal species and their habitats.	As described in the Project Description, Specific Plan and other sections of this EIR, the project design and mitigation measures focus on resource protection and restoration. As described in this EIR §5.3-6, relevant mitigation measures include shrubland revegetation, rockcress protection, surveys for nesting birds and denning badgers, and specific design and operational measures to minimize predation by domestic pets.
Policy 2.A.3. Protect and restore sensitive plants, wildlife and their habitat, and those species of exceptional scientific, ecological, or scenic value.	
Policy 2.A.6. During construction, utilize soil conservation practices and management techniques to conserve naturally occurring soils.	EIR §5.2-6 (Hydrology) describes project elements that meet the County's voluntary Low Impact Development ('LID') standards. LID features include natural drainage controls, use of pervious materials, onsite flow retention, infiltration, separate of road and pathway runoff, cluster design, vegetation retention

Ordinances pertaining to environmental protection are contained in Title 16 of the Mono County Code. As stated in Chapter 16.04.010. The purpose of Title 16 is to "implement the requirements of the California Environmental Quality Act of 1970, as amended (Public Resources Code Sections 21000—21174), and the Guidelines for Implementation of the California Environmental Quality Act of 1970 adopted by the Secretary for Resources of the state. (Ord. 73-436 §1, 1973)." Chapter 16.04 includes provisions that (1) require compliance by all county offices and departments, (2) incorporate the CEQA Guidelines as adopted by the California Secretary for Resources, (c) require that measures be imposed to mitigate impacts of discretionary actions and allow use of Overriding Considerations by the Board of Supervisors, and (d) clarify that provisions of Chapter 16 shall govern in the event of a conflict with other regulations. This Draft Subsequent EIR is prepared in conformance with the requirements of the Mono County Code provisions.

The Mono County General Plan Final EIR notes that the County does not have and is not at this time proposing a formal tree preservation policy. The EIR also notes that several Mono County communities have large native trees that may be vulnerable to development; Lee Vining is not among the communities so identified. Trees are a relatively minor component of the native vegetation on this site, occurring in Big Sagebrush Scrub as scattered Jeffrey pines or singleleaf pinyon. The only other trees that were noted within the study area are the numerous sapling to mature-sized quaking aspen that have been planted into irrigated landscape areas around existing roads and buildings. Riparian zone dominant trees that are present within the nearby Lee Vining Creek riparian zone are otherwise absent from the habitat occupied by Big Sagebrush Scrub, which is entirely upland in character. Native pines near 10% canopy closure only in one small patch north of the existing workforce housing, in a steeply sloping area where relatively high floral diversity including one special status plant species was observed.

In summary, the project will not conflict with local policies or ordinances to protect biological resources. No supplemental measures are required to support the mitigations elsewhere in this EIR, as noted.

MITIGATION MEASURES – TREE PROTECTION ORDINANCES AND POLICIES

BIO 5.3(e) (Tree Protections): No impacts have been identified, and no mitigation measures are required.

IMPACT BIO 5.3(f): Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

NO IMPACT: There are currently no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans in Mono County. USFWS and LADWP have entered into a formal process to address threatened and endangered species and their habitat on all Los Angeles-owned lands throughout the Owens River Valley in Inyo County, but this is well south of the project area and the HCP for that area has not been completed or finalized. The project would not conflict with provisions of any Habitat Conservation Plans, Natural Community Conservation Plans, or other approved conservation plans, and no mitigation measures are required.

MITIGATION MEASURES – HABITAT CONSERVATION

BIO 5.3(f) (Habitat Conservation): No significant impacts to habitat conservation efforts have been identified, and no mitigation measures are required.

5.3.6 SIGNIFICANCE AFTER MITIGATION

The intent to collaborate with Mono County on a Sustainable Communities grant application would, if successful, address concerns regarding the potential for this project to result in increased unsafe deer crossings in the vicinity of US 395 and SR 120. However, only Caltrans has authority to create a deer passage along US 395. There is no assurance that Caltrans would undertake this measure, nor can it be assured that the grant application will be successful. The potential for increased deer mortality due to a project-related increase in unsafe highway deer crossings is therefore considered to be a ***significant and unavoidable adverse project impact***. Implementation and enforcement of mitigation measures recommended above would reduce all other potential project impacts on biological resources to ***less than significant levels***.

TIOGA WORKFORCE HOUSING PROJECT DRAFT SUBSEQUENT EIR



SECTION 5.4 CULTURAL & TRIBAL CULTURAL RESOURCES

5.4.1 INTRODUCTION AND SUMMARY

Cultural resources encompass archaeological, historical and tribal resources, including but not necessarily limited to buildings, structures, objects, districts, and sites. Paleontological resources have also long been part of this section, but were incorporated under Geologic Impacts as part of the most recent CEQA Update in December 2018; paleontological resources are still addressed in this section, but also referenced in §5.1 (Geology) to reflect the recently amended CEQA Guidelines. This EIR section summarizes the results of a thorough Archaeological Survey and analysis prepared by Trans Sierran Archaeological Resources (TSAR). A redacted version of the TSAR report is provided in full as EIR Appendix J1; the report findings and recommendations are summarized in this section.

One NOP comment letter addressed issues pertaining to cultural resources: the Mono Lake Committee requested that the EIR analyze project impacts in terms of the Mono Basin Community Plan goals and policies for protection of historical resources. Key findings of the §5.4 cultural impact analysis are summarized in the table below.

SUMMARY OF IMPACTS & MITIGATIONS FOR CULTURAL RESOURCES	
IMPACT CULT 5.4(a):	IMPACTS TO PREHISTORIC OR HISTORICAL RESOURCES
Mitigations:	Construction Plan Statement and Process if Archaeological Resources are Found
Residual Significance:	Less than Significant
IMPACT CULT 5.4(b):	IMPACTS TO PALEONTOLOGICAL RESOURCES
Mitigation 5.4(b-1):	Construction Plan Statement and Process if Paleontological Resources are Found
Residual Significance:	Less than Significant with Mitigation
IMPACT CULT 5.4(c):	IMPACTS TO HUMAN REMAINS, SACRED LANDS
Mitigation 5.4(c-1):	Tribal Notification, Right to Monitor, Construction Plan Statement and Process if Tribal Resources found during construction
Residual Significance:	Less than Significant with Mitigation

5.4.2 KEY TERMS USED IN THIS SECTION

Prehistoric, Protohistoric, and Historic. ‘Historic’ refers to recorded events of the past. ‘Protohistoric’ is a period during which a culture has not yet developed writing, but other cultures have noted its existence in their own writings. ‘Prehistoric’ (a term not often used today) refers to events prior to the existence of written records.

Sacred Lands. A place in the landscape that is especially revered by a people, culture or cultural group as a focus for spiritual belief and practice and likely religious observance.¹

Tribal Cultural Resource. CEQA was expanded in 2014 to include tribal cultural resources among the categories of cultural resources evaluated in CEQA. Tribal cultural resources are defined as (1) “sites, features, places cultural landscapes, sacred places and objects with cultural value to a California Native American tribe” that are included in or

¹ Definition obtained from *Sacred Lands* at <http://www.sacredland.org/home/resources/tools-for-action/protection-strategies-for-sacred-sites/what-is-a-sacred-site/>

eligible for the state register, or included on a local register; or (2) resources determined by the lead agency, in its discretion, to be significant based on the criteria for listing in the state register.

5.4.3 OVERVIEW OF BASELINE CONDITIONS

5.4.3.1 Historical Background

When Euro-Americans first entered Mono Basin in the mid-nineteenth century, the area was occupied by the Kuzedika'a² (also known as the Mono Lake Paiute). They and their ancestors have lived in the area since time immemorial. The tribe's economy during the protohistoric and historic periods was based on hunting, gathering, and trade, and people moved seasonally to collect a wide variety of resources. Earlier economies may have depended more on specialized hunting and trade. The project area is located near or adjacent to dryland seed sources, pinyon groves, a deer migration route, and Native American trade and travel routes.

Lt. Tredwell Moore "discovered" Mono Basin in 1852 when he led a punitive expedition against the Yosemite Miwok. Following Moore's entry into the basin, gold was discovered; the towns of Dogtown, Monoville, and Aurora were built and later abandoned as gold deposits were depleted. One of the residents, Lee Vining, erected a sawmill along the creek that now bears his name to supply lumber to mining camps.

In the 1860s Euro-American settlers began establishing farms and ranches along the lower stretches of eastern Sierra streams, growing hay, alfalfa, wheat, barley, and oats, and raising cattle, sheep, and horses. The Kuzedika'a were forced out of favorite spring and summer camps, and the newcomers cut pinyon trees, a principle Paiute food source, for fuelwood. To survive, the Kuzedika'a adapted to the white farmers' and miners' economy, first trading traditional items like game and baskets, and eventually labor. At the same time, the Kuzedika'a continued many of their food-gathering and other traditions well into the twentieth century.

A major gold strike at Bodie in 1877 brought new waves of miners to the basin. Numerous mining districts were formed, and the Mono/Mammoth Toll Road was completed by 1880 along an alignment that may be the same as the dirt road that enters the northeast corner of the Tioga project area. Four thousand acres were being farmed in the Mono Basin by the 1890s, including 2 farms east of the project area. The 1901 Mt Lyell USGS topographic map depicts a ditch running through the Tioga parcel that was part of the Lee Vining ditch system. This feature is recorded as historic site CA-MNO-2764H. By the mid-1930s most of the Mono Basin farms were purchased by the City of Los Angeles for water rights.

The town of Lee Vining was founded in the 1920s by Chris Mattly, who subdivided his ranch and sold the lots beginning in 1926. The recently completed road over Tioga Pass brought new business into Lee Vining. The "Old County Road" from Bridgeport to Casa Diablo Hot Springs (recorded as CA-MNO-2761H) was aligned east of the current US 395, roughly following the earlier Mono Lake and Lake District Toll Road. In 1936, US 395 was constructed through what is now the Tioga Inn project area. The Tioga Pass road was realigned to its current location in 1970, and US 395 had been widened to four lanes by the early 1990s.

5.4.3.2 Previous Investigations/Records Review

When the project site was surveyed in 1984 (as part of the 1993 project review), one historic site and ten isolated artifacts were recorded. The historic site consisted of irrigation ditches and trash dumps; research suggested that the ditches could be late-nineteenth century or early-twentieth century, but the dumps were likely post-1900.

A December 2016 records search conducted by the Eastern Information Center of the California Historical Resources Information System indicated that 15 other cultural resources studies had been conducted within a half-mile radius of the project area. Ten of these studies included portions of the project area. Although some of the studies related to SCE utility and hydroelectric projects, most of the studies were conducted for the US 395 widening project.

² The spelling of 'Kuzedika'a' varies and includes the spelling used herein, as well as 'Kuzedika,' 'Kuzadika,' 'Kutzedika'a,' 'Kutzedika' and possibly other spellings as well.

Thirteen cultural resources properties have been recorded within a half-mile radius of the project area. The properties include Native American and Euro-American artifact scatters and features, with artifacts indicating use from as early as ca. A.D. 600 into the twentieth century. Only one of these properties (the ditches first recorded in the original survey for the Tioga Inn project), extends into the project area. The ditches are part of a system that took water from Lee Vining Creek to irrigate agricultural fields to the east and south of the Tioga Inn project area.

For the US 395 widening project, the ditch system was recorded as CA-MNO-2764H, and extensive historical research was conducted to determine whether the site was eligible for the California Register of Historical Resources (CRHR) or the National Register of Historic Places (NRHP). The upper ditch conveyed water from Lee Vining Creek northeasterly and then southerly along the hillside to the settlement of Crater on the Jake Mattly Ranch, and fields further south. The ditch was apparently constructed in the 1890s, when it brought water to various ranches along its route, and was abandoned sometime after the water rights of Lee Vining were acquired by Southern Sierras Power Company and its subsidiary, the Cain Irrigation Company.

Another part of the ditch system conveyed water southerly from Lee Vining Creek from a point slightly below the ditch described above. This water was dispersed into fields east of the present US 395 through a system of lateral irrigation ditches. This ditch was likely constructed in the early 1920s after the Cain Irrigation Company obtained control of most of the water rights in the area. This ditch appears on a 1934 map of the Cain Irrigation Company, which sold all its holdings and water rights to the City of Los Angeles in the mid-1930s. The ditch was abandoned sometime around 1970, when the second Los Angeles Aqueduct was completed. The southern segment of the ditch, south of Gibbs Creek, was utilized into the late twentieth century. In this last period of use, this ditch was charged with water from the Gibbs Siphon and used to irrigate lands leased by the LADWP to the Mono Sheep Company.

CAMNO-2764H was determined ineligible for inclusion on the NRHP or the CRHR in 1996.

5.4.3.3 Paleontology³

Limited information is available about paleontological resources in Mono County. The Mono County General Plan EIR references an undated UCLA study that found data indicating that a marine environment existed prior to and during the initiation of volcanic activity in the Early to Middle Triassic era. This finding is supported by a USGS study that concluded (based on drill cores and cuttings in the Long Valley Caldera) that *"paleontologic and isotopic data indicate that the change in secondary minerals with increasing depth is due to the older strata being deposited in a more saline environment."* Similarly, a study conducted by Caltrans in the area of Mono Lake concluded that although the Caltrans project site had no paleontologic sensitivity, geologic maps and literature indicate that numerous vertebrate fossils have been found in Trench Canyon (north of SR 167 near the Nevada border). A 2009 study by USGS and the Smithsonian Institution found fossil evidence of a small clam (the Mactrid bivalve) that requires an estuarine-like salinity regime for successful reproduction and recruitment, as well as fossil evidence of avian-assisted colonization of the Mono Basin.

5.4.3.4 Mono County Sacred Lands

No specific sacred sites or lands have been identified in the project area; however, tribal communities carefully guard information concerning sacred sites. Planning efforts conducted for nearby public land administered by the Inyo National Forest have indicated that traditional gathering areas as well as indigenous archaeological sites may have religious and cultural significance to Native American tribes in the area. The Native American Heritage Commission (NAHC) has stated⁴ that items in the NAHC Sacred Lands Inventory are confidential, and exempt from the Public Records Act (CGC §6254(r)). NAHC recommended that early consultation with Native American tribes in the project area is the best way to avoid unanticipated discoveries of cultural resources, burial sites and historic sites with religious and cultural significance.

³ Information in this section is drawn from the Mono County General Plan Draft EIR, §4.7, July 2015: https://monocounty.ca.gov/sites/default/files/fileattachments/planning_division/page/8022/2_draft_eir_with_appendices_7.31.15.pdf

⁴GBUAPCD, Draft EIR/EIS for Casa Diablo IV Geothermal Development Project, 21 November 2012: http://www.blm.gov/style/medialib/blm/ca/pdf/bishop/casa_diablo_40.Par.4399.File.dat/cd4_final_eir_volume_2_appendices_g-h.pdf.

5.4.4 REGULATORY SETTING

5.4.4.1 Federal Regulations

Executive Order 13007, Indian Sacred Sites (1996). This Executive Order requires agencies that manage federal lands to “*accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and avoid adversely affecting the physical integrity of such sacred sites.*” The Order directs federal agencies to report to the President on procedures implemented or proposed to ensure that tribal members have safe access to sacred sites for cultural and religious purposes.

The National Environmental Policy Act. NEPA states explicitly that it is a national policy to “preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity and variety of individual choice.” NEPA requires that any major federal actions significantly affecting the quality of the human environment be preceded by a detailed analysis of the impacts of the proposed action with the findings reported in an Environmental Impact Statement (EIS).

National Historic Preservation Act (NHPA, 1966). This Act requires federal agencies to consider the effects of proposed funding or permit actions on properties that may be eligible for or listed on the National Register of Historic Places. All cultural sites that may be affected must be inventoried and evaluated for NHPA eligibility. Properties that qualify for listing must meet at least one of the following criteria: 1) association with an event that has made a significant contribution to broad patterns of history; 2) association with significant persons in our past; 3) characteristic of a distinctive type, period, method of construction, or master, or containing high artistic value; and/or 4) offering information important to history or prehistory.

Native American Graves Protection and Repatriation Act of 1990 (NAGPRA). NAGPRA provides a process for museums and federal agencies to return certain Native American cultural items (such as human remains, funerary objects, and sacred objects) to descendants and culturally affiliated Indian tribes and Native Hawaiian organizations. NAGPRA includes provisions for unclaimed and culturally unidentifiable items and for inadvertent discovery of Native American cultural items on federal and tribal lands, and sets penalties for noncompliance and illegal trafficking.

American Indian Religious Freedom Act of 1978 (AIRFA). AIRFA was created to protect and preserve the traditional religious rights and cultural practices of American Indians, Eskimos, Aleuts and Native Hawaiians, including access to sacred sites, repatriation of sacred objects in museums, freedom to worship, and use and possession of sacred objects.

The Archaeological Resources Protection Act of 1979 (ARPA). The intent of ARPA is to preserve and protect archaeological resources on public and tribal lands. ARPA includes a permitting process and mandates consultation with local tribes prior to the initiation of research on tribal lands or involving Native American archaeological resources.

Antiquities Act of 1906. The Antiquities Act was the first piece of federal legislation to protect cultural resources. The act allowed the president or Congress to create national monuments from federally owned land and restrict uses such as mining and grazing. The act also set punishments for those caught looting cultural resources in national monuments. Finally, the act restricted who could conduct research, helping to define the profession of modern archaeology.

Historic Sites Act of 1935. This act better organized federally owned properties and gave the federal government authority to carry out many historic preservation activities, including surveying and noting significant historic sites, a precursor to the National Historic Landmark Program.

5.4.4.2 State Regulations

CEQA and California Register of Historic Resources (CRHR). PRC §15064.5 defines “historical resources” as any resource that is: a) listed in, or determined by the Historical Resources Commission to be eligible for listing in, the California Register of Historical Resources, b) included in a local register of historical resources, c) determined to be historically significant, provided the lead agency’s determination is supported by substantial evidence; and d) consistent with CRHR listing criteria, which include: 1) associated with events that have made a significant contribution to broad patterns of California’s history and cultural heritage; 2) associated with the lives of persons important in our past; 3)

embodies distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; and/or 4) likely to yield information important in prehistory or history. An archeological site that does not meet the definition of an "historical resource," but does qualify as a "unique archeological resource" may still be treated as a significant resource if it meets certain additional criteria (important to science, possessing a unique and special quality, directly associated with an historic or prehistoric event).

California Native American Historical, Cultural, and Sacred Sites Act. This act, which applies to both state and private lands, establishes procedures in the event human remains are discovered. Upon such discovery, the activity must cease and the county coroner be notified. If the remains are of a Native American, the coroner notifies the NAHC, and NAHC then notifies those persons mostly likely to be descended from the Native American remains. The descendants may, with the permission of private landowners, inspect the site and make recommendations for treating or disposing of the remains and associated grave goods; the inspection must occur within 24 hours of NAHC notification. Additional provisions set guidelines for removal, or if the process fails in identifying remains, or if the landowner objects to the recommendations. The act directs NAHC to inventory Native American sacred places on public lands, and makes it a felony crime for anyone to knowingly or willfully possess or obtain any Native American artifacts or human remains from a Native American grave or cairn after January 1988.

Tribal Consultation and Tribal Cultural Resources (AB52 of 2014). Assembly Bill 52 (AB 52) requires that tribal cultural resources be considered under the California Environmental Quality Act. Tribal cultural resources often include archaeological sites, and can also include places, objects, sites, or landscapes that are not discernible to (or adequately evaluated by) archaeologists. The consultation process is intended to obtain otherwise undocumented information and concerns that should be considered in the environmental analyses. Tribal cultural resources include (1) "sites, features, places cultural landscapes, sacred places and objects with cultural value to a California Native American tribe" that are included in the state register of historical resources or a local register of historical resources, or that are determined to be eligible for inclusion in the state register; or (2) resources determined by the lead agency, in its discretion, to be significant based on the criteria for listing in the state register. Under AB 52, a project that may cause a substantial adverse change in the significance of a tribal cultural resource is defined as a project that may have a significant effect on the environment. Where a project may have a significant impact on a tribal cultural resource, the environmental document must discuss the impact and identify feasible alternatives or mitigations to avoid or lessen the impact.

Mills Act. The Mills Act is a state law allowing cities to enter into contracts with the owners of historic structures. Such contracts require a reduction of property taxes in exchange for the continued preservation of the property. Property taxes are recalculated using a formula in the Mills Act and Revenue and Taxation Code. If the act is authorized, a property must be listed on an official historic register and can then enter into a contract with local government that will calculate property taxes based upon income potential rather than assessed market value.

Senate Bill 18 (SB 18). SB 18 requires local governments to consult with tribes prior to making certain planning decisions and to provide notice to tribes at certain key points in the planning process. SB 18 states that prior to the adoption or amendment of a general plan or specific plan, or designation of open space land proposed after March 2005, the city or county must consult with California Native American tribes for the purpose of preserving or mitigating impacts to Cultural Places. PRC §5097.9 and 5097.995 define a Cultural Place as a Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine or a Native American historic, cultural, or sacred site, that is listed or may be eligible for listing in the California Register of Historic Resources, including any historic or prehistoric ruins, any burial ground, or any archaeological or historic site. The intent of SB-18 is to establish early and productive consultation between tribal governments and local governments so that cultural places can be identified, preserved and protected through appropriate confidentiality of sensitive information about Cultural Place locations and uses.

The California Historical Resources Information System (CHRIS). CHRIS provides historical resources information to local, state and federal agencies, Native American tribes, the public, and individuals with responsibilities under CEQA, NEPA and the NHPA. CHRIS comprises 10 separate Information Centers (ICs), the California Office of Historic Preservation (OHP), and the State Historical Resources Commission (SHRC). OHP administers and coordinates CHRIS and presents proposed CHRIS policies to the SHRC, which approves these policies in public meetings. The CHRIS data base includes the State Historic Resources Inventory and numerous resource records and reports. The University of California at Riverside is Mono County's IC. Known as the Eastern Information Center, this office integrates data for all

known historic resources in the region, supplies information to agencies as needed and maintains a list of consultants qualified to work in the region.

5.4.4.3 Local Regulations

County Historic Preservation Legislation. Several counties have adopted local historic preservation ordinances establishing policies for preserving and protecting cultural resources. These ordinances establish a county Heritage Board, Historic Preservation Commission or Cultural Resources Commission, which researches and records county historical resources and make historic landmark designations. The board or commission also advises the County Board of Supervisors on the preservation and protection of cultural resources. Mono County General Plan policies call for developing such an ordinance and establishing a commission.

Mono County General Plan. One of the goals of the Mono County General Plan is to identify, preserve, restore, and interpret cultural resources in the County. Policy 22.C.1 states that "Future development projects shall avoid potential significant impacts to cultural resources or mitigate impacts to a level of non-significance, unless a statement of overriding considerations is made through the EIR process."

Mono Basin Community Plan. The June 13, 2012, final draft of the Mono Basin Community Plan recognizes that cultural resources can contribute to the social, cultural, environmental, and economic well-being of the community. Objective C of the Plan is to "preserve, protect, and restore (where appropriate) the cultural resources of Mono County." Policies and Actions stipulated to achieve this objective include requiring project applicants to fund an analysis of potential impacts to cultural resources, and avoiding or mitigating impacts to cultural resources to a level of non-significance, unless a statement of overriding considerations is made through the EIR process.

5.4.5 SIGNIFICANCE CRITERIA

Appendix G of the California CEQA Guidelines offer the following three criteria for determining the significance of RTP/General Plan Update impacts to cultural resources. A project would have a potentially significant impact on cultural resources if it would:

- a) Cause a substantial adverse change in the significance of a prehistorical or historical resource per §15064.5?
- b) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?
- c) Disturb any tribal cultural resources or sacred lands, or human remains including those interred outside of formal cemeteries?
- d) Would the project cause substantial change in the significance of a tribal cultural resource (i.e., a site, feature, place, cultural landscape that is geographically defined in terms of size and scope), landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: (i) Listed or eligible for listing in the California Register of Historical Resources, or in the local register of historical resources as defined in PRC §5020.1(k), or (ii) Determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC §5024.1, with consideration of the resource significance to a California Native American tribe?

5.4.6 ENVIRONMENTAL IMPACTS AND MITIGATING POLICIES AND ACTIONS

IMPACT CULT 5.4(a): Would implementation of the proposed RTP/General Plan Update cause a substantial adverse change in the significance of a prehistorical or historical resource as defined in §15064.5?

LESS THAN SIGNIFICANT IMPACT. As discussed further in EIR §5.5 (Land Use), both the *Mono Basin National Forest Scenic Area Management Plan* and the *Mono Basin Community Plan* incorporate goals and policies pertaining to cultural resources, as shown in Table 5.4-1.

TABLE 5.4-1. Cultural Resource Goals and Policies of the <i>Mono Basin National Forest Scenic Area Management Plan</i> and <i>Mono Basin Community Plan</i>
Mono Basin National Forest Scenic Area Management Plan, Guidelines for Inyo National Forest Lands
<p>CULTURAL RESOURCES GOAL: Identify, evaluate, protect, and interpret the cultural and historic resources of the Scenic Area.</p> <ul style="list-style-type: none"> • Consult with local American Indian groups to insure protection of, and access to, traditional secular, religious, and ceremonial sites. • Assess & authorize appropriate requests by local American Indians for traditional and religious uses of National Forest System lands. • Consult with State Historic Preservation Officer and nominate appropriate cultural/historical sites to the National Register. • Identify data and research efforts needed to develop more efficient inventory, evaluation, protection, compliance processing. • Encourage and support in-service and private sector efforts to address these needs. • Develop and implement appropriate management plans and strategies. • Foster active research programs by issuing antiquity special-use permits, cooperative agreements, and volunteer agreements. • Document inventories, site evaluations, impact assessments & mitigations in EAs/EISs for Forest initiated/authorized/licensed activities. • Treat Class II properties as if they were Class I until they are evaluated.⁵ • Maintain the confidentiality of cultural resource site locations for their protection. • Avoid cultural resource damage during fire suppression activities, and provide protection for known cultural resource values. • Interpret cultural resources for the benefit of the public. • Develop and implement strategies, including road closures, for the protection of cultural sites.
Mono Basin Community Plan
<p>Objective 10.D: Maintain, protect and enhance the natural, historical and recreational attributes of the Mono Basin.</p> <p>Policy 10.D.1: Coordinate with public agencies and other land-management organizations, such as the BLM, USFS, LADWP, CDFG, and U.S. Fish and Wildlife Service, to understand local policies and engage locals in the management of their lands.</p> <p> <i>Action 10.D.1.a:</i> Request that resource agencies present information to and work with the Mono Basin RPAC and the community as public resource management issues arise.</p> <p>Policy 10.D.2: Support existing General Plan policies in the Cultural Resources section, Conservation/Open Space Element.</p> <p> <i>Action 10.D.2.a:</i> Implement Objective B, Policy 1 and the associated actions to identify and inventory cultural and historic resources in the Mono Basin.</p> <p> <i>Action 10.D.2.b:</i> Implement Objective C, Policy 1 and the associated actions to preserve, protect and restore (where appropriate) the cultural and historic resources of Mono County.</p> <p> <i>Action 10.D.2.c:</i> Identify any cultural and historic resources that should be recognized and protected via registration with the State and/or National Register of Historic Places.</p> <p> <i>Action 10.D.2.d:</i> Consult the Kutzadika's Mono Lake Indian Community on potential impacts to cultural and historic resources as described in Govt. Code §65352.3, which outlines local government requirements for tribal consultation.</p> <p>Policy 10.D.3: Support recreational activities and the ability to use and enjoy the land while protecting the natural environment.</p> <p> <i>Action 10.D.3.a:</i> Identify recreation activity and access priorities, and work toward implementation.</p> <p> <i>Action 10.D.3.b:</i> Coordinate with land management and transportation agencies, such as the BLM, Caltrans, ESTA, YARTS, USFS and LADWP, to ensure adequate access and responsible use.</p> <p> <i>Action 10.D.3.c:</i> Ensure new development does not impede, & preferentially enhances, existing recreation access and activities.</p> <p>Policy 10.D.4: Review & discuss Conway Ranch operations including history, allowable uses, current uses & potential opportunities.</p> <p> <i>Action 10.D.4.a:</i> Support aquaculture and other historic uses, such as sheep grazing and agriculture.</p> <p> <i>Action 10.D.4.b:</i> Support facilities and infrastructure facilitating aquaculture and other historic uses, such as sheep grazing, agriculture, and the restoration of historic buildings.</p> <p> <i>Action 10.D.4.c:</i> Support the full allotment of water to Conway Ranch.</p> <p>Policy 10.D.5: Initiate a community conversation about upland water management.</p> <p> <i>Action 10.D.5.a:</i> Convene RPAC and community members to draft a proposal to the LADWP requesting the irrigation of Thompson Meadow and explaining the benefits to LADWP.</p> <p> <i>Action 10.D.5.b:</i> Support community conversations and planning efforts regarding issues such as Mill and Wilson creeks, and various ranches and meadows, for example Cain Ranch and Dechambeau Ranch.</p>

⁵ Mary Farrell of Trans Sierran Archaeological Resources ("TSAR"), Cultural Resource consultant on this project, suggested that this verbatim clause be further clarified as follows: Treat Class II properties (i.e., those that have not yet been evaluated for National Register eligibility) as if they were Class I properties (i.e., eligible for the National Register).

Policy 6: Work with government and private property owners to create recreational trail segments connecting population centers with attractions and recreation access points.

Action 10.D.6.a: Identify trail segments that are supported by the community, and implement trail development.

Action 10.D.6.b: Identify & consider impacts to historic lifestyles and existing uses of any potential trail, and consult with the Kutzadika Tribe in particular.

As shown in Table 5.4-1, cultural resource goals outlined in the *Mono Basin National Forest Scenic Area Management Plan* focus on consultation with local American Indian groups, ensuring the confidentiality of resource locations, and providing protection for cultural resource values. Objectives outlined in the *Mono Basin Community Plan* focus on the identification and inventory of cultural resources, the preservation of cultural resources, State and/or Federal registration of eligible resources, consultation with local tribes consistent with State law, and consideration of historic lifestyles and land uses. As described below, these applicable goals and objectives have been implemented for the proposed project.

A comprehensive Cultural Resource analysis was prepared for the proposed project by Trans Sierran Archaeological Resources (TSAR). A redacted version of the TSAR report is provided as EIR Appendix J1; results are summarized below

The project site was surveyed on 25 November 2016 to assess whether additional archaeological sites had been exposed (since the earlier survey in 1984) by ground disturbance associated with erosion or development. Flat areas were inspected with parallel pedestrian traverses approximately 20m apart, with special attention to the proposed employee housing areas and more cursory inspection of steep slopes. Ground visibility was generally very good. Artifacts and features were plotted and photographed, and the surrounding area was examined carefully to determine if the artifact or feature was part of an archaeological site.

Eleven isolates were encountered, including four outside of the project area. The isolates consisted of a single artifact (such as an obsidian flake or tin can fragment) or, in one case, the stump of a logged tree. In addition, portions of the Lee Vining Ditch System and associated trash (CA-MNO-2764H) were noted. These were not recorded in detail because the site has already been recorded thoroughly and determined to be less than significant and ineligible for the California Register of Historical Resources or the National Register of Historic Places.

The California Office of Historic Preservation (2016) lists four criteria for designation as an 'historic resource':

1. Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.
2. Associated with the lives of persons important to local, California or national history.
3. Embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values.
4. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

In addition, any resource that is eligible for the National Register of Historic Places, which has very similar criteria, would be considered a historic resource under CEQA.

The Lee Vining ditch system (CA-MNO-2764H, which crosses the project area), has previously been determined to be ineligible for the California Register of Historic Places and National Register of Historic Places. None of the isolates meets the criteria for eligibility for listing on the California Register of Historic Resources, and none meets the criteria for the National Register of Historic Places.

In recognition of California Native American tribal sovereignty and the unique relationship of California local governments and public agencies with California Native American tribal governments, Assembly Bill 52 requires special consideration of tribal cultural resources in CEQA analyses. PRC §21074 defines "Tribal cultural resources" as either of the following:

1. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
 - a. Included or determined to be eligible for inclusion in the California Register of Historical Resources.

- b. Included in a local register of historical resources as defined in subdivision (k) of §5020.1.
2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in §5024.1(c). In this instance, the lead agency must determine that the resource meets the criteria for listing in the state register of historic resources.

Based on the criteria listed above, and site survey results, it is concluded that there are no significant archaeological sites within the proposed Tioga Workforce Housing project area. Neither previously recorded site CA-MNO-2764H nor the isolates are significant resources that would require further consideration under CEQA. Potential impacts would be **less than significant**, and no further archaeological work is recommended. However, Mitigation Measure 5.4(a) would require that construction plans contain an advisory statement noting the potential for discovery of such resources, with procedures to be followed in the event resources are found on the site.

MITIGATION MEASURES - HISTORY

MITIGATION CULT 5.4(a). Discovery of Archaeological Resources: All construction plans that require ground disturbance and excavation shall contain an advisory statement that there is potential for exposing buried archaeological resources. The interested Tribes shall be notified by postal mail and electronic mail no less than 10 days prior to the initiation of any grading or earthwork, and are invited to observe the work at any time without compensation. In the event of the discovery of archaeological resources during construction, ground disturbance shall be suspended within a 200-foot radius of the location of such discovery until the area can be evaluated by a qualified archaeologist. Work shall not resume in the defined area until the archaeologist conducts sufficient research and data collection to make a determination as to the significance of the resource. If the resource is determined to be significant and mitigation is required, the first priority shall be avoidance and preservation of the resource. All feasible recommendations of the archaeologist shall be implemented. Mitigation may include, but is not limited to, in-field documentation and recovery of specimens, laboratory analysis, preparation of a report detailing the methods and findings of the investigation, and curation at an appropriate collection facility. Because archaeological resources are likely to also be tribal cultural resources, evaluation and recommendations shall be developed in collaboration with the Kutzedika'a Indian Community of Lee Vining and the Bridgeport Indian Colony, and the tribes shall be responsible for determining who will monitor the subsequent ground disturbance. The tribal monitor shall receive reasonable compensation for time and travel costs⁶

IMPACT CULT 5.4(b): Would implementation of the proposed RTP/General Plan Update directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?
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LESS THAN SIGNIFICANT WITH MITIGATION. No paleontological resources have been identified or reported during prior earthwork and soil testing on the project site. However, the limited available information indicates that paleontological resources are likely to be present in numerous locations throughout Mono County, most particularly in the Mono Basin where preliminary evidence points to the possibility of an inland ocean in the early to mid-Triassic period. Although no data have been found in the region or on the site that would allow a delineation of areas with the highest potential, the evidence clearly indicates a potential for adverse impacts to paleontological resources, a risk that is increased by the lack of cohesive information. Through analyses conducted for the current project as well as the 1993 project, the project is already in compliance *General Plan Conservation/Open Space Element* Objective 22, Policy 22.C.1, which requires that development projects undertake cultural resource studies through the EIR process, with mitigations are required. The county does not routinely require that paleontological assessments be conducted. However, in light of the elevated potential for paleontological resources in the Mono Basin, mitigation is provided below to guide activities in the event paleontological resources are uncovered during construction. Impacts would be **less than significant**.

⁶ Reasonable compensation shall include mileage at standard IRS rates, and an hourly fee (including monitoring and travel time) not to exceed \$40.

MITIGATION MEASURES –PALEONTOLOGICAL RESOURCES

MITIGATION CULT 5.4(b). Discovery of Paleontological Resources: All construction plans that require ground disturbance and excavation shall contain an advisory statement that there is potential for exposing buried paleontological resources. In the event of the discovery of paleontological resources during construction, ground disturbance shall be suspended within a 200-foot radius of the location of such discovery until the area can be evaluated by a qualified paleontologist. Work shall not resume in the defined area until the paleontologist conducts sufficient research and data collection to make a determination as to the significance of the resource. If the resource is determined to be significant and mitigation is required, the first priority shall be avoidance and preservation of the resource. All feasible recommendations of the paleontologist shall be implemented. Mitigation may include, but not limited to, in-field documentation and recovery of specimens, laboratory analysis, preparation of a report detailing the methods and findings of the investigation, and curation at an appropriate paleontological collection facility.

IMPACT CULT 5.4(c,d): Would implementation of the proposed RTP/General Plan Update disturb any tribal cultural resources, sacred lands, or human remains, including those interred outside of formal cemeteries? Would the project cause substantial change in the significance of a tribal cultural resource (i.e., a site, feature, place, cultural landscape that is geographically defined in terms of size and scope), landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: (i) Listed or eligible for listing in the California Register of Historical Resources, or in the local register of historical resources as defined in PRC §5020.1(k), or (ii) Determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC §5024.1(c), with consideration of the resource significance to a California Native American tribe?

LESS THAN SIGNIFICANT WITH MITIGATION. Tribes are recognized as having particular expertise to identify tribal cultural resources. Because of their proximity to the project area and their historical ties to Mono Basin, the Kutzedika'a Indian Community of Lee Vining and the Utu Utu Gwaitu Tribe of the Benton Paiute Reservation were contacted for this project. Following a request for notification under AB 52, the County sent formal AB 52 letters on 27 April 2018 to the Washoe Tribe of Nevada and California, and to the Kutzedika'a tribe. No written response was received from the Washoe or Kutzedika'a tribes. However, the Bridgeport Indian Colony informally requested to be consulted about the Tioga Workforce Housing project.

In preliminary discussions, Joseph Lent, the Tribal Historic Preservation Officer of the Bridgeport Indian Colony, indicated that ancestral burials are considered tribal cultural resources. Burials were generally located away from villages and camps, and after many decades or centuries, they are no longer marked. Mr. Lent noted that there is a possibility that one or more burials could be in the project area. Such burials, if present, would not be discernible in a pedestrian survey, but could be encountered during ground disturbance and excavation. Mr. Lent recommended that a mitigation measure be included in the EIR to require that a Tribal monitor be present during ground disturbance activities.

During January 2019, Charlotte Lange (Tribal Chairperson of the Kutzedika'a Indian Community of Lee Vining) requested a meeting with Mono County. During the meeting (also in January 2019), Ms. Lange concurred strongly with the recommendation previously suggested by Mr. Lent, and also requested that Mono County provide email notification whenever AB 52 Consultation Letters are sent.

Based on results of the Archaeological site survey and analysis, there is no evidence of ancestral burials on the project site, and no tangible basis for the monitoring mitigation requirement. Mono County contacted the Native American Heritage Commission (NAHC) for guidance in determining the best course of action; a copy of the NAHC response is provided as Appendix J2.

Because there is a possibility that one or more undocumented Native American burials could be encountered during grading and excavation, Mitigation Measure 5.4(c) was developed for the protection of tribal cultural resources. This Mitigation Measure is consistent with the California Native American Historical, Cultural, and Sacred Sites Act, and with California Health and Safety Code §7050.5 and Public Resources Code §5097.98, which regulate the treatment of human

remains discovered during construction. The measure is also consistent with written guidance provided by the Native American Heritage Commission (Appendix J). Implementation of Mitigation Measure 5.4(c) would reduce potential impacts on Tribal and cultural resources to ***less than significant levels***.

MITIGATION MEASURES –TRIBAL RESOURCES AND HUMAN REMAINS

MITIGATION MEASURE CULT 5.4(c,d). Discovery of Human Remains. No evidence of Native American burials, which are considered Tribal Cultural Resources, was found in the project area. However, unmarked Native American graves may, potentially, be encountered during ground disturbance or excavation. Because no cultural tribal resources have been identified on the project site but the potential exists for subsurface resources that cannot be seen at this time, the interested Tribes shall be notified by postal mail and electronic mail no less than 10 days prior to the initiation of any grading or earthwork, and are invited to observe the work at any time without compensation.

All construction plans that require ground disturbance and excavation shall contain an advisory statement that (1) there is potential for encountering human burials, (2) the Indian communities have been invited to observe the work at any time without compensation, (3) if human remains are encountered, all work shall stop immediately and the County shall be notified, and (4) that human remains must be treated with respect and in accordance with State laws and regulations.

In the event of the discovery of human remains at any time during construction, by either project personnel or the Tribal monitor, ground disturbance shall be suspended within a 200-foot radius of the location of such discovery and the Kutzedika'a Indian Community of Lee Vining and the Bridgeport Indian Colony shall be notified. California Health and Safety Code §7050.5 stipulates that if human remains are discovered during project work, the specific area must be protected, with no further disturbance, until the county coroner has determined whether an investigation of the cause of death is required. If the human remains are determined to be those of a Native American, the coroner must contact NAHC by telephone within 24 hours. PRC §5097.98 states that NAHC must then notify the most likely descendant community, which then inspects the find and makes recommendations how to treat the remains. Both laws have specific time frames, and PRC 5097.98 outlines potential treatment options. Representatives of the most likely descendant community shall be responsible for determining who will monitor the subsequent ground disturbance. The tribal monitor shall receive reasonable compensation for time and travel costs involved in developing recommendations for, and treating, the remains and for monitoring subsequent ground disturbance.⁷

5.4.7 SIGNIFICANCE AFTER MITIGATION

All potential project impacts associated with cultural resources on the site would be reduced to ***less than significant*** levels through adoption and implementation of the mitigation measures identified above.

⁷ Reasonable compensation shall include mileage at standard IRS rates, and an hourly fee (including monitoring and travel time) not to exceed \$40.

TIOGA WORKFORCE HOUSING DRAFT SUBSEQUENT EIR



SECTION 5.5 LAND USE, RECREATION AND PLANNING

5.5.1 INTRODUCTION

The following section describes existing and planned land uses and planning initiatives within the project area as well as recreational elements. Comments received during scoping and in response to the NOP requested that the EIR assess the project in terms of goals and policies in the Mono Basin Community Plan and the Mono Basin National Forest Scenic Area, as well as impacts on tourist businesses in Lee Vining, and seasonal use characteristics. Impacts and mitigations are summarized in the text box directly below. Please note that habitat conservation planning is addressed in EIR §5.3, Biological Resources.

SUMMARY OF IMPACTS AND MITIGATIONS	
<u>IMPACT LU 5.5(a)</u>	<u>Physically divide an established community</u>
Mitigation:	No impact; no mitigation required.
Significance:	Less than significant
<u>IMPACT LU 5.5(b):</u>	<u>Conflict with an applicable land use plan, policy or regulation</u>
Mitigation:	Less than significant; no mitigation required
Significance:	Less than significant
<u>IMPACT LU 5.5(c):</u>	<u>Impact recreational facilities or open space areas</u>
Mitigation:	Less than significant; no mitigation required
Significance:	Less than significant
<u>IMPACT LU 5.5(d):</u>	<u>Impact the acreage or function of designated Open Space</u>
Mitigation:	Less than significant; no mitigation required
Significance:	Less than significant

5.5.2 EXISTING CONDITIONS

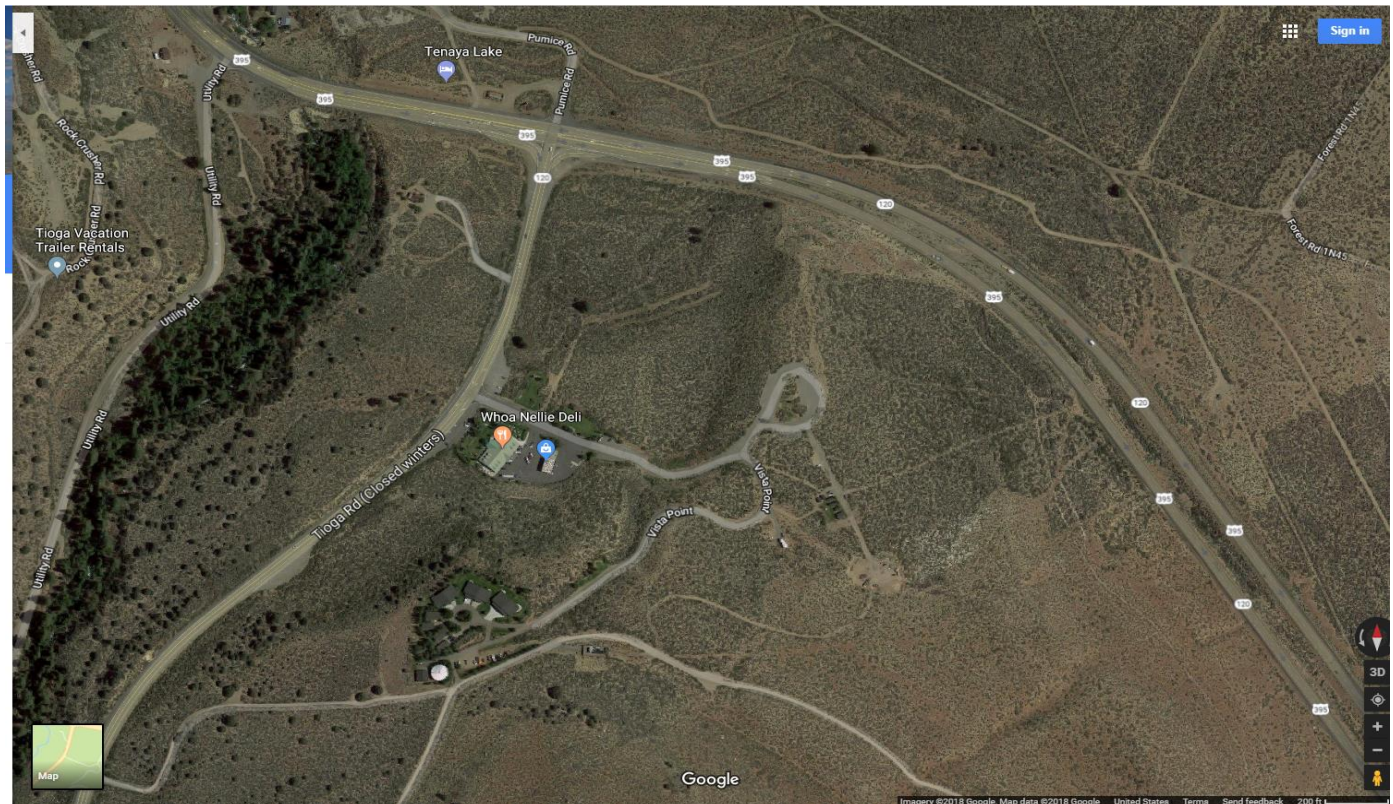
5.5.2.1 Existing Site Land Uses

The project site is located at 22 Vista Point Road, directly south of the intersection of SR 120 and US 395, and about 1/2 mile south of Lee Vining. The property is the location of the Mobile Mart and 'Whoa Nellie Deli,' established by Dennis and Jane Domaille in 1996. From a regional perspective, the site is located at roughly the midpoint between the northern Mono County boundary at Topaz Lake and the southern County boundary at Round Valley (just north of Bishop). As a whole, the County is dominated by lands that are owned by the public and managed by federal, state, and local entities; the *General Plan* estimates that 94% of the county land area is publicly owned, including 88% that is managed by federal agencies. Most privately held property is concentrated in community areas.

The Tioga property consists of four parcels, one of which (Parcel #2) is bisected by US 395. The 4 parcels total 67.8 acres of land in an overall ownership area of roughly 74 acres (including an outparcel west of SR 120). As a whole, elevations on the property generally rise from east to west. Topographically, the site is characterized by a dominant ridge that spans roughly two thirds of the property (about 7,000' elevation, marked by a flagpole) with the toe of slope (about 6,800' elevation) along the US 395 right-of-way, and a smaller but higher ridge (about 7,200', marked by the existing Tioga employee homes) on the southwest. The northwestern quadrant of the site (about 6,840', where the future hotel will be located) is characterized by a pronounced swale. There are no blue-line streams on the property.

Existing onsite features and land uses include a gas station with two islands, the Convenience Store and interior Deli (with exterior grass-planted picnic areas on the north and west sides), 8 hilltop residential units and a water storage tank located at the southern terminus of Vista Point, and several smaller residential structures and propane tank facilities and an equipment storage area just south of the promontory flagpole that overlooks US 395, with parking for automobiles, buses and larger trailer units in several locations throughout the site. The property also contains two water wells and ancillary features (both on the portion of Parcel 2 located east of US 395) that are owned and operated by the Domaille family. Exhibit 5.5-1 provides an aerial overview of the project location and onsite uses; Exhibit 5.5-2 depicts area land use designations as shown in the Mono Basin Community Plan.

EXHIBIT 5.5-1. Aerial Overview of Project Location and Existing Uses



5.5.2.2 Surrounding Land Uses

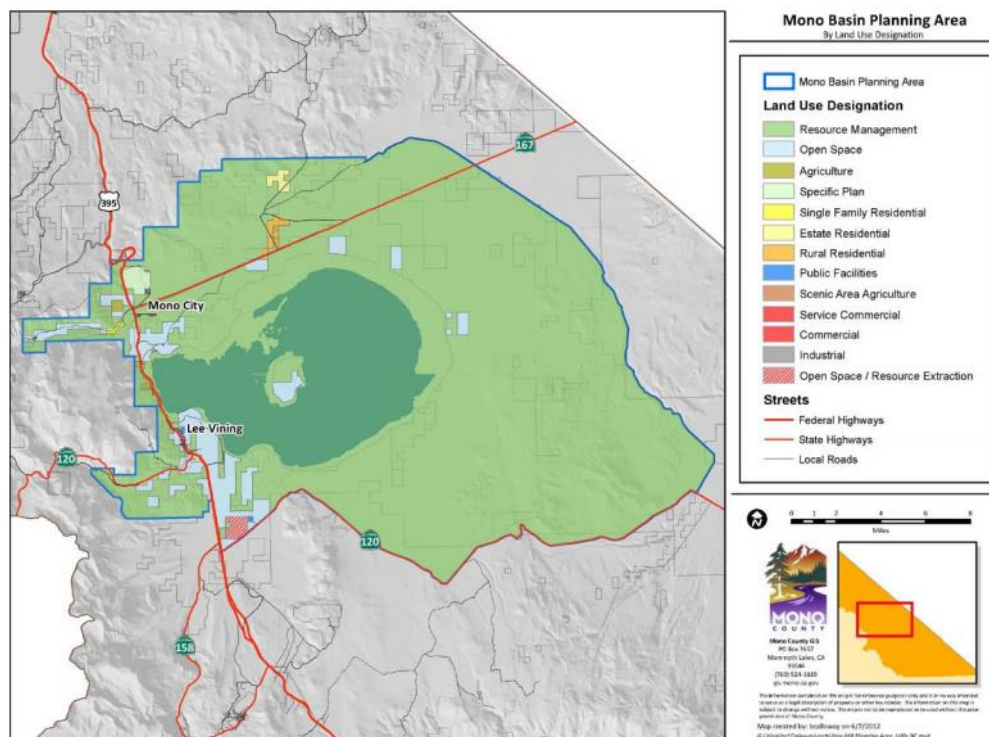
Mixed uses characterize surrounding parcels. Land to the north, east and west is owned by LADWP; adjoining acreage to the west is owned by Southern California Edison (SCE). The LADWP and SCE parcels are largely undeveloped but include a smattering of industrial uses, roads and utility improvements. The surrounding land ownership mirrors patterns in the larger region, which is dominated by public lands managed by federal and local agencies including USFS, BLM and LADWP. The extensive acreage of public land in the Mono Basin is a significant limiting factor for private enterprise and growth. Development is also limited by the number of special status species and habitats, the mule deer population, the Alquist-Priolo fault rupture hazards zone, and a designated flood zone along Lee Vining Creek.

The Mono Basin planning area as a whole encompasses the communities of Lee Vining and Mono City, as well as Basin residents that live outside of these two communities. The total population of the Mono Basin was about 446 in 2010, comprised of mainly lower-income and increasingly Hispanic residents with an emerging technology-based middle class (many of whom work from their homes).

Mono Basin Community Plan



MONO BASIN AREA PLAN MAPS



Page 10

EXHIBIT 5.5-2. Land Use Designations in the Mono Basin

The community of Lee Vining is located on US 395 along the southwest shore of Mono Lake. The town's 2016 population of 89, and 2010 population of 222, reflect continuing declines since 1990 when the population reached a peak of about 400 residents. The Town economy is largely tourism-dependent, supported by its proximity to important features including Mono Lake, SR 120 (the only east entry to Yosemite National Park), the nearby ghost town of Bodie, and many other nearby recreational and historic areas. Weather generally limits tourism to the summer months, although year-round visitation has increased in recent years. The town was named after its founder, Leroy Vining, who in 1852 established a mining camp. Mono City is a residential subdivision located north of Mono Lake, adjacent to the Mono Basin National Forest Scenic Area. Census data indicate that the 2010 was 172, up slightly from the 2000 population of 126. Like Lee Vining, Mono City is a census-designated place; it lies north of Mono Lake at the junction of US 395 and SR 167 (which leads to Hawthorne, NV).

5.5.2.3 General Plan Land Use Guidelines¹

To set the framework for development of appropriate objectives, policies and actions, the General Plan identifies and evaluates issues, opportunities and constraints that shape development potential within the unincorporated area. The analyses include identification of issues that affect the county as a whole, as well as issues that are specific to land uses in the

¹ The summary of Mono Basin issues and opportunities is drawn from the Mono County General Plan and Mono Basin Community Plan: *Mono Basin Community Plan Final Draft*, June 2012: <https://monocounty.ca.gov/rpac-mono-basin/page/mono-basin-community-plan>.

special planning areas including the Mono Basin, and those applicable to the county's Airport Land Use Plans for the airport facilities in Bridgeport, Lee Vining and Mammoth Lakes. The impact analysis in §5.5(b) evaluates the project in light of applicable issues, opportunities and constraints, as described in the *General Plan* for the county as a whole as well opportunities and constraints that have been identified for the Mono Basin (please also see Table 5.5-XX).

5.5.2.4 Mono Basin Community Plan Land Use Guidelines

The Mono Basin Regional Planning Advisory Committee (RPAC) developed the Mono Basin Community Plan to provide detailed community-based land use guidance during the General Plan update, and to facilitate implementation of local planning goals in decision-making at all levels; goals and policies in the General Plan are the same as those stated in the Mono Basin Community Plan. The Plan sets forth a vision with 6 main pillars: (1) Small, compact communities; (2) Safe, friendly communities; (3) A sustainable economy; (4) Recreation opportunities and access; (5) A healthy natural environment; and (6) Historic uses and character that recalls and re-creates the vitality, strength and character of the Mono Basin. This vision is reflected in 3 primary General Plan goals, each supported by objectives, policies and actions. Impact §5.5(b), later in this section, evaluates the project in light of issues, opportunities and constraints described in the *Mono Basin Community Plan*.

5.5.2.5 Mono Basin National Forest Scenic Area²

Established in 1984, the Mono Basin National Forest Scenic Area (MBNFSA) is the first National Scenic Area designated by congress. The designation reflected a desire to protect the geologic, ecologic, cultural, scenic, and other natural resources of the Mono Basin, while allowing a wide range of activities (recreational, scientific, and other) consistent with this goal. As shown in Exhibit 5.5-3, the project site is located adjacent to but not within the (light-green) MBNFSA boundary. The Scenic Area is part of the Inyo National Forest, and managed by the US Dept. of Agriculture, Mono Lake Ranger District.

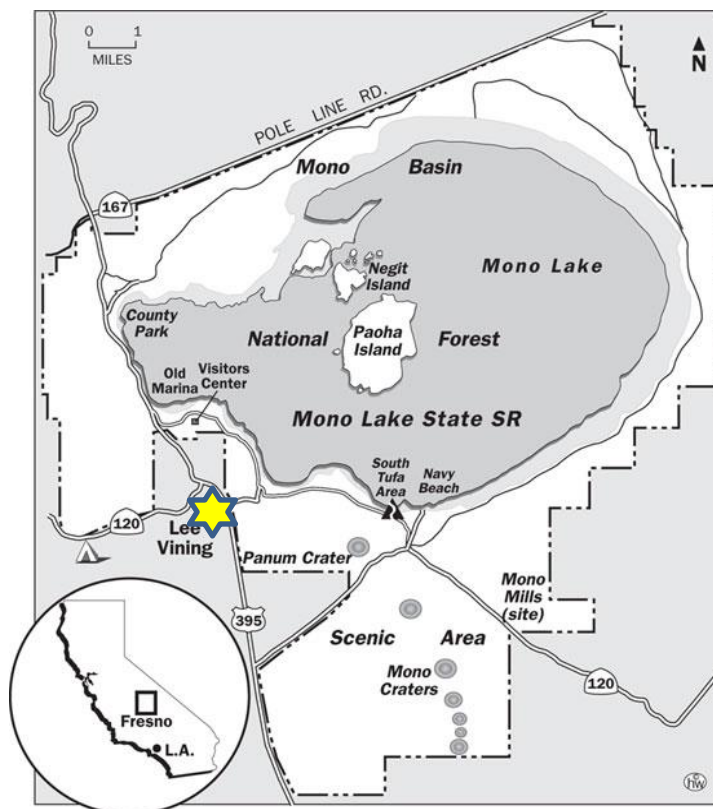


EXHIBIT 5.5-3. Mono Basin National Forest Scenic Area Boundaries (★ = Project Site)

The act required preparation of a Comprehensive Management Plan (CMP) that was subsequently completed in 1989 and remains effective to the present date. The CMP provides management direction based on various sources ranging from relevant federal laws and regulations to the Inyo National Forest *Land & Resource Management Plan*. Levels of direction include Scenic Area Goals, Legislative Direction, Forest Standards and Guidelines for Inyo National Forest as a whole, Scenic Area Standards and Guidelines, Management Prescriptions (for specific Scenic Area lands), and Action Items. For public lands in the Inyo National Forest but outside of the NFSA (including the project site), only the Forest Standards and Guidelines are relevant. The Forest Standards and Guidelines are summarized in Table 5.5-1. Although the project site is private land, and not part of the publicly owned INF, many of the prescriptions have value as guidelines for the project site and have been highlighted in Table 5.5-1.

² Mono Basin NFSA Comprehensive Management Plan, 1989: <https://www.monobasinresearch.org/images/legal/scenicareacmp.pdf>

TABLE 5.5-1. Mono Basin National Forest Scenic Area Management Plan, Guidelines for Inyo National Forest Lands (not within the Scenic Area Boundary)

AIR QUALITY – GOAL: Manage land to comply with applicable air quality regulations.

- Coordinate with the GBUAPCD when developing guidelines for management programs on the Forest.
- Obtain permits from the APCD prior to conducting prescription fire activities.
- Burn only when fuel & climatic conditions would assure rapid smoke dispersion and minimal total suspended particles/volatilized gases..
- Use dust abatement procedures during construction or other Forest activity that generates significant dust.

CULTURAL RESOURCES - GOAL: Identify, evaluate, protect, and interpret the cultural and historic resources of the Scenic Area.

- Consult with local American Indian groups to insure protection of, and access to, traditional secular, religious, and ceremonial sites.
- Assess & authorize appropriate requests by local American Indians for traditional and religious uses of National Forest System lands.
- Consult with State Historic Preservation Officer and nominate appropriate cultural/historical sites to the National Register.
- Identify data and research efforts needed to develop more efficient inventory, evaluation, protection, compliance processing.
- Encourage and support in-service and private sector efforts to address these needs.
- Develop and implement appropriate management plans and strategies.
- Foster active research programs by issuing antiquity special-use permits, cooperative agreements, and volunteer agreements.
- Document inventories, site evaluations, impact assessments & mitigations in EAs/EISs for Forest initiated/authorized/licensed activities.
- Treat Class II properties as if they were Class I until they are.
- Maintain the confidentiality of cultural resource site locations for their protection.
- Avoid cultural resource damage during fire suppression activities, and provide protection for known cultural resource values.
- Interpret cultural resources for the benefit of the public.
- Develop and implement strategies, including road closures, for the protection of cultural sites.

FACILITIES - GOAL: Maintain suitable transportation and access while protecting values of the Scenic Area. Maintain roads at assigned maintenance levels. Maintain other facilities to standards appropriate to the planned use, safety of users, and protection of resources.

- Provide distinctive non-interpretive signing only to the extent necessary to , identify the Scenic Area as a component of the National Forest System, and to provide for the safety of visitors, protection of resources, and basic directions.
- Provide additions to the transportation system for resource development.
- Provide public access to public land and developed recreation sites consistent with Forest goals and objectives.
- Reconstruct roads and regulate traffic as needed for public safety and/or resource protection.
- Eliminate concerns for public safety & resource protection through road closures, relocation, or reconstruction within available budgets.
- Maintain facilities to established standards, make them energy efficient, and/or replace them if necessary.
- Provide trails for hikers, skiers, equestrians, bicyclists, snowmobilers, the handicapped, and off-highway vehicle users where compatible with user needs, level of development, and Forest goals and objectives.
- Maintain trails to assigned maintenance levels.

FIRE AND PEST MANAGEMENT - GOAL: Provide cost-efficient fire management that minimizes resource losses and long-lasting adverse effects on Scenic Area resources. Control pests to so they do not impact resources and are compatible with Scenic Area goals and objectives.

- Use Prescriptions, Management Area Direction & fire management plans when determining appropriate wildfire suppression strategy.
- Coordinate with local fire districts in the development of major new structural facilities on National Forest lands.
- Use prescribed fire as a management tool.
- Consider both existing conditions and the effect of future management activities in the area surrounding the project area, when developing treatment standards for activity fuels.
- Coordinate pest control programs with the U.S. Fish and Wildlife Service, California Dept. of Fish and Game, California Dept. of Health Services, other Federal, state, and local agencies, and private sector groups as needed.
- Use integrated pest management (IPM) in planning & implementation of appropriate activities. Analyze, at a project level, a full range of IPM alternatives (cultural, biological, mechanical, chemical methods). Select method(s) via CEQA/NEPA alternative reviews that address environmental effects, treatment efficacy and cost effectiveness, with monitoring and enforcement plans.

MINERALS - GOAL: Allow continued operation of valid claims but minimize adverse impacts. Eliminate all non-valid claims over time.

- Administer mining laws & regulations to permit uninterrupted mineral production while protecting resources & environmental values.
- Where valid rights are exercised in withdrawn areas, operating plans should conform to the purpose for which the area was withdrawn.
- Coordinate the mineral management program with the Bureau of Land Management.

RANGE - GOAL: Manage grazing to protect wetlands, springs, riparian zones, wildlife habitat. Allow improvements compatible with goal of a healthy ecosystem. Phase out grazing on NFS lands. Cooperate with LADWP, State, private land owners to reduce grazing impacts.

- Manage grazing allotments according to a planned management system.
- Develop range allotment management plans before term permits are issued where possible.
- Incorporate in those plans provisions for implementing Best Management Practices for range management.
- Use individual grazing allotment plans as the instrument to guide the avoidance of unacceptable damage to soil, water quality, and fish habitat and the resolution of incompatibilities between livestock and known key mule deer fawning areas.

- Use positive measures (delayed grazing season, directing livestock away from riparian areas). Amend allotment plans to include adopted measures and mitigations. If unsuccessful in preventing damage, as a last resort, reduce or eliminate livestock grazing.
- Schedule and review Allotment Management Plans per available funding; update on an average of every ten years.
- Consider deer forage requirements (five pounds per deer per day) in the allocation of livestock forage as part of range analysis.
- Consider the benefit to fisheries, wildlife, recreation, and watershed, as well as range, when designing range improvements.
- Graze meadows only when range ready as defined in Forest Service Handbook 2209.21.
- Conduct utilization checks annually on selected meadows and key wildlife habitats in grazing areas.
- Coordinate with the Bureau of Land Management for administration of shared grazing allotments (within the Scenic Area) to implement decisions in BLM's Benton-Owens Valley (and Bodie-Coleville) Management Framework Plans.
- Maintain rangeland in "satisfactory" condition as defined by applicable Handbook and rating systems.
- Where feasible, locate range improvements away from travel corridors, especially trails, popular fisheries, and other water courses.
- Allotment Management Plans will display use, improvement maintenance, and other management data.
- Establish/document use criteria for permissible grazing levels in each unit of each allotment, using soil & vegetation as resource standards.
- Inform the California Department of Fish and Game before planning and implementing revegetation projects.
- Locate salt and sheep bed-grounds outside riparian areas and at least 1/4 mile away if possible and reasonable.

RECREATION AND INTERPRETATION - GOAL: Provide for low levels of overnight and day use facilities, and provide a balanced program on the Scenic Area ecological, cultural, and geologic values. Use the Visitor Center as a focal point for interpretation & discovery. Provide dispersed recreational opportunities including motorized use on designated routes; maintain solitude over major portions of the Scenic Area.

- Construct and maintain facilities and sites to Regional standards. Construct and maintain sites and associated water systems and wastewater treatment plants to Facility Condition 1 as defined in RIM.
- Develop day use facilities, interpretive and information sites and trails and overnight campgrounds for a balanced facility package.
- Maintain activities and developments at levels that meet prescribed ROS classes as defined in the ROS Users Guide.
- Develop programs, displays, and publications to interpret Forest Service resource management and the natural and cultural environments. Design physical elements of the Interpretive Services program to harmonize with their setting.
- Formalize an interpretive plan of operation for each district based on interpretive composite plans.
- Design at least 10% of recreation units for use by the physically limited, in all new highly developed sites and in reconstructed sites with a capacity of more than 125. Consider the needs of the physically limited in toilet design for these sites where possible.
- Develop interpretive composite plans for major interpretive opportunities.
- Continue coordination with E. Sierra Interpretive Assn. to promote & facilitate eastern Sierra interpretation and education.
- Coordinate Forest OHV planning/funding with Federal, state, local agencies and private land owners where appropriate.
- Designate OHV/OSV trails and open areas to minimize conflicts.
- When necessary, close critical wildlife and fish habitat to OHV/OSV use.
- Do not permit recreational use of wheeled vehicles over snow except in designated areas.
- Permit OSV use only when there is sufficient snow cover to protect the soil and vegetative resources.

GEOLOGICAL FEATURES - GOAL: Protect & maintain the integrity of geological features; provide opportunities for interpretation.

- Design/construct structures or facilities located near active faults and/or areas of known seismic activity to stand seismic impacts.
- Relocate structures or facilities to less active sites where design and construction is not economically efficient.
- Cooperate with other agencies to ID geologic hazards in areas of roads or facilities; assess feasibility of hazard mitigation measures.
- Where appropriate include information about local geology & geological features in interpretive displays/programs and publications.

SOILS - GOAL: Manage lands to maintain or improve soil productivity. Cooperate with agencies to stabilize non-vegetated relicited lands.

- Reduce soil erosion resulting from management activities to natural background levels within 3 years after soil disturbing activity.
- Conduct a Soil Resource Inventory or investigation to evaluate areas set for modification or subject to concentrated use.
- Avoid the use of soil-disturbing equipment, OHV's and the trampling by livestock on wet or poorly drained soils whenever possible.
- Minimize dozer-constructed lines, with concurrent erosion control in areas of shallow, compacted, or highly erodible soils.
- Avoid land alterations that potentially cause significant soil erosion and loss of soil productivity.
- Apply BMPs for National Forest System Lands in California when implementing ground disturbing activities.
- Conserve surface mineral or surface organic layer of the soils by minimizing soil disturbance to maintain long-term productivity.
- Stabilize all areas disturbed by management activities to minimize soil erosion.
- Require an interdisciplinary review team to avoid or mitigate adverse impacts for any projects or activities proposed in areas identified in the soil resource inventories as having an erosion hazard rating of nine or greater.

VISUAL RESOURCES - GOAL: Manage the Scenic Area to maintain and enhance the visual resource.

- Obtain the Forest Supervisor's approval through the environmental analysis process for any deviations from assigned Visual Quality Objectives (VQO's) assigned in the prescription.
- Maintain or enhance the size and diversity of all riparian zones, aspen stands, meadows, and alpine tundra vegetation zones, where such zones are visible from sensitivity level 1 & 2 roads and trails, or where they receive significant recreation use.
- Rehabilitate and/or enhance the visual resource when implementing projects where appropriate as follows:

- Rehabilitate the visual resource where the existing visual condition fails to meet the assigned VQO.
- Enhance the resource where the existing visual condition appears monotonous, and where there is an opportunity to create visual variety in the landscape through planting, vegetation manipulation, or other accepted means.
- Base rehabilitation & enhancement priorities on the assigned VQO, corridor viewshed plans, and the following considerations:
 - Relative importance of the area and the amount of deviation from adopted visual quality objective.
 - Length of time it would take natural processes to reduce visual impacts so they meet the adopted visual quality objective.
 - Length of time it would take rehabilitation measures to meet the adopted VQO.
- Coordination with the resources necessary to rehabilitate the project area. Maintain foregrounds and middlegrounds of scenic corridors of the following travel routes to retention and/or partial retention VQO as inventoried but not less than partial retention:
 - Highways officially designated by the State as California State and County Scenic Highways.
 - California State Scenic Highway System Routes (including State Highway 120 (West of 395), and U.S. 395).
- Meet the VQO of retention in all foreground zones of other sensitivity level 1 roads and trails, recreation sites, and within all concentrated recreation areas.

WATER - GOAL: Conduct activities to maintain or improve favorable waterflow conditions and to comply with water quality goals specified in State and Federal clean water legislation. Manage the lake level to protect ecological, geological, visual, air quality, recreational values.

- Maintain or improve water quality to meet State & Federal standards; coordinate with State & Federal agencies on planning projects.
- Implement BMPs to meet water quality objectives and maintain/improve the quality of surface water on the Forest. ID BMP methods and techniques during site level environmental analyses and incorporate into project plans & implementation documents.
- Secure water rights for existing and foreseeable future National Forest consumptive uses according to State law. Convert all National Forest System water uses into the name of the Forest Service where possible.
- Require the water-bar spacing on dozer constructed fire lines as shown in the Forest Plan.
- Do not channelize natural streams unless there are no other options available.
- Maintain instream flows needed to maintain stream channel competence.
- Design construction activities within streams to avoid sedimentation in the aquatic zone.
- Revegetate roads and trails when use is terminated.
- Return all lands in declining watershed condition to equilibrium.

WILDLIFE/FISH/VEGETATION - GOAL: Manage habitats to promote healthy ecosystems & diverse wildlife species. Maintain viable populations of native vertebrates/invertebrates & enhance habitat of native species of special interest to the Scenic Area. Provide fishery habitat in all streams (Rush, Lee Vining, Mill, Wilson). Manage vegetation for diverse species composition and structure.

Threatened, Endangered, and Sensitive Animal Species

- Consider threatened and endangered species as below viability until recovery is achieved. Emphasize habitat protection & improvement for threatened or endangered wildlife. Protect & enhance historical and threatened and endangered species habitat as necessary.
- Cooperate with USFWS and CDFW in managing threatened and endangered species and restoration of habitat. Submit proposals for actions that might affect the continued existence of a threatened or endangered species to USFWS for formal consultation.
- Permit scientific studies on sensitive species only if the studies would benefit the species.
- Develop & implement a sound strategy to manage sensitive species and their habitats so that Federal listing does not occur.

Bald Eagle:

- Manage for recovery. Recovery may require the management of potential sites as well as occupied sites.
- Use the presence of bald eagles and results of the habitat capability model for the species to establish the existing and potential wintering areas, including winter roosts, foraging areas, and daytime perches.
- Maintain the integrity of existing wintering areas.
- Do not establish new winter uses or recreation developments within 1/4 mile of such areas.
- Maintain/enhance fish, waterfowl, prey-based populations in winter foraging areas; Implement Pacific States Bald Eagle Recovery Plan.
- Prepare a local winter bald eagle management plan that tiers to the Pacific States Plan.

Peregrine Falcon: Implement the Pacific Coast American Peregrine Falcon Recovery Plan prepared by the USFWS.

Mule Deer:

- Maintain/enhance key mule deer wintering ranges, migration routes & fawning areas. Though management activities may allow some habitat alteration, the goal is to support deer populations consistent with herd management objectives.
- Strictly limit infringement on key mule deer fawning areas during fawning period (June 15-July 15); resolve conflicts in favor of fawning.
- Develop water sources where water is needed and opportunities are available.
- Recognize the importance of key deer habitat.
- Emphasize the protection of critical deer habitat when analyzing development proposals.
- Determine forage allocation for deer on the basis of five pounds of forage per deer per day.
- Coordinate with the CDFW in implementing existing deer herd plans and preparation of needed additional deer herd plans.

Sierra Nevada Mountain Sheep

- Maintain mountain sheep habitat. Where feasible, expand their ranges by transplanting animals to suitable unoccupied habitats per

criteria stated in the Sierra Nevada Mountain Sheep Recovery Plan.

- Do not permit increased livestock use if shown to be deleterious to mountain sheep populations as defined in the Recovery Plan.
- If reintroduced mountain sheep establish themselves in drainages outside the reintroduction sites, take advantage of opportunities to extend mountain sheep range, consistent with other resource activities.

Riparian Areas

- Give emphasis to riparian dependent resources in the management of riparian areas.
- Protect streams, streambanks, shorelines, lakes, wetlands, and the plants and animals dependent on these areas.
- Use allotment management plans as the vehicle for ensuring protection of riparian areas from unacceptable impacts from grazing.
- Institute salting, herding, water developments, fencing, rest rotation, deferred rotation, and other grazing systems as mitigations. If mitigation does not prevent unacceptable riparian resource damage, limit or reduce livestock grazing in the affected areas.
- Limit wildfire control measures & activities that would adversely affect the riparian zone. Avoid dozer-built lines here where possible.
- Restore dozer impacts on riparian zones when rehabilitating fire sites, prioritize rehabilitation of riparian areas in improvement projects.
- Recognize the important and distinctive values of riparian areas when implementing management activities.
- Give preferential consideration to riparian-dependent resources in land use conflicts & remove livestock watering locations if feasible.

Sensitive Plants

- Develop and implement a sound program for sensitive plant species and their habitat so that Federal listing does not occur. Complete inventories of project sites and areas of disturbance if there is potential habitat or known population locations are identified.
- Allow no new disturbance of sensitive plant habitat without direction from Interim Management Guides, Species Management Guides, or an environmental analysis.
- Allow scientific studies when there is no detrimental effect on the species.

5.5.2.6 Overview of Airport Land Use Issues, Opportunities and Constraints

Mono County operates two public airports: the Lee Vining Airport, and Bryant Field in Bridgeport. California counties are required to prepare a comprehensive Airport Land Use Plan (ALUP) that addresses each public airport and airport environs within that county. CGC §65302.3 requires that the General Plan be consistent with the ALUP and requires that the general plan be amended within 180 days to be consistent with any amendment to an ALUP. Where a local airport may be impacted by a General Plan Amendment, the airport planning area must be reviewed by the Airport Land Use Commission and a determination made as to the consistency with the ALUP.

In 2002, the County completed a master plan for the Lee Vining Airport that details specifications, layout and other facility details. Lee Vining Airport is located on 59 acres of land with one paved runway, near the intersection of US 395/SR 120 just south of the Lee Vining community. The Airport Master Plan was updated in 2017.³ As with other Mono County airports, this facility is primarily for general aviation activity (firefighting, emergency services, charter service, business or recreational use). The number of aircraft and aircraft operations have increased at Lee Vining Airport since 2000 (the facility had four single-engine aircraft as of 2015), but the level of use remain lows with approximately 7 daily flights at Lee Vining). Aviation services and existing airport infrastructure are vital for the movement of people and light cargo, firefighting, and emergency medical purposes. For visitors, the air services provide the only automobile alternate into Mono County, and residents rely on air services for a range of business, governmental, medical and emergency purposes. Mammoth Yosemite Airport is the only airport in Mono County that provides air cargo and FAA-certified commercial service.

5.5.2.7 Overview of the Specific Plan Land Use Designation

The County has assigned a land use designation for every parcel of land in unincorporated Mono County. The designations, shown on the General Plan maps available online at (<http://www.monocounty.ca.gov/planning/page/general-plan>), are based on an area's suitability for certain land uses, community support and consideration of criteria such as the presence of natural hazards and resources, existing land uses, infrastructure, open space values and community vision for the future.

The land use designation of the Tioga Inn site is 'SP' – Specific Plan. The SP designation is based on approvals gained in the 1993 Tioga Inn development review and entitlement process. As described in the General Plan, Specific Plans are intended to *"function as implementation mechanisms for the General Plan and as a standard-setting mechanism for detailed land use*

³Mono County, Lee Vining Airport Master Plan, 2017: https://monocounty.ca.gov/sites/default/files/fileattachments/public_works_-_facilities/page/4027/lee_vining_alp-2017.pdf

designation, subdivisions, and use permits. A specific plan must be consistent with the General Plan and, once adopted, becomes a part of the General Plan." The Specific Plan designation is generally reserved for planned development in areas outside of existing communities, or on large parcels in or adjacent to existing communities. The SP designation may also be applied to provide direction for potentially conflicting or incompatible land uses. Mono County has a number of adopted Specific Plans including the Tioga Inn project, Bodie RV Park, Crowley Lake Estates, the Highlands in June Lake, Mountain Vistas in Chalfant, Rock Creek Canyon in Paradise, Sierra Business Park in Long Valley, and others. Since each Specific Plan is tailored to the project and site and region in which it is located, the standards for each plan vary.

5.5.2.8 Overview of Existing Recreational and Trail Features

The project site is located adjacent to or near numerous recreational facilities, as listed in Table 5.5-2.

TABLE 5.5-2. Recreational Facilities in the Project Area		
FEATURE	TYPE	DESCRIPTION
Guss Hess Park	County Park	Established in 1975 on land leased from LADWP.
Lundy Canyon Campground	County Park	Established in 1961 on land leased from California Electric Power Company (now SCE)
Mono Lake Park	County Park	Established in 1970 on land leased from LADWP.
Mono Basin National Forest Scenic Area	Federal Scenic Area	Established in 1984 on public lands managed by the US Dept. of Agriculture
Yosemite National Park	Federal National Park	Established in 1890 on public lands managed by the US Forest Service

Large numbers of visitors are drawn each year to the diversity of Mono County recreational features. Table 5.5-3 summarizes recreational issues, opportunities and constraints that impact the Mono Basin and Lee Vining, as described in the Mono County Regional Transportation Plan (including the Trails Plan and the Bikeway Plan).

TABLE 5.5-3: Non-Motorized Trail and Recreational Issues in Mono County	
COMMUNITY	CONSTRAINTS & OPPORTUNITIES
MONO BASIN	<p>Additional pedestrian trails to and from local activity nodes such as the Visitor Center and Mono Lake.</p> <p>The concept of a sustainable, successful economy is supported, but the fear is that communities will need to become too big or "citified" to achieve this, sacrificing the rural characteristics and healthy natural environment valued by residents. The challenge is to appropriately balance economic development goals with the desired rural community characteristics and protection of the natural, scenic, historical and recreational values of the area. Growth does not necessarily mean becoming bigger; it could also mean improving what already exists within the current development footprint.</p>
LEE VINING	<p>There is a desire for pedestrian improvements throughout Lee Vining and adjacent areas, including:</p> <ul style="list-style-type: none"> • Safe pedestrian crossings across US 395 in Lee Vining. Improvements to slow traffic may include variations in pavement surface, raised intersections, reconfigured traffic lanes, flashing caution lights, and crosswalk landmarks. • Post and enforce slow speed limits along US 395 within Lee Vining to minimize conflicts with pedestrians crossing the highway. Speeds on US 395 along Mono Lake should also be lowered to minimize conflicts with recreational visitors to the lake. • Additional pedestrian trails to and from local activity nodes, such as the Mono Basin Visitor Center and Mono Lake. <p>There is need for bikeway improvements throughout the Mono Basin. There are opportunities to include wider shoulders adequate for bike use as part of scheduled road maintenance projects and to provide other improvements for bicyclists.</p>
SIGHTSEEING TRAILS – SCENIC BYWAYS	<p>The Mono County Trails Plan notes that sightseeing is a major recreational activity in Mono County, particularly along US 395 (most of which is a state-designated Scenic Highway) and SR 120 (a National Forest Scenic Byway), as well as State Route 158 in the June Lake Loop, and State Route 270 (SR 270) to Bodie. The Coalition for Unified Recreation in the Eastern Sierra (CURES) has made interpretive improvements along US 395 and SR 120 to enhance the sightseeing experience.</p>

	The Trails Plan states that pedestrian facilities in Lee Vining could be improved by streetscape improvements along the US 395 right of way and by provision of additional parking. The Mono Yosemite Trail Plan also identifies opportunity to connect Mono City to Lee Vining with trail access.
	The Trails Plan notes opportunities to extend the Lee Vining Creek trail (across SR 120 from the Tioga site) up Lee Vining Canyon to the campgrounds and other locations as specified in the Mono Yosemite Trail Plan.
	Access for pedestrians and equestrians along the west side of Mono Lake is limited to the shoulder of US 395 or to trails on the steep hillside to the west. Residents have expressed concern that access be improved along this portion of the highway.

Based on these findings, the Trails Plan identifies a series of community priorities, with a focus on project with the highest need. Community priorities for the Mono Basin as outlined in Table 5.5-4.

TABLE 5.5-4. Trail Plan Priorities for the Mono Basin⁴	
Priority #	Action
1	Work with community groups to improve the sidewalk system along Main Street (US 395) in Lee Vining.
2	Work with the USFS, community groups, and landowners to implement an extension of the community trail up Lee Vining Canyon and to provide interpretive signage along the trail per the Mono Yosemite Trail Plan.
3	Work with Caltrans to improve safety for sightseers, pedestrians, and bicyclists on US 395 along the west side of Mono Lake.
4	Investigate potential alignments for trail connections between Mono City and Lee Vining.

The Trail Plan also identifies a series of future regional and community trail routes in Mono County, including a 350-mile Eastern Sierra Regional Trail that would extend from Topaz Lake on the north to Round Valley on the south. For the Mono Basin, the recommended trail improvements include: (a) Sidewalk and streetscape improvements in Lee Vining: Pursue grant funding for a community Main Street planning effort to address detailed plans for sidewalk and streetscape improvements; (2) Lee Vining Trail extensions: From the south end of the Lee Vining Creek community trail up Lee Vining Creek to the campgrounds in Lee Vining Canyon, and (3) a trail from Mono City to Lee Vining, including investigation of potential alignments.

5.5.2.9 Overview of Existing Onsite Land Uses

Existing land uses on the Mobile Mart site include a gas station with 8 fuel pumps in two separate islands (each with canopies and an underground fuel storage tank), the convenience store, the deli with indoor seating plus outdoor picnic and deli seating areas, 8 hilltop residential housing units, 6 workforce housing cabins, one water storage tank, two water supply wells, five propane tanks with a combined capacity of 2,500-gallons, septic tank and leach lines, SCE overhead power lines, one cellular transmission tower, one electric supply shed, one historical marker, ingress/egress and interior roads (paved and unpaved), a buried utility crossing under US 395 for the water and septic system, and parking areas for busses and vehicles and park and ride.

5.5.2.10 Overview of Designated Open Space on the Tioga Project Site

The Tioga Specific Plan incorporates three Open Space land use designations. As discussed in EIR §4.0 (Specific Plan), the Specific Plan designation allows development of use designations that are tailored to individual properties and may vary from the designations described in the Municipal Code. The Open Space land use designations identified for the Tioga Inn Specific Plan as part of the 1993 approvals are described below:

1. **Open Space-Preserve:** This designation permits improved landscaped areas and native or undisturbed areas retained as landscaping. Physical development in Open Space-Preserve areas is limited to underground utilities. Existing overhead utilities may be retained, but new overhead utilities lines are not permitted in this classification. Underground leach tanks are permitted, as are partially buried water storage tanks provided that introduced

⁴ Mono County General Plan Appendix G, Trails Plan: <https://www.monocounty.ca.gov/generalplan/appendix-g-mono-county-trails-plan>.

landscape screening is planted around view-sides of the tank. Snow storage is a permitted use. The 1993 Specific Plan included 14.8 acres of Open Space-Preserve land area.

2. **Open Space-Facilities:** This designation is intended to provide a land area for private utility service development. All uses permitted in open space are permitted in the Facilities designation, as are above-ground appurtenance structures, propane tanks, an onsite nursery, and other similar uses. The original Specific Plan included 13.2 acres of Open Space-Facilities land area.
3. **Open Space-Support:** this designation is intended for storage of supplies and equipment, a pet kennel, a stable or horse corral, parking area expansion, accessory buildings such as storage for snow removal equipment or products used in landscaping, for wastewater treatment, and irrigation supplies). The Open Space-Support designation allows for construction of small utility structures and storage sheds (provided that the facilities are not generally visible from the SR 120 and US 395 scenic view corridors), and an onsite nursery. The original Specific Plan included 18.5 acres of Open Space-Support land area.

Exhibit 5.5-4 depicts the location and extent of the open space designations and other land uses approved in the 1993 Specific Plan.

5.5.3 REGULATORY SETTING

5.5.3.1 Federal Regulations

Federal Land Policy and Management Act (FLPMA). FLPMA was enacted in 1976 to unify the management and preservation of public lands that have not been set aside for national forests and parks, wildlife preservation areas, military bases or other federal purposes. The guiding principle of FLPMA is to protect the quality of resources on such lands. BLM administers the FLPMA, and is required by the FLPMA to establish a management planning process that supports multiple uses and sustained yields of natural resources. BLM responsibilities include periodic inventory of public lands and resources thereon. The FLPMA sets a goal of preserving and protecting public lands in their natural condition to the extent possible, and retaining federal ownership of public lands unless their disposal would serve the national interest. Uses of lands managed by BLM include commerce (livestock grazing, mineral extraction, logging), recreation (fishing, hunting, birding, boating, hiking, biking, off-roading), and conservation (biological, historical, cultural resources).

USDA Forest Service, Inyo National Forest Assessment.⁵ The Inyo National Forest Assessment fulfills a key step in the revision of the Inyo National Forest's *Land and Resource Management Plan*. It provides updated information about relevant ecological, economic, and social conditions, trends and sustainability, and their relationship to the current land resource management plan in the context of the broader landscape. Land and resource management plans establish requirements and constraints for management decisions in a national forest or grassland. The update process precedes revision of the *Land and Resource Management Plan*, followed by monitoring. The process takes an integrated approach that balances ecological processes with social and economic systems based on best available science, and emphasizes collaboration with stakeholders and transparency of process. The Assessment notes that declining budgets and increasing public demand have created greater need for collaboration between Inyo NF and its many partners, including Mono County. Partners support Inyo NF by offering interpretive programs, volunteer opportunities and citizen stewardship, and special events.

5.5.3.2 State Regulations

California Government Code (CGC). CGC §65300 requires cities and counties to prepare and adopt a "comprehensive, long-range general plan" to guide development. To achieve this long-range development mandate, the General Plan process requires a complex set of analyses, comprehensive public outreach and input, and public policy to guide a vast range of topic areas. State law identifies seven required General Plan elements including Land Use, Circulation, Housing, Conservation, Open Space, Noise and Safety, and Transportation. State law also specifies that a general plan must contain development policies, diagrams, and text that describe objectives, principles, standards, and plan proposals.

⁵ USDA Forest Service, draft *Inyo National Forest Assessment*, November 2013.

LEGEND

14.8 AC	Open Space - Preserve
19.2 AC	Open Space - Facilities
18.5 AC	Open Space - Support
11.4 AC	Hotel/Conference
6.1 AC	Full Service Restaurant
1.8 AC	Convenience Store
3.4 AC	Residences

TOGA INN & CONFERENCE CTR

RESTAURANT

CONVENIENCE STORE AND FUEL

RESIDENTIAL AREA

US HIGHWAY 325

120

CULTRANS RIGHT-OF-WAY
(DOES NOT INCLUDE SPACE DESIGNATION)

GRAPHIC SCALE
0 100 FEET

California Airport Land Use Planning Handbook. The State Aeronautics Act sets forth requirements for airport land use compatibility planning. The 2011 California Airport Land Use Planning Handbook (Caltrans 2011) provides guidance for determining consistency between a general plan and an Airport Land Use Commission's (ALUC's) Compatibility Plan. General Plan amendments must be consistent with any applicable Airport Land Use Plan unless a local government governing body overrules the plan by a 2/3 vote and makes certain findings (CGC §65302.3(a)).

California Department of Parks and Recreation. The mission of the Department of Parks and Recreation is to provide for the health, inspiration and education of residents by helping to preserve biological diversity, protect natural and cultural resources, and create opportunities for high-quality outdoor recreation. The park system includes two state parks in Mono County: Mono Lake Tufa State Natural Reserve (established to preserve the 'tufa towers,' the 65-square mile surface of Mono Lake, and wetlands and other habitat for the 1-2 million birds that annually feed and rest at Mono Lake), and Bodie State Historic Park (a gold-mining ghost town that is today preserved in a state of 'arrested decay').

Military Land Use Compatibility Planning Requirements. Pursuant to SB 1468 (2002), CGC §65302 requires local governments to consider impacts to military operations in the General Plan. CGC §65302 stipulates a notification process, and also requires that the General Plan Land Use Element (and other general plan elements) consider the impact of new growth on military readiness activities carried out on military bases, installations, and operating and training areas, when proposing or designating land uses on lands adjacent to military facilities and military aviation routes and airspace. The requirements of CGC §65302 are valid statewide.

Natural Communities Conservation Plan. The Natural Communities Conservation Plan (NCCP) program, which began in 1991 under the state's Natural Community Conservation Planning Act, is a broad-based ecosystem approach that identifies and provides for the regional or area-wide protection of plants, animals, and their habitats, while allowing compatible land use and economic activity. There are currently no adopted Habitat Conservation Plans (HCP), Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans in Mono County..

State Lands Commission. The State Lands Commission manages 4 million acres of tidelands and submerged lands and the beds of navigable rivers, streams, lakes, bays, estuaries, inlets and straits (collectively referred to as 'sovereign or public trust lands'). The Commission also monitors sovereign lands granted in trust to roughly 75 local jurisdictions, administers mineral rights on lands under the jurisdiction of other agencies, and manages lands granted by Congress to support California public schools. The Commission protects and enhances these lands and resources by issuing leases for use or development, resolving boundaries between public and private lands, promoting public access, and implementing regulatory programs to shield state waters from oil spills and invasive species. The Commission is involved in Mono Lake through its obligation to protect public trust resources and the lands beneath those waters (lakebed and streambeds). The state holds title to these areas. The State Lands Commission also has jurisdiction over 'relicted lands' (i.e., lands exposed by changes in water levels or locations). The relicted lands at Mono Lake include areas exposed by the diversion of Mono Basin streams to Los Angeles.

Williamson Act. The California Land Conservation Act of 1965, also known as the Williamson Act, enables local governments to enter into contracts with private landowners to restrict parcels of land to agricultural or open-space use while promoting growth patterns consistent with local planning priorities. In return, landowners receive property tax assessments that are based on farming and open-space uses and thus lower than rates based on full market value. The minimum contract term is 10 years; contracts automatically renew on the anniversary date unless the landowner or local government initiates non-renewal procedures. There were approximately 12,500 acres of land in Williamson Act contracts in Mono County as of 2008; Mono County has not allowed any new Williamson Act contracts since approximately 2005.

SB 99 - Active Transportation Program (ATP). The ATP was passed in 2013 to encourage increased use of active transportation modes through the following program goals:

- Increase the proportion of trips accomplished by biking and walking;
- Increase the safety and mobility of non-motorized users;
- Advance the ATP efforts of regional agencies to achieve mandated greenhouse gas reduction goals;
- Reduce childhood obesity through programs eligible for funding (such as the Safe Routes to School Program);
- Ensure that disadvantaged communities fully share in program benefits; and
- Provide a broad spectrum of projects to benefit many types of active transportation users.

Small urban and rural areas with populations up to 200,000 receive 10% of program funding, and another 50% of ATP funding is awarded competitively on a statewide basis; 25% of both categories must benefit disadvantaged communities. The funding may be used for a wide variety of eligible infrastructure and non-infrastructure projects. Note that the criteria for successful applications currently are not well suited to rural areas such as Mono County.

5-5-3-3 Regional and Local Regulations

Mono County Zoning Ordinance. Mono County in 2000 integrated its Zoning Code into the General Plan Land Use designations. Thus the Mono County General Plan Land Use Element contains not only policies and land use designations, but also land development regulations. The land development regulations govern the use of buildings, signage, size and layout and intensity of uses, parking requirements, allowed lot coverage, setbacks and other similar standards. In concert, the policies, designations and regulations serve the General Plan goal to “maintain and enhance the environmental and economic integrity of Mono County while providing for the land use needs of residents and visitors.” They also serve the accompanying objective to “accommodate future growth in a manner that preserves and protects the area's scenic, agricultural, natural and recreational resources and that is consistent with the capacities of public facilities and services.”

Mono County Bicycle Transportation Plan. The General Bikeway Plan provides a comprehensive plan for bicycle facilities in communities throughout the county. The plan focuses on direct and convenient routing for the commuting bicyclist.

5-5-4 THRESHOLDS OF SIGNIFICANCE⁶

Consistent with Appendix G of the CEQA Guidelines, the proposed RTP/General Plan update project will be considered to have a significant impact on land use and planning if it will:

- a) Physically divide an established community
- b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the General Plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect
- c) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
- d) Impact the acreage or function of designated open space.

5-5-5 ENVIRONMENTAL IMPACTS AND MITIGATING POLICIES

IMPACT LU 5.5(a):	Would project implementation physically divide an established community?
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NO IMPACT: The Tioga Mart development is located about one-half mile south of the community of Lee Vining. The site is physically separated from Lee Vining and from Mono Lake by US 395 (which defines most of the northern property boundary) and by SR 120 (which defines most of the western property boundary). Proposed uses would be integrated into the layout of existing and approved onsite uses and none of the proposed uses would have the potential to physically divide established community areas in other locations. No impacts have been identified, and no mitigation is required.

MITIGATION MEASURES – COMMUNITY SEPARATION

LU5.5(a) (Community Separation): The proposed Tioga Workforce Housing project does not have potential to divide an established community, and no mitigation measures are required.

⁶ EIR §5.3 (Biology) discusses project potential to conflict with applicable habitat conservation or natural community conservation plans.

IMPACT LU 5.5(b): Would project implementation conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including the General Plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

LESS THAN SIGNIFICANT IMPACT: State CEQA Guidelines §15125(d) requires that an EIR analyze the potential for inconsistencies between a proposed project and other relevant plans, programs and regulations. For the proposed Tioga Workforce Housing Project, the relevant planning documents (outside of the adopted Specific Plan) include the Mono County General Plan and the Mono Basin Community Plan. Since the General Plan and Community Plan were developed through a cohesive process, the documents reflect the same goals and policies. The following analysis is therefore based on comparing the proposed project with the land use issues identified in the General Plan, and with the goals and policies contained in the Mono Basin Community Plan. The Mono Basin National Forest Scenic Area Comprehensive Management Plan is also considered briefly in this section.

Mono County General Plan. As noted in the Land Use Baseline, the General Plan identifies and evaluates issues, opportunities and constraints that shape development potential within the unincorporated area. Tables 5.5-5 and 5.5-6 summarize applicable issues, opportunities and constraints described in the *General Plan* for the county as a whole and for the Mono Basin, and consider the degree to which the proposed project would be responsive to the identified issues, opportunities and constraints.

**Table 5.5-5
PROJECT COMPARISON WITH COUNTYWIDE GENERAL PLAN LAND USE
ISSUES/OPPORTUNITIES/CONSTRAINTS⁷**

COUNTYWIDE TOPIC	SUMMARY OF COUNTYWIDE ISSUES/OPPORTUNITIES/CONSTRAINTS	ANALYSIS OF PROPOSED PROJECT IN TERMS OF IDENTIFIED ISSUES
DEVELOPMENT PRESSURE	May result in shifting population distribution through the unincorporated areas of Mono County.	The newly proposed workforce housing will increase the resident population within the Mono Basin. The increase is within the population forecasts set forth in the Mono County General Plan for the Mono Basin, as discussed in EIR §5.6, Population. The proposal to provide onsite employee housing recognizes that the cost of housing is a significant limiting factor on economic development throughout Mono County.
JOB-HOUSING SEPARATION	Many residents do not work in their community of residence; the separation of jobs and housing may continue due to limited opportunities for economic expansion.	Though most project entitlements were established long ago, two approved elements have not yet been developed (the hotel and full-service restaurant). Both will draw a substantial number of new employees to the Tioga site. Provision for onsite employee housing will increase the likelihood that employees will have access to affordable housing near their place of work.
LAND CONSTRAINTS	Only 6% of county lands are privately owned and available for development; much of that land is in small parcels that cannot be used to resolve area-wide issues.	The project will not measurably increase the acreage of private ownership. While adding a new economic opportunity to the area, the project also provides employee housing to resolve the area-wide issue of a lack of employee housing.
LAFCO POLICIES	LAFCO policies favor expansion of existing communities over new development.	The proposed project would be part of a long-established development located near a long-established community.
LAND OWNERSHIP PATTERNS	The dispersed nature of private land ownership results in planning challenges, especially in environmentally sensitive areas.	The Tioga development was approved 25 years ago, is located adjacent to two major existing roads (US 395 and SR 120), and close to the existing Lee Vining community. Approval of the workforce housing proposal would not add to the planning challenges of checkerboard development.
CONSTRAINTS ON LARGE PARCELS	Infrastructure & service costs may be prohibitively high for development of large private parcels.	With the exception of the expanded wastewater treatment system (including treatment plant, subsurface irrigation system and expanded leach field), most of the project infrastructure is in place.
INFRASTRUCTURE LIMITATIONS	Development opportunities are constrained by the suitability of soils for septic systems, water quality standards, and access.	Onsite soils have accommodated septic system use for existing uses over the past two decades; studies conducted for this Subsequent EIR indicate that soils will be suitable for the expanded septic system (see EIR §5.2).
NEED FOR INDUSTRY	The countywide need for industry is complicated by the absence of environmentally suitable sites.	The project does not involve industrial development or require land designated for industrial uses.
RURAL CHARACTER	Most local residents and planning advisory	The newly proposed project uses and entitlements will not expand the growth

⁷Paraphrased from Mono Co. *Land Use Element*, Countywide Issues/Opportunities/Constraints (II-4 through II-7).

VALUES	groups support efforts to maintain rural character, limit growth, protect agricultural areas & maintain scenic values.	boundary, or impact agriculture, or substantively change the rural character and scenic values of the site relative to existing approvals.
ENVIRONMENTAL CONSTRAINTS	Development opportunities are further constrained by resource conservation requirements and natural hazards.	The 1993 Final EIR & Specific Plan identified resource protection areas on the project site. The proposed project would modify but not reduce the acreage of the resource areas, while allowing for new workforce housing.
ECONOMIC CONCERNS	New development must pay its own way by generating adequate taxes to support service systems and maintain a diverse economy.	The Tioga development generates substantial tax revenues and is expected to generate additional tax revenues if the workforce housing project is approved and implemented..

Table 5.5-6

GENERAL PLAN LAND USE ISSUES/OPPORTUNITIES/CONSTRAINTS IN THE MONO BASIN⁸

TOPIC	SUMMARY OF MONO BASIN ISSUES/OPPORTUNITIES/CONSTRAINTS	ANALYSIS OF PROPOSED PROJECT IN TERMS OF IDENTIFIED ISSUES
CONFLICTING VIEWS ON GROWTH	Residents support sustainable economic development but not at the cost of a healthy rural environment; the emphasis is on enhancing existing resources.	The Tioga Mart is a well-established existing use and the hotel and restaurant are long-established entitlements. The proposed new elements will support and enhance the existing resources and entitlements.
LIMITED LAND	There is little private land for community expansion; land exchanges with USFS or LADWP may be feasible.	This issue is not directly applicable to the project, except to the extent that proposed workforce housing is made available to meet the needs of offsite businesses.
MAINTAIN EXISTING DEVELOPMENT BOUNDARY	Residents seek to protect visual quality and the deer herd and limit traffic by maintaining the current subdivision limits.	The project will not alter the Mono Basin development boundary. Visual impacts of the new uses will be less than significant (see discussion in §5.14), as will be project impacts on the deer herd (see §5.3) and traffic (§5.11).
WORKFORCE HOUSING	Workforce housing is needed to sustain the economy and allow people to live where they work.	The project will provide workforce housing and thereby contribute to economic sustainability and allowing employees the opportunity to live where they work.
VISUAL APPEARANCE	Residents are concerned about the town's appearance (vacant commercial properties, unattractive storage, and design of the built environment) and support high quality design and green-building practices.	Proposed new project elements will reflect the design concepts of the existing Tioga Mart land uses. Subsurface irrigation with treated wastewater and solar green-building practices will be integral to development design.
PUBLIC SERVICES	Residents support public service providers and service availability for all community segments & seek infrastructure that is compatible with rural, natural and scenic qualities of Mono Basin. Water & sewage treatment infrastructure are concerns.	Water and sanitation services will be provided privately, as will propane and most electricity. The applicant plans to make propane and water supplies available to the Lee Vining community if desired.
BALANCING PUBLIC AND PRIVATE LAND USES	Residents support the protections associated with public lands but are concerned about excessive fees and regulations and seek to balance the two.	This issue is not directly applicable, except for the possibility that the County & applicant may seek a Sustainability Community Grant to fund public-private trail elements linking the project to Lee Vining.
AGRICULTURE AND GRAZING	These uses, once common in Mono Basin, are now scarce. Still highly valued by some residents, there is a desire to adapt sheep grazing practices that would be compatible with resource protection and land management.	This issue is not applicable to the project; no grazing activities currently exist on the site and none are proposed for the future.
VACANT COMMERCIAL PROPERTIES	Priorities include commercial/Main Street revitalization and investment, a business friendly environment and protection of local economic assets as ways to reduce commercial property vacancies.	This issue is not directly applicable, except to the extent that the County and project applicant plan to apply for grant funding (if the project is approved) for establishment of safe pedestrian and cycling access between the site and the community; if realized, this access would potentially benefit commercial enterprises in downtown Lee Vining.
LIMITATIONS POSED BY US 395	The Main St. layout, bisected by a 5-lane highway, poses challenges for creating a vibrant, walkable, safe downtown with physical connectivity between uses east & west of US 395.	The project is bisected from the Lee Vining community by SR 120. If the County is successful in obtaining a Sustainability Grant as noted above, the intent is to use a portion of the funds to create a pedestrian/bike trail that safely links the project site and the community of Lee Vining. Outcomes will rely on state and federal agencies' decisions.
JOB SCARCITY	Residents seek increased job opportunities and a diverse economy to enable people to live in Lee Vining.	The Tioga Mart project is expected to provide a relatively small number of new jobs (see §5.6), but the workforce housing would, if approved and if units are available, be offered to Lee Vining residents as at present.

⁸Paraphrased from Mono Co. *Land Use Element, Issues/Opportunities/Constraints – Mono Basin* (II-8 through II-9).

EQUAL OPPORTUNITY	Residents care deeply about maintaining a community that is culturally diverse and provides equal opportunity for all. Second home ownership is seen as a threat to these goals.	This issue is not directly applicable, although none of the onsite housing would be used for second homes and the Tioga development would continue to use fair employment practices for all existing and prospective workers.
CONWAY RANCH	Residents support Conway Ranch, including full water allotments, for its inclusion of sheep grazing, aquaculture and other historic agricultural uses and infrastructure, and support opportunities for expanded agriculture.	This issue is not applicable to the Tioga project.
UPLAND WATER MANAGEMENT	Residents support the management of water from the north (water distribution, potential dewatering of ranches and meadows and streams and riparian habitats), and maximizing water deliveries to Mono Lake and Conway Ranch.	This issue is not directly applicable to the Tioga project, except that water supplies from the Tioga wells would be made available to residents in Lee Vining if desired.

Mono Basin Community Plan Land Use Guidelines.⁹ The Mono Basin Community Plan was developed by the Mono Basin RPAC to provide detailed community-based land use guidance during the Mono County General Plan update process, and to facilitate the achievement of local planning goals in decision-making at all levels. The goals and policies for Mono Basin as stated in the General Plan are the same as those stated in the Mono Basin Community Plan.

The Plan sets forth a vision with 6 main pillars: (1) **Small, compact communities** with a clear edge between developed and natural areas,... a small-town rural character,... a vibrant and attractive commercial, ... aesthetically appropriate and energy-efficient building design, and connectivity through transit services and trails; (2) **Safe, friendly communities** where people interact and feel connected,...[where] children are safe and have access to a good education and opportunities, ..., and our elders are cared for and respected...diverse recreation and cultural activities enhance the quality of life [while] community events weave strong social connections; (3) **A sustainable economy** with diverse job opportunities that offers year-round employment and competitive wages [with] local products to grow profits,...encourage entrepreneurial efforts, and...foster home-based businesses. Housing is affordable so... families can continue to live here; (4) **Recreation opportunities and access** that highlight our exceptional outdoor venues; (5) **A healthy natural environment** with clean air and water, scenic grandeur, dark night skies, pristine wilderness and open space [achieved]...by minimizing the intrusiveness of structures, protecting our natural assets, and being environmentally responsible; and (6) **Historic uses and character** that recalls and re-creates the vitality, strength and character of the Mono Basin. This vision is reflected in 3 primary General Plan goals, each of which is supported by a series of objectives, policies and actions. Table 5.5-7 summarizes applicable policy directions and considers (in the yellow-highlighted boxes) how each would be impacted by the proposed project.

Table 5.5-7
MONO BASIN COMMUNITY PLAN APPLICABLE GOALS, POLICIES AND ACTIONS ¹⁰

GOAL 10: MAINTAIN THE SPECTACULAR NATURAL VALUES OF THE MONO BASIN AND RURAL, SMALL-TOWN CHARACTER OF COMMUNITIES BY MANAGING GROWTH, ENSURING HIGH-QUALITY AESTHETICS, AND PROVIDING FOR COMMUNITY DEVELOPMENT TO ENHANCE THE QUALITY OF LIFE FOR RESIDENTS.

Objective 10.A: Provide for the orderly growth of Lee Vining in a manner that retains the small-town character by directing future development to occur in and adjacent to Lee Vining.

Policy 10.A.1: Prioritize infill and rehabilitation of the existing built environment over the addition of private property.

Action 10.A.1.a: Explore options for encouraging and facilitating the use of vacant commercial space for new businesses.

Action 10.A.1.b: Pursue brownfields grants to assist with rehabilitation.

Policy 10.A.2: Where infill or rehabilitation is not viable, obtain adjacent lands for orderly expansion of the Lee Vining community.

Action 10.A.2.a: Work with appropriate agencies to provide for developable lands adjacent to Lee Vining. The

Landownership Adjustment Project Final Report should be referenced for opportunities, policies and procedures.

Action 10.A.2.b: Designate lands adjacent to Lee Vining for community expansion in the Land Use Element.

⁹ Mono Basin RPAC, *Mono Basin Community Plan Final Draft*, 13 June 2012. Available online at: <https://monocounty.ca.gov/rpac-mono-basin/page/mono-basin-community-plan>

¹⁰ The Mono Basin goals and policies are drawn from the Mono County General Plan (op cit.), which in turn directly incorporates (with changes in numbering) the goals and policies stated in the Mono Basin Community Plan (op cit.).

Action 10.A.2.c: Work with service providers to ensure adequate infrastructure and service capacity for any expansions.
Policy 10.A.3: Support the acquisition of a land base for the Kutzadika Mono Lake Indian Community, consistent with Goal 12,
Objective 12.A, Policy 12.A.5, Action 12.A.5.a.

DISCUSSION OF PROJECT RELATIONSHIP TO OBJECTIVE 10.A: The project would be consistent with the objective to pursue orderly development in and around Lee Vining, as well as the policies to prioritize existing built uses over new lands. Water and propane services would be provided (if desired) to supplement existing infrastructure in Lee Vining.

Objective 10.B: Manage buildout of the Mono City subdivision to retain its rural character.

Policy 10.B.1: Limit the buildable area of Mono City to the existing subdivision footprint.

Action 10.B.1.a: Coordinate with the BLM to ensure the next update of the Bishop Resource Management Plan reflects the agreement to remove APN 019-110-010 from the BLM disposal list.

DISCUSSION OF PROJECT RELATIONSHIP TO OBJECTIVE 10.B: This objective is not applicable; the project site is located about 6 miles south of Mono City.

Objective 10.C: Encourage building types, architectural design compatible with scenic & natural attributes of Mono Basin.

Policy 10.C.1: Maintain a clear edge between developed areas and open space by ensuring future development outside existing communities is compatible with the scenic and natural attributes of the area.

Action 10.C.1.a: Encourage siting & design of buildings to complement the natural environment and preserve open space.

Action 10.C.1.b: Higher-intensity uses (e.g., limited commercial, industrial, and resource extraction) may be permitted if it can be demonstrated that the use cannot be accommodated in existing community areas, the use incompatible with existing community uses, or that the use directly relies on the availability of unique on-site resources. Higher-intensity uses should not adversely impact the area's scenic, recreational, historical, and natural resources.

Action 10.C.1.c: Require preparation of a Specific Plan and environmental review in compliance with CEQA for subdivisions of ten (10) parcels or more that are not within or adjacent to Lee Vining or Mono City.

Action 10.C.1.d: Require preparation of a Specific Plan or PUD for development projects proposed on federal exchange lands (parcel maps are exempt from this requirement).

Action 10.C.1.e: Periodically review the Conway Ranch Specific Plan, Tioga Inn Specific Plan and any other future specific plans in the Mono Basin.

Policy 10.C.2: Support design practices that protect scenic vistas, energy efficiency, and "green" building practices.

Action 10.C.2.a: Encourage the siting and design of buildings to preserve scenic vistas.

Action 10.C.2.b: Designate public view corridors that visually connect the community to the natural environment and establish development standards to avoid impacts.

Action 10.C.2.c: Explore potential incentives related to energy efficiency and "green" building practices.⁴⁹

Action 10.C.2.d: Support the expansion and promotion of recycling programs, and encourage the inclusion of recycling services in new commercial facilities.³⁹

Action 10.C.2.e: County-owned buildings should set an example by implementing green building technologies.

Policy 10.C.3: Preserve the dark night sky of the Mono Basin.

Action 10.C.3.a: Require compliance with and enforce Dark Sky Regulations.

Action 10.C.3.b: Retrofit existing lights on County-owned properties, public rights of way to conform to Dark Sky Regulations.

Action 10.C.3.c: Outreach to other public agencies operating facilities within the Mono Basin about the benefits of Dark Sky regulations and to encourage the use of compliant light fixtures.

Policy 10.C.4: Support improving the visual appearance of Lee Vining.⁵¹

Action 10.C.4.a: Use Mono County Design Guidelines to promote architecture, site planning, and uses compatible with the surrounding visual and scenic environment within the communities of Lee Vining and Mono City.

Policy 10.C.5: Consider applying residential standards to parcels with a Commercial Land Use Designation in Lee Vining.

Action 10.C.5.a: Encourage applicants to meet residential standards to protect the character of residential areas in Lee Vining and facilitate compatible uses within the Commercial Land Use Designation.

Policy 10.C.6: Recognize that the Mono Basin National Forest Scenic Area Comprehensive Management Plan contains separate Guidelines that may impact development; encourage developers in this area to consult with Inyo National Forest during planning.

DISCUSSION OF PROJECT RELATIONSHIP TO OBJECTIVE 10.C: New uses will incorporate the colors, materials and rustic design elements of the existing Tioga Mart development. The siting of new uses incorporates recommendations of the project biologist as well as visual perspectives gained from the schematic renderings. Green energy will be integral to project infrastructure. The workforce housing will be designed as a residential community located inside a commercial development. All project lighting will conform with dark sky regulations that were enacted after the original Specific Plan was approved.

Objective 10.D: Maintain, protect and enhance the natural, historical and recreational attributes of the Mono Basin.

Policy 10.D.1: Coordinate with public agencies and other land-management organizations, such as the BLM, USFS, LADWP, CDFG, and U.S. Fish and Wildlife Service, to understand local policies and engage locals in the management of their lands.

Action 10.D.1.a: Request that resource agencies present information to and work with the Mono Basin RPAC and the community as public resource management issues arise.

Policy 10.D.2: Support existing General Plan policies in the Cultural Resources section, Conservation/Open Space Element.

Action 10.D.2.a: Implement Objective B, Policy 1 and the associated actions to identify and inventory cultural and historic resources in the Mono Basin.

Action 10.D.2.b: Implement Objective C, Policy 1 and the associated actions to preserve, protect and restore (where appropriate) the cultural and historic resources of Mono County.

Action 10.D.2.c: Identify any cultural and historic resources that should be recognized and protected via registration with the State and/or National Register of Historic Places.

Action 10.D.2.d: Consult the Kutzadika Mono Lake Indian Community on potential impacts to cultural and historic resources as described in Govt. Code §65352.3, which outlines local government requirements for tribal consultation.

Policy 10.D.3: Support recreational activities and the ability to use and enjoy the land while also protecting the natural environment.

Action 10.D.3.a: Identify recreation activity and access priorities, and work toward implementation.

Action 10.D.3.b: Coordinate with land management and transportation agencies, such as the BLM, Caltrans, ESTA, YARTS, USFS and LADWP, to ensure adequate access and responsible use.

Action 10.D.3.c: Ensure new development does not impede, & preferentially enhances, existing recreation access and activities.

Policy 10.D.4: Review & discuss Conway Ranch operations including history, allowable uses, current uses & potential opportunities.

Action 10.D.4.a: Support aquaculture and other historic uses, such as sheep grazing and agriculture.

Action 10.D.4.b: Support facilities and infrastructure facilitating aquaculture and other historic uses, such as sheep grazing, agriculture, and the restoration of historic buildings.

Action 10.D.4.c: Support the full allotment of water to Conway Ranch.

Policy 10.D.5: Initiate a community conversation about upland water management.

Action 10.D.5.a: Convene RPAC and community members to draft a proposal to the LADWP requesting the irrigation of Thompson Meadow and explaining the benefits to LADWP.

Action 10.D.5.b: Support community conversations and planning efforts regarding issues such as Mill and Wilson creeks, and various ranches and meadows, for example Cain Ranch and Dechambeau Ranch.

Policy 6: Work with government and private property owners to create recreational trail segments connecting population centers with attractions and recreation access points.

Action 10.D.6.a: Identify trail segments that are supported by the community, and implement trail development.

Action 10.D.6.b: Identify & consider impacts to historic lifestyles and existing uses of any potential trail, and consult with the Kutzadika Tribe in particular.

DISCUSSION OF PROJECT RELATIONSHIP TO OBJECTIVE 10.D: No historic resources have been identified in the Cultural Assessment; however, the project site does have a cultural monument erected by the Bodie Chapter of E. Clampus Vitus that features 'little known and forgotten facts about Mono Lake.' The Kutzadika Indian Tribe of Lee Vining met with Mono County during January 2019 to discuss their history in the Mono Basin and their concerns about the project proposal (see EIR §5.4). Onsite trails will be provided, and the applicant and county have indicated they will jointly seek grant funding for safe trail linkage from the project vicinity to the Lee Vining Community.

Objective 10.E: Promote well-planned and functional community uses that retain small-town character and increase the quality of life.

Policy 10.E.1: Increase the housing supply available to the workforce, including rental units.

Action 10.E.1.a: Establish tenant eligibility criteria, including a time requirement as a local resident and/or local employee, for workforce housing units, and identify the entity that applies, manages and enforces the criteria.

Action 10.E.1.b: Explore siting workforce housing next to the Community Center (LADWP land), on the Lee Vining High School parcel, at the County and/or Caltrans yard, including evaluation of the suitability of each site and other opportunities.

Action 10.E.1.c: Consider acquiring and rehabilitating existing housing for workforce housing, as per Housing Authority policy.

Action 10.E.1.d: Promote workforce housing opportunities that connect the community with housing programs.

Policy 10.E.2: If the need is identified, provide a site for limited and/or cottage industrial uses, including road yards, heavy equipment storage, auto repair, and similar uses, proximate to Lee Vining.

Action 10.E.2.a: If need exists, identify new locations for limited/cottage industrial uses, potentially at the airport/pumice plant area or other appropriate site; develop necessary partnerships, conduct feasibility analyses, and secure financing.

Action 10.E.2.b: Limit footprint of the new industrial location to previously disturbed areas and consider impacts to viewsheds.

Policy 10.E.3: Continue community discussions and explore potential solutions for location of the County and/or Caltrans yards in order to: (a) Maintain a high level of related services, such as snow removal; (b) Retain the authenticity of a working community; (c)

Navigate challenges of cost, timeline, environmental issues, agency coordination and site location to ensure feasibility (Brownfields grants could assist with some of these issues); (d) Provide more appropriate Main Street uses, such as workforce/residential housing, commercial, and/or mixed use; (e) Improve connectivity between the community, high school, park, community center, and Visitor Center; (f) Increase commercial space to open new businesses and improve the vibrancy and aesthetics of Main Street; (g) Recognize the junction of US 395 and SR 120 as an important viewshed; projects should avoid potential impacts to that viewshed.

Policy 10.E.4: Support agricultural and grazing uses, such as sheep and cows, in historic locations, locations compatible with resource sensitivity and availability, and where consistent with scenic and natural resources.

Action 10.E.4.a: Research incentives and other tools to support small scale, local agriculture.

Action 10.E.4.b: Support guidelines for sound grazing management practices on public lands to maintain environmental resource values while supporting agricultural uses.

Action 10.E.4.c: Support community and agency discussions to revitalize agricultural and grazing uses, such as sheep grazing and the irrigation associated with historic grazing; creatively explore and implement sound grazing practices that may benefit the landscape, such as utilizing sheep for wildfire fuels management rather than controlled burns or mechanical thinning.

Policy 10.E.5: Parking standards should contribute to business viability and residential livability.

Action 10.E.5.a: Support Obj. C in the Mono Basin Policies of the Circulation Element of the General Plan to improve parking opportunities in Lee Vining, with Action 2.2 as a priority: "Consider amendments to the Mono County parking requirements ... for commercial uses in Lee Vining, such as reducing the number of required parking spaces and relaxing paving requirements."

Action 10.E.5.b: Review residential parking needs and consider modifications to parking requirements.

Policy 10.E.6: Provide safe and convenient pedestrian and biking facilities, working with Caltrans when applicable, to reduce vehicular traffic, increase local livability, and encourage visitors to explore town.

Action 10.E.6.a: Prioritize pedestrian safety facilities & improvements on US 395 over other improvements and as consistent with Circulation Element goals & policies, with emphasis on the Livable Communities section and Mono Basin Objectives A & D.

Action 10.E.6.b: Emphasize safe pedestrian travel to community & activity centers (schools, parks, library, visitor centers etc.).

Action 10.E.6.c: Support transit connections in Mono City and Lee Vining that provide local and regional connections for residents and visitors consistent with the Circulation Element of the General Plan.

Action 10.E.6.d: Initiate community discussions to consider pedestrian and street lighting in appropriate locations for safety, connectivity, and comfort and ensure compliance with Dark Sky Regulations.

Action 10.E.6.e: Pursue the Livable Communities goals and policies in the Circulation Element of the General Plan.

Action 10.E.6.f: Pursue Objective D of the Mono Basin Policies in the Circulation Element of the General Plan to make progress toward a comprehensive streetscape plan for the Lee Vining Main Street area that enhances pedestrian safety, connectivity (including trails), and makes Lee Vining a more attractive place to walk, live and work.

Action 10.E.6.g: Support installation of a bus stop in front of the County Yard in Lee Vining that is accessible to pedestrians.

DISCUSSION OF PROJECT RELATIONSHIP TO OBJECTIVE 10.E: The project would increase the housing supply available to local workers, and occupancy would be linked to eligibility criteria. Ample parking would be provided for customer vehicles (standard & oversized), as well as transit vehicles (YARTS & ESTA) and car-pool participants. The project incorporates partnership opportunities including increased airport utilization (through rental car availability). Trails would be provided onsite for walking and bicycles, and efforts will be made to obtain grant funds for development of a walking/biking trail that would safely link the project site to the Lee Vining community. The 1993 project design was developed to optimize public access to the scenic resources and views around the US 395/SR 120 junction, and the newly proposed uses will be largely screened from offsite views.

Objective 10.F: Provide appropriate public infrastructure and service capability expansion to support development, public safety, and quality of life.

Policy 10.F.1: Future development should coincide with infrastructure and service capability expansion.

Action 10.F.1.a: Require development projects to obtain "will-serve" letters from applicable service agencies.

Policy 10.F.2: Support improvements to local service infrastructure, such as water, sewer, telecommunications, and electricity, that is compatible with the small-town character, aesthetic values, and the health and safety of the community.

Action 10.F.2.a: Inventory local infrastructure needs and provide support to service providers as appropriate.

Action 10.F.2.b: Require utility line upgrades and replacements to be undergrounded subject to the findings and analysis required for new utility lines in Chapter 11 – Utilities of the Land Use Element.

Action 10.F.2.c: Where feasible, require local utility providers to underground, relocate or visually screen power lines and other facilities in areas of high visual quality.

Action 10.F.2.d: Encourage utility providers to develop an overall plan for underground installation of all utilities in Mono Basin.

Action 10.F.2.e: Work with utility providers to ensure siting, screening and design of facility upgrades, expansions or renovations are compatible with the scenic and natural attributes of the Mono Basin and public health and safety.

Policy 10.F.3: Provide for adequate emergency services, facilities, and access, and support emergency providers.

Action 3.1: Identify local hazards, such as dangerous wind areas on Hwy 395, defensible space to reduce wildfire risk, lack of cell phone coverage, and work with the appropriate entities to mitigate those hazards.

Action 3.2: Continue working with BLM on the Mono City Emergency Access Road.

Policy 10.F.4: Prioritize maintaining & programming existing County facilities, especially the Community Center, over new facilities.

Policy 10.F.5: Encourage the provision of local health services for the community.

Policy 10.F.6: Support access to necessary life services such as those provided by DMV and Social Security Administration.

Action 10.F.6.a: Work with the DMV and Social Security Administration to make their services locally available.

Policy 10.F.7: Provide support and services for elders.

Action 10.F.7.a: Identify the needs of the elderly community.

DISCUSSION OF PROJECT RELATIONSHIP TO OBJECTIVE 10.F: Water, sewer and propane demands of the existing and proposed project will be met onsite, and the applicant will make water and propane service available to customers in Lee Vining. A sizeable share of the demand for electricity will be met through solar panels to be installed on all structures, and a cell tower located on the property supports Wi-Fi connectivity for project site and the region as a whole. The site serves as a staging area during emergencies, and provides space adequate for helicopter landings. All project utility lines will be underground (only the SCE overhead lines will remain).

GOAL 11: GROW A SUSTAINABLE LOCAL ECONOMY WITH DIVERSE JOB OPPORTUNITIES THAT OFFERS YEAR-ROUND EMPLOYMENT AND WAGES THAT REFLECT THE COST OF LIVING IN THE AREA.

Objective 11.A: Plan for a diversified, sustainable economy.

Policy 11.A.1: Achieve a more-diversified economy & employment base consistent with the small-town, rural nature of Mono Basin.

Action 11.A.1.a: Support Obj. H, Policy 4 in the Countywide Land Use Policies of the Land Use Element to develop strategies to improve the County's economic climate, including an Economic Development Strategy for the County and/or Mono Basin.

Action 11.A.1.b: Research and incorporate best practices for economic development in small, rural communities.

Action 11.A.1.c: Establish a community-based organization to provide leadership for economic development; include private citizens, County/RPAC, local business leaders, chamber of commerce, as well as other agencies, nonprofits and corporations.

DISCUSSION OF PROJECT RELATIONSHIP TO OBJECTIVE 11.A: The proposed workforce housing will support continued development of a diversified, sustainable economy in the Mono Basin.

Objective 11.B: Enhance and support the existing tourism-related economy.

Policy 11.B.1: Cultivate tourism-related programs and attractions that promote longer, multi-day visits.

Policy 11.B.2: Capitalize on local and nearby attractions such Yosemite National Park, Bodie State Historic Park, Mono Basin Scenic Area, and the Tufa State Reserve by promoting Lee Vining as a centralized recreation hub.

Action 11.B.2.a: Support the Yosemite Policies, and Objective H of the Mono Basin Policies, in the Circulation Element of the General Plan to strengthen the relationship between the Yosemite region and its eastern gateway.

Action 11.B.2.b: Support local recreational uses and visitor accommodations (e.g. campgrounds, hotels/motels, and RV parks).

Action 11.B.2.c: Collaborate with other agencies to provide 24-hour, year-round visitor sanitation facilities; e.g., public restrooms, and sanitation facilities at popular recreation staging areas.

Action 11.B.2.d: Support Lee Vining as a host for YARTS services such as the High Country Hiker Shuttle.

Policy 11.C.3: Support a sufficient bed base and visitor accommodations to support the tourism industry.

Policy 11.B.4: Diversify and promote recreation opportunities during the shoulder seasons and winter.

Action 11.B.4.a: Identify and implement potential shoulder season and winter opportunities, such as ice climbing.

Action 11.B.4.b: Work with applicable entities to increase access and activities.

Policy 11.B.5: Keep public roads open as long as practical during the shoulder season to provide access to recreation activities and other communities. 27, 31

Policy 11.B.6: Promote collaboration with organizations in the region to enhance tourism.

Action 11.B.6.a: Support the designation of US 395 as a National Scenic Byway.

Policy 11.B.7: Keep up-to-date airport planning documents, such as the Lee Vining Airport Master Plan and Lee Vining Airport Land Use Compatibility Plan.

Action 11.B.7.a: Initiate community conversations about opportunities available through expansion of airport-related services.

Action 11.B.7.b: Consider visual sensitivity of Lee Vining Airport surroundings to prevent further degradation of Scenic Area.

Action 11.B.7.c: The County shall complete the revegetation project at Lee Vining Airport to address visibility & dust concerns.

DISCUSSION OF PROJECT RELATIONSHIP TO OBJECTIVE 11.B: The project will support community efforts to promote longer stays, provide more visitor accommodations, host YARTS services, provide extend tourism into the shoulder seasons, and explore expanded use of the Lee Vining Airport. The applicant has communicated with USFS

regarding the potential availability of housing for Yosemite employees, and has communicated with Mono County regarding the possibility of providing rental cars to airport customers. Restroom facilities on the site are well maintained and open to the public year round.

Objective 11.C: Diversify the existing economic base & employment opportunities to achieve a more sustainable economy.

Policy 11.C.1: Pursue Objective H of the Countywide Land Use Policies in the Land Use Element of the General Plan to “Maintain and enhance the local economy.”

Policy 11.C.2: Encourage and support new business development and entrepreneurial efforts that contribute to a mix of uses and services, and a wider range of employment opportunities.

Action 11.C.2.a: Research programs and other mechanisms that could offer financial incentives for small businesses.

Action 11.C.2.b: Catalog the specific businesses identified in the action plan workshops and the community survey for inclusion in the Economic Development Plan.

Policy 11.C.3: Encourage and support new development within Lee Vining.

Action 11.C.3.a: Explore County incentives such as reduced fees, Alquist-Priolo fault study funding for the Lee Vining Main St. area, parking standard adjustments and prescriptive building designs such as ground-mounted solar and residential decks.

Policy 11.C.4: Encourage diverse uses and services and a healthy business environment to recirculate dollars spent in the community.

Action 11.C.4.a: Convene local business owners to initiate discussions about a healthy economy.

Policy 11.C.5: Support the revitalization of Main Street.

Action 11.C.5.a: Pursue planning, implementation grants, and funds to support Main Street and Livable Community goals, such as the Scenic Byway planning grant.

Action 11.C.5.b: Explore options for encouraging and facilitating the use of vacant commercial space for new businesses.

Action 11.C.5.c: Encourage businesses to provide public gathering spaces to contribute to the vitality & activity of Main Street.

Action 11.C.5.d: Support an attractive Main Street through actions such as the promotion of the Mono County Design Guidelines to complement Lee Vining’s small-town character and attract visitors.

Policy 11.C.6: Encourage locally-produced goods & services including production for local consumption of locally produced food.

Action 11.C.6.a: Work with local food producers and relevant permitting authorities, such as Mono County Environmental Health, to enable public consumption.

Action 11.C.6.b: Establish a market for locally produced foods, such as a farmers market, door-to-door sales, or local purchase by businesses or institutions.

Action 11.C.6.c: Support and promote community, school, and backyard gardens, and other types of urban agriculture.

Policy 11.C.7: Encourage businesses and services to remain open year round.

Policy 11.C.8: Support infrastructure to expand home-based businesses.

Action 11.C.8.a: Support the efforts of Digital 395.

Policy 9: Support continued and new agricultural and grazing uses in the Mono Basin, the potential for agricultural tourism, and consider incentives or other mechanisms to increase viability of agricultural operations.

DISCUSSION OF PROJECT RELATIONSHIP TO OBJECTIVE 11.C: The project would contribute to employment opportunities, provide a year-round residential market for locally produced goods and foods and an opportunity for expanded water and propane infrastructure. The workforce housing would increase the local recirculation of wages through increased resident purchases in and around Lee Vining. The onsite cellular tower would continue to support Digital 395 broadband access for the site and surrounding environs.

GOAL 12: BUILD A SAFE, FRIENDLY COMMUNITY WHERE PEOPLE FEEL CONNECTED, WORK TOGETHER TO RESOLVE COMMUNITY ISSUES AND ARE INVOLVED IN COMMUNITY ACTIVITIES & EVENTS.

Objective 12.A: Build healthy social connections & interactions that contribute to a sense of community.

Policy 12.A.1: Improve interactions and support between community and the schools.

Action 12.A.1.a: Open a dialog with the schools to initiate a collaborative relationship and share community suggestions about building mutual support, including: (a) Tapping the business community and local organizations to provide vocational training and educational opportunities; (b) Holding joint or mutual community events; (c) Increasing communication and information sharing between the community and school (e.g., school-produced newspaper); (d) Collaborating to involve parents and community members through volunteer opportunities; (e) Stabilizing school staff; and (f) Strengthening the connection between the school and community by making school facilities accessible and encouraging community use.

Policy 12.A.2: Support the provision of higher education and workforce development programs.

Action 12.A.2.a: Promote the development of vocational programs and higher education services.

Action 12.A.2.b: Connect the Mono Basin residents to Mono County’s career services program.

Policy 12.A.3: Support factual media coverage and accurate community information sharing.

Action 12.A.3.a: Develop and/or enhance local community communication mechanisms, which could include a regularly published newsletter, radio station, regular social gatherings, centralized bulletin boards for posting notices, and/or social media.

Action 12.A.3.b: Develop and maintain a local community calendar.

Policy 12.A.4: Cultivate community leadership.

Action 12.A.4.a: Support decision making that empowers & strengthens the community and achieves meaningful results.

Action 12.A.4.b: Address community issues and concerns rather than positions; seek common ground & win-win situations.

Action 12.A.4.c: Maintain representation on the RPAC that encompasses the diversity of the community.

Action 12.A.4.d: RPAC meetings are intended to be an open forum for the public to respectfully and candidly discuss community issues, recognizing consensus is not always possible or necessary in order to move forward.

Action 12.A.4.e: Consider refining the role and responsibility of the RPAC by reviewing the bylaws.

Policy 12.A.5: Support various cultural and ethnic groups in the community.

Action 12.A.5.a: Assist the Kutzadika Mono Lake Indian Community's efforts to obtain formal tribal recognition, a land base, and community services.

Action 12.A.5.b: Support community interaction that celebrates & invites multicultural participation/educational opportunities.

DISCUSSION OF PROJECT RELATIONSHIP TO OBJECTIVE 12.A: Eastern Sierra Unified School District notes that the project would enrich the school community and that developer fees would cover the cost of new facilities for children in the workforce housing area; onsite space will be provided for playgrounds, social meeting areas, day care, and other workforce community programs.

Objective 12.B: Encourage and support local events and programs that provide community and youth activities, capitalize on the tourist economy, and bring the community together.

Policy 12.B.1: Identify key community events that excite residents and resonate with the community.

Action 12.B.1.a: Inventory community events, consider combining events based on overlapping interests, and define a set of events on which to focus and invest. Consider local people's interests and talents when selecting events.

Action 12.B.1.b: Encourage the pooling, coordinating and sharing of resources for events.

Policy 12.B.2: Encourage programs and events celebrating local history and diversity, and encourage the revitalization of historical events that no longer exist (e.g., Mark Twain days).

Policy 12.B.3: Support outdoor education, supervised and unsupervised activities, and facilities for youth.

Action 3.1: Work with the school district and community groups to develop afterschool and summer programs.

Action 3.2: Work with the library to enhance service offerings and activities for youth and the community.

Action 3.3: Support natural history education and interpretive programs, and encourage the Kutzadika Mono Lake Indian Community to share its local knowledge and history.

DISCUSSION OF PROJECT RELATIONSHIP TO OBJECTIVE 12.B: The Tioga Mart will continue to host the popular free summer music events program which is open to all and offers diverse music forms.

Objective 12.C: Encourage people to volunteer in the community and participate in events.

Policy 12.C.1: Organizations should honor and take care of their volunteers.

Policy 12.C.2: Promote a positive, nonpolitical, inclusive social environment that attracts volunteers.

Policy 12.C.3: Advertise the events, including the use of social networking.

Action 12.C.3.a: Post community events in the community calendar of local papers, local radio stations, and other media.

Action 12.C.3.b: Advertise events through any local communication networks that are developed.

Policy 12.C.4: Recruit all residents, especially younger residents.

Action 12.C.4.a: Engage high school students, teachers, seniors, nonprofits & service clubs to provide volunteers, leadership.

Policy 12.C.5: Foster ownership of events by volunteers.

Action 12.C.5.a: Engage volunteers in planning the events.

DISCUSSION OF PROJECT RELATIONSHIP TO OBJECTIVE 12.C: A community poster board is provided outside of the convenience store.

5.5.3.4 Lee Vining Airport Land Use Compatibility

Table 5.5-8 below assesses the proposed Tioga Inn Workforce Housing Project in terms of the issues, opportunities and constraints identified in the General Plan for Lee Vining Airport, which is about one-half mile east of the Tioga Mart site.

**TABLE 5.5-8: Lee Vining Airport
Issues, Opportunities and Constraints**

TOPIC	ISSUE	ANALYSIS OF PROJECT IN TERMS OF ISSUES AT LEE VINING AIRPORT
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PUBLIC SAFETY	Airport operations inherently present risks to public welfare, particularly inside the airport 'Safety Zone' (runway, approach paths and primary traffic areas)	The Tioga Mart site is outside of the Lee Vining Airport Runway Safety Zone, the Building Restriction Line, and the Runway Protection Zone ('clear zone').
ISSUES ON APPROACH	Highest traffic volumes occur around the approach/departure paths, transitional surfaces and clear zones; these areas also have more noise and potential for problems.	While much of project site is within a designated 'Ground Obstruction Zone,' no part of the property is in designated approach/departure paths or transitional surfaces and clear zone areas.
CLEAR ZONE ISSUES	The 'Clear Zone' (at the end of the runway) is particularly subject to noise and safety factors affecting people and property in the airport environs.	The proposed workforce residential area is separated from the clear zone by about one-half mile at the closest point.
NOISE LEVELS	Noise readings and analyses indicate that noise levels do not extend much beyond the airport property at either facility. There are no residential areas around the Lee Vining airport.	The proposed housing area will be located inside the 'traffic pattern zone' and the 'ground obstruction zone,' but is a permitted use for both zones and not subject to significant airport noise due to the confined noise contour and limited number of flights. Further discussion of noise impacts is provided in EIR §5.13.
EXISTING LAND USE CONFLICTS	Neither Bryant Field nor Lee Vining Airport is situated in a manner that poses conflicts with existing land uses; there are some structures in the clear zone at Bryant Field that the County is seeking to purchase.	Much of the project size is inside the FAA-designated Obstruction Zone for Lee Vining Airport, but FAA has determined that there is no hazard to air navigation (see discussion in EIR §5.7, Safety). No other airport conflicts have been identified for the project site.
FUTURE LAND USE CONFLICTS - LEE VINING	Potential for future land use conflicts is limited by the widespread public ownership of lands in the Lee Vining Airport planning area	No future conflicts with the Tioga site are noted in the General Plan or in the Lee Vining Airport Master Plan.

In summary, the Tioga Inn Workforce Housing Project is generally consistent with land use guidelines, objectives and policies as stated in the Mono County General Plan, the Mono Basin Community Plan, and the Lee Vining Airport Master Plan. No significant adverse impacts have been identified, and no mitigation is required.

MITIGATION MEASURES – CONFLICT WITH RELEVANT PLANNING

LU5.5(b) (Community Planning): The proposed Tioga Workforce Housing project does not have potential to conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect. No mitigation measures are required.

IMPACT LU 5.5(c): Would project implementation increase the use of existing recreational facilities such that substantial physical deterioration would occur, or require construction or new facilities?

LESS THAN SIGNIFICANT IMPACT. As noted in the baseline, the project site is located adjacent to or near a wide range of recreational facilities, several of which regularly experience large number of visitors. The Mono Basin alone annually attracts about 250,000 visitors,¹¹ and an estimated 4 million people visit Yosemite National Park each year (though most enter from the west and stay in the Valley). The Mono Basin Community Plan indicates that Lee Vining residents are ambivalent about tourism, valuing the economic benefits and at the same time concerned about the loss of rural community character.

The workforce housing is expected to house up to 300 residents. Some of the future residents will already live in other parts of Mono County and use County recreational areas. Residents' use of facilities at Guss Hess Park (about 3-acres in size) would likely be proportionally higher than at other nearby facilities since Guss Hess park has ballfields and other facilities used by local school children. As noted in EIR §5.6, the project is expected to increase attendance at the Lee Vining

¹¹ Dept. of Water Resources, 2004: <https://water.ca.gov/LegacyFiles/salttonsea/historicalcalendar/ac/03.23.2004/MonoLakeValues.pdf>

Elementary School by one-third (from 102 at present to 136 with the project), and at the Lee Vining High School by half (from 56 at present to 84 with the project).

None of the recreational impacts are expected to rise to a level of significance. The planned onsite play area will be sized to accommodate use by the estimated 80 residents in the 0-18 age range. The adult social meeting areas will be designed and sized to accommodate the estimated 220 adult residents. Nor is project residents' use of offsite facilities expected to cause significant adverse effects, since park acreage in the Mono Basin far exceeds the minimum for 'adequate open space' as set forth in the Quimby act (3-5 acres per 1,000 residents).

Based on the above considerations, the project is not expected to cause substantial deterioration of existing recreational facilities, nor is it expected to require construction of new facilities or expansion of existing facilities and thereby contribute to environmental degradation. No significant adverse impacts have been identified, and no mitigation is required.

MITIGATION MEASURES – RECREATIONAL FACILITIES

LU5.5(c) (Recreational Facilities): The proposed Tioga Workforce Housing project does not have potential to cause substantial deterioration of existing park facilities, and would not require new facilities the construction of which might adversely impact the environment. No mitigation measures are required.

IMPACT LU 5.5(d): Would project implementation impact the acreage or the function of open space areas on the project site?

LESS THAN SIGNIFICANT IMPACT. The proposed project would modify the acreage of open space areas on the site, and would clarify the uses that are allowed within in each designation. The most significant proposed modification is to increase by 87% (relative to the 1993 Specific Plan) the acreage designated as Open Space-Preserve. Acreage in this category would increase from 14.8 acres (in the 1993 Specific Plan) to 27.8 acres as now proposed. Most of the additional Open Space-Preserve acreage would be used to create a protected corridor along US 395, with the intent to minimize deer mortality.

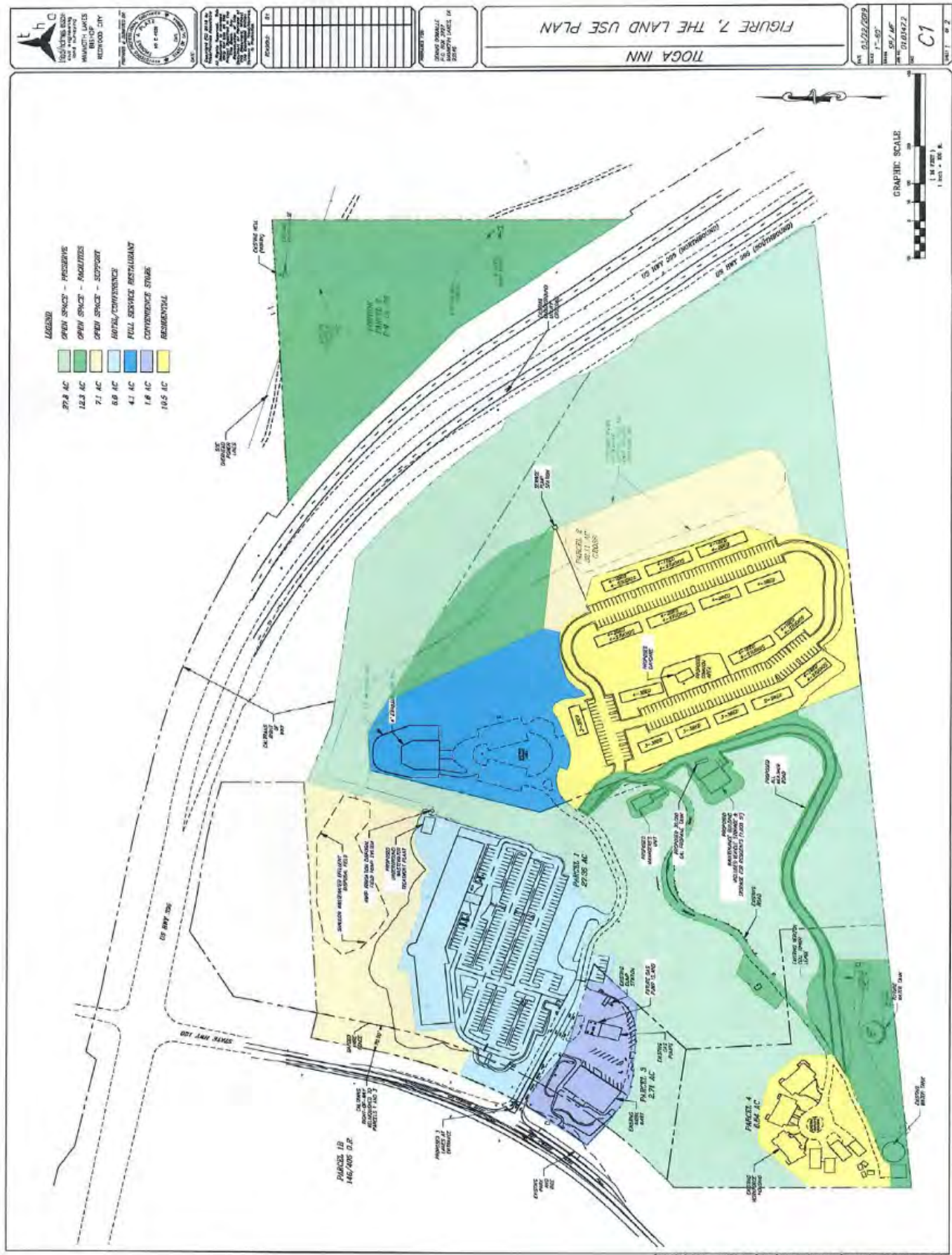
The project would reduce by 7% the acreage designated as Open Space-Facilities, and the acreage designated as Open Space-Support would be reduced by 62%. Table 5.5-9 summarizes open space acreage as shown in the 1993 Specific Plan and as now proposed.

TABLE 5.5-9. Proposed Changes in Open Space Acreage			
Open Space Designation	1993 Specific Plan	Specific Plan Amendment #3	CHANGE
OS-Preserve	14.8 acres	27.8 acres	(+) 13.0 acres
OS-Facilities	13.2 acres	12.3 acres	(-) 0.9 acres
OS-Support	18.5 acres	7.1 acres	(-) 11.4 acres
TOTAL	46.5 acres	47.2 acres	(+) 0.7 Open Space Acres

As noted in the Specific Plan (EIR §4), physical development within *Open Space-Preserve* areas is limited to underground utilities, with one exception for construction of a water pump control structure with up to 100 square feet of building area. New overhead utilities would be classified as surface structures and not permitted in this land use although existing overhead utility lines may be retained; above-ground snow storage is also a permitted use.

The Open Space – Facilities and *Open Space – Support* designations apply to lands where surface construction is allowed but limited to small above-ground and subsurface structures and uses including wastewater treatment system components, the well houses and storage building, the propane tanks and onsite nursery features. Exhibit 5.5-5 depicts the location and acreage of lands within each of the Open Space designations, as now proposed in Specific Plan Amendment #3. Potential impacts on project open space would be ***less than significant***, and no mitigation is required.

EXHIBIT 5.5-5. SPECIFIC PLAN AMENDMENT #3 PROPOSED LAND USE PLAN. To view the full image please visit <https://www.monocounty.ca.gov/planning/page/tioga-inn-specific-plan-seir>



MITIGATION MEASURES – OPEN SPACE

LU5.5(d) (Open Space): The proposed Tioga Specific Plan Amendment would not have a significant impact on the use or function of open space areas on the project site, and no mitigation measures are required.

5.5.6 SIGNIFICANCE AFTER MITIGATION

All potential project impacts associated with land use and relevant planning would be reduced to less than significant levels through adoption and implementation of the mitigation measures identified above.

TIOGA WORKFORCE HOUSING DRAFT SUBSEQUENT EIR



SECTION 5.6

POPULATION, HOUSING AND EMPLOYMENT

5.6.1 INTRODUCTION, SUMMARY AND KEY TERMS

This section describes existing population, housing and employment in Mono County, and the potential impacts on population, housing and employment that may occur in association with the proposed Tioga Inn Workforce Housing project. **NOTE: since the Notice of EIR Preparation was distributed in October of 2016, the proposal has been modified to incorporate up to 150 bedrooms, instead of 80 bedrooms as indicated in the NOP.**

Comments received during scoping and in response to the NOP requested that this EIR consider (1) impacts on Lee Vining services and businesses that would result from a near doubling of population; (2) whether the proposed cost and size of the workforce housing units would respond to employee needs and ability to pay; (3) whether the housing would remain available for workforce use over time, or convert to market rate housing; and (4) where the new employees would come from. Comments also requested that the EIR include one or more alternatives with a lower number of workforce units (please see EIR §6.0, Alternatives), and whether the workforce housing units would be energy efficient (please see EIR §5.8, Public Services and Utilities).

As shown in Appendix A2 (written comments on the NOP), many comments requested information about project impacts on the viability of local businesses and the economic and social fabric of Lee Vining. This analysis does not include an economic analysis, but is guided by CEQA §15131, which states:

"Economic or social information may be included in an EIR or may be presented in whatever form the agency desires.

(a) Economic or social effects of a project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on the physical changes.

(b) Economic or social effects of a project may be used to determine the significance of physical changes caused by the project. For example, if the construction of a new freeway or rail line divides an existing community, the construction would be the physical change but the social effects on the community would be the basis for determining that the effect would be significant. As an additional example, if the construction of a road and the resulting increase in noise in an area disturbed existing religious practices in the area, the disturbance of the religious practices could be used to determine that the construction and use of the road and the resulting noise would conflict with the religious practices. Where an EIR uses economic or social effects to determine that a physical change is significant, the EIR shall explain the reason for determining that the effect is significant.

(c) Economic, social, and particularly housing factors shall be considered by public agencies together with technological and environmental factors in deciding whether changes in a project area feasible to reduce or avoid the significant effects on the environment identified in the EIR. If information on these factors is not contained in the EIR, the information must be added to the record in some other manner to allow the agency to consider the factors in reaching a decision on the project."

The proposed project does not incorporate elements that would extend beyond the project boundaries into the Lee Vining community, and thus there are no qualifying physical changes that would result from economic or social changes in Lee Vining. However, the project does entail population, housing and employment impacts that are analyzed in terms of the Lee Vining community as well as the county overall, including relevant issues raised in the NOP comment letters.

SUMMARY OF IMPACTS & MITIGATIONS FOR POPULATION AND HOUSING AND UTILITIES

IMPACT POP 5.6(a):	INDUCE SUBSTANTIAL UNPLANNED POPULATION GROWTH
Mitigation:	Less than Significant Impact; No Mitigation Required
Significance:	Less than Significant
IMPACT POP 5.6(b):	DISPLACE SUBSTANTIAL NUMBERS OF PEOPLE OR HOUSING
Mitigation:	Less than Significant Impact; No Mitigation Required
Significance:	Less than Significant

5.6.2 KEY TERM

Census Designated Place (CDP). Lee Vining and Mono City are identified by the Census Bureau as 'Census Designated Places.' The Census Bureau defines a Census Designated Place (CDP) as an area with a settled concentration of residents that is identifiable by name but are not legally incorporated (the 'statistical counterpart of an incorporated area'). Selected census data is available for CDPs. The Tioga Inn Workforce Housing project site is included in the boundaries of the Lee Vining CDP.¹

5.6.3 OVERVIEW OF EXISTING CONDITIONS

5.6.3.1 Population and Employment

The Mono Basin planning area is located in the heart of Mono County and includes the communities of Lee Vining and Mono City as well as residences in the general vicinity but outside these defined communities. As of 2010, the population of the Mono Basin was approximately 446 people. Population growth in the Mono Basin was fairly steady from 1980 until 2000 but slowed considerably thereafter, declining from 496 in 2000 to 446 in 2010. Table 5.6-1 summarizes demographic characteristics for Mono Basin overall as of 2010:

TABLE 5.6-1. Mono Basin Demographic Characteristics as of 2010	
Population	446
Household (HH) Size	2.62
Rental Rate	29%
Median HH Income	\$45,500

Like the eastern Sierra as a whole, the Mono Basin economy is largely based on tourism. In 2008, Mono County had an estimated 1.5 million visitors spending a total of \$369.6 million.² The Sierra Business Council's *State of the Sierra* report (2007) noted that small, locally owned businesses made up more than 90% of all business establishments in the Eastern Sierra and formed the economic backbone of the region. Only 5 years later, in their 2012 report on *Innovation and Prosperity*,³ the Council noted that e-commerce had eroded the status of east side small business. Nonetheless, the Council concluded that *"the growth of e-commerce may well be the single-most important opportunity to*

¹ Census Bureau: https://www2.census.gov/geo/maps/dc10map/tract/sto6_ca/co6051_mono/DC10CT_Co6051_001.pdf.

² *Economic and Fiscal Impacts and Visitor Profile of Mono County Tourism in 2008*, Lauren Schlau Consulting.

³ Sierra Business Council, *Innovation & Prosperity: An Industry Cluster Approach to Economic Sustainability in California's Inyo & Mono Counties*, 2012: http://sierrabusiness.org/images/Publications/EasternSierraEconAssessment/Eastern_SierrainnovationProsperity_ESEA_Pub.pdf.

expand sales, profits and employment in rural small business in decades,” largely due to the broadband access made possible through the Digital 395 Middle Mile Project.

The business and tourist economy of Lee Vining is oriented around the natural beauty and unique ecosystems of the region. The seasonality of the economy is a constraint on growth, as is the region’s dependence on National Park Service decisions regarding the opening and closing dates of SR 120 (Tioga Road). SR 120 is the only eastern entry to Yosemite National Park, and also the only road providing access to the Tioga Workforce project site.

Data on Transient Occupancy Taxes (TOT) collected by the County demonstrate the seasonal nature of the Mono Basin economy. As shown in Exhibit 5.6-1 below, TOT returns from 2008-2011 indicate consistently higher revenues in the first fiscal quarter (July to September). These findings are strongly supported by a 2016 study of Visa spending patterns by international and domestic visitors to Mono County,⁴ which showed that domestic spending peaked at little over \$4 million in mid-July, and international spending peaked at close to \$5 million in August. Spending by both domestic and international groups was comparatively negligible (less than \$1 million) for the months from November through April.

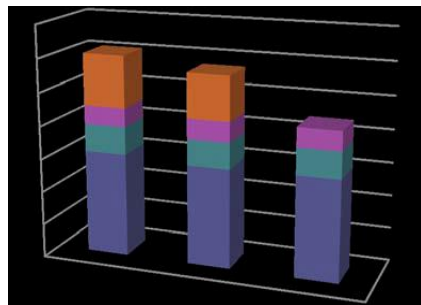


Exhibit 5.6-1. Transient Occupancy Tax (TOT) Revenues 2008-2011, District 3 (June Lake and Lee Vining)⁵

- 4th Quarter (April through June)
- 3rd Quarter (January through March)
- 2nd Quarter (October through December)
- 1st Quarter (July through September)

The Mono County population as of the 2010 Census totaled 14,202 residents countywide, a majority of which (58%, or 8,234) resided in the Town of Mammoth Lakes. Unincorporated communities with the largest 2010 population included Crowley Lake (with 875 residents), Walker (721 residents), Chalfant (651 residents) and June Lake (629 residents); Aspen Springs, Topaz and McGee Creek had the smallest 2010 populations (65, 50 and 41, respectively).

Residents of the unincorporated communities as a whole had a median age of 45.2 years, substantially higher than the town of Mammoth Lakes’ median (32.6 years). Largest gains were evident in the number of seniors aged 65+ years (increasing from 10% in 1990 to 14.2%); the senior population, as well as the percentage of children under 5 years, was notably high in Coleville, Antelope Valley, Wheeler Crest, and the Tri-Valley planning area.

As of 2018, the Tioga Mart project site has a residential population of 26 persons including 20 permanent residents living in the 8 hilltop housing units, and 6 seasonal residents living in the 6 cabins constructed about 200 feet south of the flagpole. All six of the cabins are occupied by onsite employees, and all 8 of the hilltop residences are occupied by Lee Vining residents. The project owner indicates that rental rates for the cabin units and for the hilltop units are below market rates for the Lee Vining area.⁶

5.6.3.2 Housing Characteristics

Lee Vining is identified by the U.S. Census Bureau as a Census Designated Place (CDP). Table 5.6-2 presents selected demographic data for the Lee Vining CDP, as well as Mono County.

⁴ Mono County Economic Devt. Dept. (EDD), *VISA International Tourism, Mono County, CA*, 2016; EDD, *VISA Domestic Tourism*, 2016.

⁵ Mono Basin Community Plan, https://monocounty.ca.gov/sites/default/files/fileattachments/rpac_-_mono_basin/page/4007/mb_plan_rpacfinal_06.13.12.pdf

⁶ Mono County rents for 2012-2016 (median of \$1,107/month; <https://www.census.gov/quickfacts/fact/table/monocountycalifornia/PST045216>) were substantially higher than in Lee Vining (where all 12 occupied rentals were paying less than \$500 per month; no median was available; <https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>).

TABLE 5.6-2. 2010 Demographic Characteristics – Lee Vining and Mono County⁷		
Characteristic	Lee Vining CDP	Mono County
Population	222	13981
Total Households	85	4950
Average Household Size	2.51	2.77
Median Age	60.2 years	38.9
Household Income⁸	\$64,710 (mean)	\$56,944 (median)
Percent below Poverty Level	5.6%	6.3%

The 2010 population of Lee Vining (222) was nominally higher than the population in 2000 (218).⁹ However, the population in Lee Vining has experienced significant declines in recent years and was estimated at 90 in the County's 2017 *Housing Need Assessment*.¹⁰

As shown in Table 5.6-2, residents of the Lee Vining CDP had a median age of 60.2 years in 2015. That figure is substantially higher than for the County overall (38.9 years), and also substantially higher than the 2010 median age in Lee Vining proper (30.4 years). Household size in Lee Vining, at 2.51 persons per unit, is almost 10% lower than in the County (2.77 persons per unit), and education levels are higher (100% of Lee Vining CDP adult residents have a bachelors' degree or higher, compared to 84% countywide).

As a whole, unincorporated areas in Mono County have experienced a decrease in the number of renters over the past 20 years, declining from 40% in 1990 to 32% in 2010. Over the same period rental occupancy in Lee Vining increased substantially, rising from 49.4% of all occupied units in 2010 to 81% of all occupied units in 2016, while the number of occupied units (owner and renter) dropped from a total of 85 occupied units in 2010 to 42 occupied units as of 2016.¹¹

Rental occupancy rates varied widely between communities: as of 2016, Lee Vining had the highest percentage of renter-occupied units (81%), while Paradise had the highest percentage of owner-occupied units (98.8%).¹² More recent data from the Mono County *Housing Needs Assessment*¹³ indicates that Lee Vining continues to have comparatively high rental rates (71% as of 2017, versus 41% countywide). However, Lee Vining has a comparatively low proportion of seasonal units (41% in Lee Vining v. 54% countywide), and Lee Vining's proportion of owner-occupied housing is notably low (29% in Lee Vining versus 59% countywide). Average households size in Lee Vining is 2.4 persons per unit, compared with an average of 2.5 persons per unit countywide.

Vacant units continue to represent a large share of all units (32.7% countywide; the vacancy rate in Lee Vining was slightly higher (36.4%) and June Lake was highest (59.4%) due to vacation homes and seasonal occupancy. As a whole, Mono County has a relatively low proportion of occupied units (35% for the period 2011-2015) in comparison with similar resort communities in other areas.

As of 2010, extremely low-income households (households with income less than 30% of the area's median income) represented 17.4% of the unincorporated county total; this number was significantly higher than in 2000, when only

⁷ Census Bureau, American Factfinder: https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF;https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml?src=bkmk.

⁸ Median income is the average of all income levels divided by the population, whereas mean income is the income level at which 50% of the population earns more, and 50% earns less. Median income is generally lower than mean income.

⁹ Census Bureau Census Viewer: <http://censusviewer.com/city/CA/Lee%20Vining>

¹⁰ Mono County, *Housing Needs Assessment Final Report*. October 2017. Prepared by BBC Research and Consulting.

¹¹ Census Bureau housing data, Lee Vining CDP, 2010 and 2012-2016: <https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>.

¹² Census Bureau, American Community Survey 5-Year Estimates, *Selected Housing Characteristics, Lee Vining CDP* <https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>.

¹³ Mono County, *Housing Needs Assessment Final Report*. October 2017. Prepared by BBC Research and Consulting.

7.5% met the criteria. Six percent of extremely low income renters met the criteria for overpayment (i.e., paid over 30% of their income on housing costs).

The 2014 Mono County Housing Element indicates extremely low-income households (i.e., households with income less than 30% of the area median) represented 17.4% of the unincorporated county total; this number was significantly higher than in 2000, when only 7.5% met the criteria. In Lee Vining 28.6% of households earn 30% or less of the mean household income. Housing overpayment is generally defined as any amount exceeding 30% of pre-tax income. As of 2016, overpayment had increased to 31% of residents countywide; in contrast, none of the residents of Lee Vining paid more than 20% of household income toward housing costs.¹⁴

The household size of owner-occupied units is higher in Lee Vining (at 2.51 persons per unit) than in the county as a whole (2.38 persons per unit), but the household size of renter-occupied units is much lower in Lee Vining (2.5 persons per unit versus 3.26 persons per unit countywide).

As part of the 2014 Housing Element, the County completed a comprehensive Housing Condition Survey for the unincorporated areas in 2009. Compared with countywide housing as a whole, the Mono Basin had a low percentage of homes rated as 'fair' (about 26.5%, versus 31.4% countywide), and a very low percentage rated 'poor' (about 4.5% versus 6.7% countywide). The Housing Element notes that overcrowding is not a significant housing issue in the unincorporated areas: 47 households were identified as overcrowded in total, with 20 severely overcrowded units. Lee Vining had 85 households with an average household size of 2.51 persons per unit (slightly higher than the 2.42 persons/unit countywide), and an average family size of 3.25 persons (2.98 countywide).

The County is currently updating its Housing Element, and has determined that its share of regional housing need for the 8-year period from 2019 to 2027 is 240 units.¹⁵ This represents a significant increase over the county's share of regional housing need (46 units total) for the 5-year period from 2014-2019.¹⁶ For the coming 8 year period, 39 units are needed to serve households with extremely low and very low incomes; 46 units for low income housing, 55 units for moderate income, and 100 units for above moderate income households (up to 120% of median income). A large majority of this need is in the Town of Mammoth Lakes; regional housing need for the unincorporated County as a whole through 2027 totals 85 units and includes 13 units for extremely and very-low income households, 16 units for low income, 21 units for moderate income, and 35 units for above-moderate income households.

The assessment does not address the needs of income groups above 120% of median. In the past, Mono County has allocated regional housing needs to unincorporated communities based on the percentage of the population in each community area. This has been superseded by a program that allocates need based on varied factors including current and projected population, economic conditions, transportation systems, potential for rehabilitation, and the availability of utilities and infrastructure. The County met roughly 43% of the total 292 units needed for the 2007-13 Housing Element, with the greatest success in meeting the needs of above-moderate income (71.6% of units constructed) and moderate income (51.7% constructed) residents.

During 2017, Mono County commissioned a study of current housing needs, to provide a basis for updating the Housing Element and the Housing Mitigation Ordinance; the Town of Mammoth Lakes participated in this effort. The final Mono County *Housing Needs Assessment*¹⁷ describes housing need in urgent terms, citing a need for 184 additional units by 2022 under the most conservative scenario (the need is set at 664 units under the accelerated growth estimate). Although much of this need is centered in Mammoth Lakes, the *Housing Needs Assessment* cites a need for between 120-170 additional units to accommodate current needs and future employment growth in the unincorporated communities, concluding that "it will be imperative that the County and Town facilitate the creation of permanently

¹⁴ Census Bureau, Selected Housing Characteristics, Lee Vining CDP 2012-2016: <https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>. Note that the sample for this statistic was limited to the 12 units for which 'gross rent as a percentage of household income' could be computed.

¹⁵ California Housing & Community Development Dept, Mono County *Final Regional Housing Need Determination*, September 2018.

¹⁶ Note, however, that the 2014-19 assessment incorporated a one-time downward adjustment to account for the prolonged recessionary conditions, high unemployment and unprecedented foreclosures in California and elsewhere at that time.

¹⁷ Mono County, *Housing Needs Assessment Final Report*. October 2017. Prepared by BBC Research and Consulting.

affordable housing units that accommodate a variety of households. This should be paired with grants and low interest loans that address condition needs, particularly weatherization."

5.6.3.3 Income and Employment

The overall median household income in the unincorporated area as of 2012 was \$79,600, up from \$45,325 in 2000. The median has since declined, with a current median (2013-2017) of \$60,595.¹⁸ Median household income varied significantly through the county, with the communities near Mammoth Lakes generally having higher overall income levels. The median household income based upon HCD income limits for Mono County in 2012 was \$79,600. The Mono County Housing Element states that median 2012 household income countywide was \$68,868 (with a roughly equal mean income of \$68,546), and the median 2012 household income in Lee Vining was slightly higher at \$70,172 (with a mean income of \$57,240). In contrast, the median income in Mammoth Lakes (\$59,972) is notably lower than the mean income (\$67,089).

Very little Census data is available regarding employment in individual Mono County communities, including the Lee Vining CDP, and the County's Housing Element notes that the available Census data tends to have high margins of error. With respect to Mono County as a whole, the major employment sectors as of 2000 were education, recreation, agriculture, retail sales, public administration and construction; these industries comprised about 70% of all employment countywide. Many of the major employers are located in Mammoth Lakes, including the Mammoth Hospital, Mammoth Mountain Inn and Ski Area, the Town of Mammoth Lakes, Vons and the Westin-Monache Resort. Several of the large employers are in various county locations including the Eastern Sierra Unified School District, and the U.S. Forest Service, both of which have a presence in Lee Vining.

The Tioga Mart development currently employs 37 individuals. Roughly two-thirds of the existing employees (25 of the 37) work in the Deli, and an additional 10 employees work in the convenience store. Two employees provide maintenance and support.

5.6.4 REGULATORY SETTING

5.6.4.1 Federal Regulations

There are no federal plans, policies, regulations, or laws related to population or housing that apply to the Draft Mono County RTP/General Plan Update.

5.6.4.2 State Regulations

California Housing Element Requirements. Article 10.6 of the CGC outlines Housing Element requirements that apply to California cities and counties. As required therein, each agency must prepare and regularly update a Housing Element that analyzes existing and projected housing needs, examines special housing needs of the population, evaluates the effectiveness of goals and policies from the prior adopted Element, identifies constraints imposed by local government and other sources, assesses the agency's compliance with other housing laws, and identifies opportunities to incorporate energy conservation into the housing inventory. The Housing Element is the *only* General Plan element for which the State specifies a mandatory update schedule.

State law also requires that each city and county accommodate its fair share of its region's new housing construction needs for all income groups, based on the Regional Housing Needs Assessment (RHNA). The RHNA is prepared for each agency by HCD, and identifies the total number of housing units that each jurisdiction must accommodate in its Housing Element in order to meet the needs of residents at various income levels. The Housing Element also addresses zoning density, infrastructure, services and other topics necessary to ensure that local governments adequately plan to meet the housing needs of all people in the community – regardless of their income.

¹⁸ Census Bureau: <https://www.census.gov/quickfacts/monocountycalifornia>

5.6.4.3 Local Regulations

Mono County Housing Element. The Mono County Housing Element was last updated in 2014 in compliance with all State requirements including strategies and programs to (a) ensure adequate sites and remove constraints to housing production, (b) support affordable and special-needs housing, (c) pursue cooperative planning and outreach, (d) promote conservation and energy efficiency, (e) support equal-opportunity housing and other goals. The Housing Element sets forth the County's plan to address housing, provides a profile of county demographics, housing characteristics, and existing housing needs, analyzes future housing needs and constraints, identifies land and financing resources to meet housing needs, and assesses accomplishments for the previous Housing Element goals. The 2014 Mono County Housing Element serves (along with data from the Mono County Land Use Element and the RTP) as the reference source for much of the information presented in this section on Population and Housing.

Mono County Inclusionary Housing Ordinance. During the 1980s and 1990s, Mono County experienced a shortage of affordable workforce and residential population housing. Housing costs were high, private land was scarce, and much of the available supply was owned by second-homeowners. These factors resulted in labor shortages and increased commuting times. To address these concerns, the county Board of Supervisors approved an Inclusionary Housing Ordinance requiring developers to mitigate the impact of development projects on the availability of workforce and affordable housing, either directly or through the payment of fees, dedication of land or similar means. The requirements were encoded in the Mono County Code S15.40.040 (Housing Mitigation Requirements). Largely as a result of recessionary economic conditions nationwide, the County suspended the Housing Mitigation Ordinance in 2011. The ordinance remains suspended as of January 2019, but is periodically reviewed by the Board of Supervisors for reinstatement when economic conditions permit.

5.6.5 SIGNIFICANCE CRITERIA

Appendix G of the California CEQA Guidelines offers the following two criteria for determining the significance of population, housing and employment impacts. A project would have a potentially significant impact if it would:

- a) Induce substantial unplanned population growth in an area, or adversely impact employment or living conditions, in Lee Vining, in the Mono Basin, or in Mono County as a whole?
- b) Displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere?

5.6.6 ENVIRONMENTAL IMPACTS AND MITIGATING POLICIES AND ACTIONS

IMPACT 5.6(a): Would the project induce substantial population growth in an area, or adversely impact employment or living conditions, in Lee Vining, in the Mono Basin, or in Mono County as a whole?

LESS THAN SIGNIFICANT IMPACT. The Tioga Inn Workforce Housing Project proposal calls for the construction of up to 150 bedrooms, in up to 100 units, to house workforce employees and their families. The workforce units would preferentially house employees of the project site (and their families); any units not needed for project employees would be available for occupancy by other Mono County employees. All residents will be renters (none of the units will be sold), and all residents will be employees (whether on the Tioga site or other locations). Using current demographic data¹⁹ it is possible to estimate the number and age profile of the workforce housing residents. Table 5.6-3 profiles Mono County households in terms of the number of persons per unit in rental and owner housing, and Table 5.6-4 summarizes the number of bedrooms per unit countywide.²⁰

¹⁹ 2014 Mono County Housing Element, 2005 Eastern Sierra Housing Needs Assessment, Census Bureau.

²⁰ Eastern Sierra Council of Governments, Eastern Sierra Housing Needs Assessment, March 2005: https://monocounty.ca.gov/sites/default/files/fileattachments/housing_authority/page/3067/easternsierrahousingneedsassessment.pdf

TABLE 5.6-3. Persons per Unit for Rental and Owner Households		
Persons per Unit	Renters (%)	Owners (%)
1-person	30.5%	24.0%
2-person	30.7%	43.5%
3-person	15.8%	13.4%
4-person	11.9%	12.5%
5-person	6.1%	4.1%
6-person	3.0%	1.7%
7+ persons	1.9%	0.9%

TABLE 5.6-4. Bedrooms per Unit – All Households	
Number of Bedrooms	% of Households
0 bedrooms	2.7%
1 bedroom	20.2%
2 bedroom	35.8%
3 bedroom	31.9%
4 bedroom	7.7%
5+ bedrooms	1.7%

The U.S. Census Bureau defines an overcrowded household as a housing unit occupied by more than one person per room (not including kitchens and bathrooms). Units with more than 1.51 persons per room are considered severely overcrowded and indicative of a significant need for housing. Table 5.6-5 profiles overcrowded households in Mono County for both rental and owner-occupied housing²¹, and Table 5.6-6 presents selected housing tenure and occupancy data for Mono County and for the Lee Vining and Mono City CDPs.²²

TABLE 5.6-5. Occupancy and Overcrowding in Unincorporated Mono County Households				
	Renter-Occupied		Owner-Occupied	
	Number	Percent	Number	Percent
TOTAL HOUSEHOLDS	907	--	1,702	--
0.5 or fewer persons per room	479	52%	1,300	76%
0.5 to 1 persons per room	408	45%	375	22%
1 to 1.5 persons per room	0	--	27	1.6%
1.5 to 2 persons per room	20	2%	0	--
2 or more persons per room	0	--	0	--

Table 5.6-5 indicates, based on 2014 Mono County Housing Element data, that there were 20 severely overcrowded renter-occupied households (2% of total) and 27 overcrowded owner-occupied units (1.6% of total); no owner-occupied households were severely overcrowded. The statewide overcrowding rate for households in 2010 was 15.2 percent of all households, significantly higher than for Mono County.

TABLE 5.6-6. 2012-2016 Housing Tenure in Mono County, Lee Vining CDP & Mono City CDP			
	Mono County	Lee Vining CDP	Mono City CDP
Total Occupied Units	4,950	42	57
Rental Occupied Units	2,217	34	7
% Rental Occupied	44.8%	81%	12%

²¹ Mono County Housing Element, 2014: <https://monocounty.ca.gov/housing-authority/page/mono-county-housing-element>

²² Census Bureau, American Community Survey 2012-16 5-Year Estimates, *Housing Tenure & Households by Type & Grandparents*.

Average Rental HH Size	3.26	1.62	** ²³
% Family Households	45.3%	71.4%	52.6%
Average Family HH Size	3.49	2.03	2.93
% Non-Family Households	54.7%	28.6%	47.4%
Average HH Size	2.77	1.74	2.02

Table 5.6-7 below shows the average number of bedrooms per unit for the Lee Vining CDP (2016, see Column 2) and for Mono County as a whole (2014, Column 3), plus an average of the residential unit sizes in Lee Vining and Mono County combined (Column 4). Column 5 shows the distribution of the proposed 150 Tioga Village bedrooms by unit size based on the combined average for Lee Vining and Mono County,²⁴ and Column 6 shows the distribution of the 150 bedrooms as proposed for the Tioga Workforce Village. Column 7 shows the number and distribution of bedrooms (by unit type) proposed in the Tioga Workforce housing project. The proposed Tioga Workforce housing unit sizes combine the average residential unit sizes found in Lee Vining and in Mono County, with adjustments to reflect the anticipated higher number of single and childless project employees in Tioga Village compared with the region as a whole.

TABLE 5.6-7. Estimate of Tioga Workforce Housing Residential Bedrooms by Number and Percent						
1 Number of Bedrooms	2 Lee Vining CDP Average 2016	3 Mono Co. Average 2014	4 Average % - Lee Vining & Mono County	5 Number/% of Tioga Village Bedrooms based on LEE VINING Average	6 Number/% of Tioga Village Bedrooms based on LEE VINING/COUNTY Average	7 Tioga Village Proposal (# bedrooms/% in each unit size)
0 (studio units)²⁵	36 / 54.5%	577 / 4.1%	29.3%	82 bedrooms / 55%	44 / 29%	52 / 35%
1 bedroom	0 / 0%	2032 / 14.6%	7.3%	0 / 0%	11 / 7%	38 / 25%
2 bedroom	8 / 12.1%	5338 / 38.2%	25.2%	18 / 12%	38 / 25%	30 / 20%
3+ bedroom	22 / 33.3%	6,010 / 43%	38.1%	50 / 33%	46 / 17%	30 / 20%
TOTALS				150 Bedrooms	150 Bedrooms	150 Bedrooms

Table 5.6-8 converts the data in Table 5.6-7 Column 7 to determine the overall number of units in each category (i.e., studio units, units with 1 bedroom, etc.). As noted, the workforce units will be designed to accommodate changes in the mix of unit sizes; this design concept will allow workforce housing modifications to respond to changing workforce demographics over time. Demographic research suggests that compared with current workers, the future workforce will be older, more educated, with more females but a declining share of mothers with young children, increasing numbers of unmarried individuals, and more racially and ethnically diverse than the current workforce.^{26, 27} Additional discussion of the flexible unit design concept is provided in the Project Description.

TABLE 5.6-8. Estimate of Tioga Workforce Housing Residential Unit Distribution			
Number of Bedrooms	Number / Percentage of Bedrooms based on Lee Vining + Mono County Combined	Number / Percentage of Units based on Lee Vining + Mono County Combined	Proposed Number / Percentage of Tioga Village Units each Category

²³ The Census Bureau notes that too few sample observations were available to compute an estimate.

²⁴ Census Bureau, American Community Survey 2012-16 5-Year Estimates, *Housing Occupancy data, Lee Vining CDP 2012-2016*: <https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>.

²⁵ Studio Units would count as 1 bedroom units in the Workforce Housing.

²⁶ Buckley, P., D. Bachman, Deloitte Review Issue 21, *Meet the US workforce of the future: Older, more diverse, and more educated*. July 2017: <https://www2.deloitte.com/insights/us/en/deloitte-review/issue-21/meet-the-us-workforce-of-the-future.html>

²⁷ Lerman, R, S. Schmidt, Urban Institute, Dpt. of Labor, *Futurework, Overview of Economic, Social, Demographic Trends Affecting US Labor Market*, undated: <https://www.dol.gov/oasam/programs/history/herman/reports/futurework/conference/trends/trendsl.htm>,

0 (studio units)	44 / 29.3%	44	30 studio units
1 bedroom	11 / 7.3%	11	28 1-bedroom units
2 bedroom	38 / 25.2%	19	22 2-bedroom units
3+ bedroom	57 / 38.1%	20	16 3+bedroom units
Manager Unit	NA	NA	1 4-bedroom unit
TOTALS		94 Units	97 units

Table 5.6-9 below applies the average countywide and Lee Vining CDP rental occupancy and housing tenure rates shown above to the average number of persons per unit for Mono County and Lee Vining combined to estimate the total population in Tioga Village.

TABLE 5.6-9. Tioga Workforce Housing Population Estimates (based on 100 units)							
1 Based on Mono County Averages		2 Based on Lee Vining CDP Averages		3 Based on Average of Mono Co & Lee Vining		4 Based on 100 Units & Avg. Occupancy per Column 3²⁸	
45.3% Family Occupied	43 Family Units	71.4% Family Occupied	67 Family Units	58.4%	55 Family Units	40% Family Occupied	40 Family Units
3.49 Persons per Family HH Unit	150 Family Residents	2.03 Persons per Family HH Unit	137 Family Residents	2.76 Persons per Family HH	153 Family Residents	2.76 Persons per Family HH	110 Family Residents
54.7% Nonfamily Occupied	52 Nonfamily units	28.6% Nonfamily Occupied	27 Nonfamily units	41.6% Nonfamily Occupied	40 Nonfamily Units	60% Nonfamily Occupied	60 Nonfamily Units
2.77 Persons per nonfamily HH Unit	143 Nonfamily Residents	1.74 Persons per Non-family Unit	47 Nonfamily Residents	2.25 Persons per Non-family Unit	89 Nonfamily Residents	2.25 Persons per Nonfamily Unit	135 Persons per Nonfamily Unit
TOTAL POPULATION	293 Residents		194 Residents		254 Residents		245 Residents

As a cross check for the population estimates in Table 5.6-9, it is noted that the U.S. Department of Housing and Urban Development (HUD) has adopted an occupancy standard of 2 persons per bedroom as a reasonable standard under the Fair Housing Act.²⁹ Using this as a basis, the 150 Tioga Workforce Housing bedrooms would have a population of 300 people. This bedroom-based estimate of 300 residents would be slightly lower than the unit-based estimate of 310 residents using average rental occupancy rates in Mono County as a whole, much higher than the unit-based average of 194 residents using data for the Lee Vining CDP, and about 20% higher than the population estimate based on an average of Mono County and Lee Vining family and non-family occupancy rates as well as the estimate based on the project proposal. Noting again that the number of Tioga Workforce Village units and total population are expected to vary over time in response to changing demographics, the bedroom-based HCD occupancy standard would represent a conservative estimate of the potential additional population on the project site (i.e., 300 residents).

The Mono County General Plan EIR provides community population projections through the year 2040 as prepared by the California Department of Finance (DOF). The DOF projections were used by the County to prepare the Draft Regional Transportation Plan. DOF projections show total population in Mono County increasing from 14,202 in 2010 to 17,614 in 2040, a growth rate of 24% over 30 years. The DOF projections assumed that the unincorporated area would continue to represent about 43% of the total countywide population, and that the population distribution in unincorporated community areas would remain similar to that seen in 2010. Table 5.6-10 shows the DOF population

²⁸ The estimate assumes that all 2 and 3+ units are family units and all studio and 1-bedroom units are nonfamily units.

²⁹ National Fair Housing Advocate Online, *HUD adopts Keating Memo standard for occupancy limit cases, 1999*: <https://fairhousing.com/%20news-archive/advocate/1999/hud-adopts-keating-memo-standard-occupancy-limit-cases>.

projections for Mono County as a whole, Mammoth Lakes, and the Mono Basin (including the Lee Vining and Mono City CDPs). As shown, the DOF forecasts anticipate that the population of Lee Vining will increase by 52 residents (from 222 to 274) by 2040, and the population of Mono City will increase by 41 residents (from 172 to 213). Note, however, that the population of Lee Vining decreased from 222 in 2010 to 89 as of 2016.

TABLE 5.6-10: Department of Finance Population Projections by Community Areas, 2010-2040³⁰					
	2010 Pop.	% of 2010 Pop.	2020 Pop.	2030 Pop.	2040 Pop.
Mono County – Total	14,202	100 %	15,037	16,261	17,614
Mammoth Lakes – Total	8,234	58 %	8,721	9,431	10,216
County – Total	5,968	42 %	6,316	6,830	7,398
Mono Basin					
Lee Vining CDP	222	3.71	234	253	274
Mono City CDP	172	2.88	182	197	213

The 2015 Mono County *General Plan Land Use Element* assesses future housing development through 'build-out' by analyzing the acreage of various land use designations and applying factors to determine the number of dwelling units and population that may result. The County considered several scenarios, including a 'theoretical maximum' build-out (development of 100% of the total units that could potentially be built in each planning area), and a 'practical' build-out that adjusted development based on known constraints (hazards, infrastructure and agricultural preserves).

Under the 'theoretical maximum' scenario, the county estimated a maximum buildout of 933 dwelling units in the Mono Basin; the County's estimate using the 'practical' scenario was for 908 dwelling units in the Mono Basin at build-out. The County then converted the housing unit forecasts into population forecasts by applying information from the Mono County Housing Element concerning household size (occupied units only) in the various unincorporated communities. With this adjustment, the 'theoretical maximum' build-out population in Mono Basin was estimated by the County to be 2,574 (the countywide theoretical maximum buildout estimate was 48,702) and the 'practical' buildout population for Mono Basin was estimated to be 2,478 (37,657 countywide).³¹

The County then refined the estimates for each planning area. The refinements reflected changes in land use entitlements (including repeal of the Conway Ranch Specific Plan) and use of a GIS/polygon-based analysis to assess land suitability and parcel characteristics in Long Valley, Benton Valley, Oasis, Sonora and the lands around Mammoth Lakes. Table 5.6-11 summarizes the final 2015 Land Use Element buildout population estimates for the Mono Basin and for the county as a whole, and compares the 2015 projections with the forecasts that were adopted in the 2001 General Plan Land Use Element. As shown, projections for buildout population and housing were substantially higher in the 2001 Land Use Element than those adopted with the 2015 Land Use Element update.

TABLE 5.6-11: Comparison of 2001 & 2015 LUE Maximum Build-Out Estimates for Mono County & Mono Basin						
Community	2010 Census Population	2001 LUE Build-out		2015 LUE Build-out		% Change Max Population 2001-2015
		Max Dwellings	Max Population	Max Dwellings	Max Population	
Mono Basin (Lee Vining,	394	1601	4,371	933	2,574	-41.1%

³⁰ Table drawn from Mono County RTP which used the following sources: Calif. Dept. of Finance (www.dof.ca.gov), U.S. Census Bureau (2010 Census, American FactFinder). DOF subsequently adjusted the Mono County forecast slightly downward (the 2040 forecast is now 16,823 instead of 17,614); the changes were not sufficiently large to revise the RTP and are not reflected herein.

³¹ Mono County General Plan EIR. The EIR notes that all County build-out population estimates exceed the DOF population forecast, mainly because DOF forecasts provide snapshots at selected points of time, while the General Plan 'build-out' forecasts extend into the future with no set time frame. Both DOF and the County use assumptions about future events that may not occur.

Mono City)						
Unincorporated Total	5,968	27,947	65,761	21,138	48,702	-25.9%

Using the *Land Use Element* build-out estimates as a basis for comparison, the conservative project population estimate of 300 residents in the Tioga Workforce Housing project would represent approximately 11.6% of the total adopted population increases allowed in Mono Basin through buildout under the theoretical maximum build-out scenario, and 12.1% of the total increase allowed under the 'practical' build-out scenario.^{32 33}

Employment. The Tioga Mart development currently employs 37 individuals. Roughly two-thirds of the existing employees (25 of the 37) work in the Deli; an additional 10 employees work in the convenience store. Two additional employees provide maintenance and support. Census Bureau data do not provide current employment estimates for Lee Vining. However, Data USA estimates that Lee Vining had a total of 74 employees as of 2016 (a 6.33% decline from 2015), with the majority of employment in 'Other Services (primarily accommodation and food service), Professional (including Scientific and Technical Services), and Public Administration; in Lee Vining, these categories employ respectively 7.4, 4.0, and 2.3 times more people than average in locations of this size.³⁴

At buildout, the project applicant anticipates that approximately 187 employees will work on the project site – a five-fold increase. Table 5.6-12 shows the allocation of employees by use on the project site at present and at buildout.

TABLE 5.6-12. Existing and Projected Employment on the Tioga Project Site		
	2018 Employees	Buildout Employment
Convenience Store	10	10
Deli	25	20
Maintenance and Support	2	1
Full-Service Restaurant	0	35
Hotel	0	120
Workforce Housing	0	1
Gas Station	0	0
Propane Services	0	0
TOTAL	37	187

As noted, employment in the deli is expected to drop from 25 at present to 20 at buildout. The applicant intends to scale back deli service by shifting some of the existing restaurant demand to the full-service restaurant when that facility opens. Music events will continue to be held on the yard area between the convenience store and SR 120.

The reduction in maintenance (1 fewer employee) reflects the expectation that maintenance and support services will in the future be provided for each use (rather than project-wide, as at present). The most significant employment gains will occur with the previously approved hotel (reflecting an estimated 1 employee for each of the 120 guest rooms). Total food service employment is expected to increase from 25 at present to 55 at buildout. Only 1 new employment position is directly related to the proposed workforce housing project (and other proposed improvements); the new position would be for a resident manager of the workforce housing units.

³² The County did not break down the maximum or practical population forecasts into subareas of the Mono Basin.

³³ These estimates are considered conservative, because they are compared with the Census data for year round residents; in practice, 41% of Lee Vining residents are seasonal occupants, primarily in residence during the summer months. The project contribution to buildout growth would likely be lower than the cited numbers for this reason.

³⁴ Data USA (a service of Deloitte USA): <https://datausa.io/profile/geo/lee-vining-ca/>.

Based on these data, the 37 existing Tioga employees represent roughly half of all employment in Lee Vining. The approved but as yet undeveloped Tioga elements would employ an additional 150 individuals (roughly twice the existing employment in Lee Vining). The proposed 1 new employment position associated with the current workforce housing project would have a negligible impact on employment (existing and future) in Lee Vining.

Major components of the overall Tioga complex are expected to scale back during the winter months, as at present. However, the opening and closing dates may extend further into the shoulder seasons, and some seasonal facilities may stay open through the year. Seasonal facilities are expected to include the hotel, the full service restaurant and the deli. The convenience store and gas station will continue to remain open throughout the year. With the seasonal closures, winter employment in the onsite facilities may drop from an estimated 187 positions during summer months to as few as 20 mid-winter positions (including the convenience store, the hotel, workforce housing management, and project maintenance services). Workforce housing units would remain open year-round, and any unoccupied units would be made available to offsite workers, such as ski industry employees.³⁵

As shown in Table 5.6-13 below, a total of 3,860 individuals were employed in the accommodation and food service sector (60% of total) throughout Mono County as of 2016.

TABLE 5.6-13. Mono County Employment Total and Top Employment Sectors, 2016³⁶	
	2016 Employment (#/%)
Mono County Total	6461 (100%)
Accommodation & Food Service	3860 (60%)
Retail	686 (10.6%)
Health Care	479 (7.4%)
Real Estate	340 (5.3%)
Administration	247 (3.8%)
Construction	234 (3.6%)

The 2017 Housing Needs Assessment includes a discussion of Mono County job opportunities and household income. The data indicate that the vast majority of jobs that are offered in Mono County are in the lower paying industry category of leisure and hospitality. Moreover, many of the positions are seasonal in nature and largely filled (55-65%) by seasonal residents.

According to the Bureau of Labor Statistics, hotel desk clerks in the hospitality sector nationwide had a mean hourly wage of \$11.66 (mean annual income \$24,250) as of May 2017; the mean hourly wage of traveler accommodation workers was \$11.63 (mean annual income of \$24,190). California has the highest employment levels in the hospitality occupations (26,510 jobs), followed by Texas (21,170), Florida (19,750), New York (10,520) and Pennsylvania (8,400). Hospitality sector wages are about 19% higher in California, with an hourly mean of \$13.89 and an annual mean wage of \$28,890.³⁷ Among nonmetropolitan areas, the eastern Sierra region of California has the highest employment in this occupation, with 20.45 positions per 1000 jobs (the north coast of Oregon is second highest, with 12.33 positions per 1,000 jobs). However, the eastern Sierra region does not fall within the 5 top-paying nonmetropolitan areas; Hawaii is highest with a mean annual wage of \$39,220, followed by Nantucket Island (\$31,290), North Dakota (\$30,980) and northwest Colorado (\$30,980). According to the County's 2017 Housing Needs Assessment, median earning of workers

³⁵ Note that 11 of the existing employees at Tioga Mart already work in the ski industry during the winter months.

³⁶ U.S. Census Bureau, 2016 Mono County Business Patterns: <https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>.

³⁷ Dept. of Labor, Bureau of Labor Statistics. *Occupational Employment and Wages*, May 2017: <https://www.bls.gov/oes/current/oes434081.htm>

in the June Lake CDP (averaging \$26,830 per year) were lower than the county median (\$34,744). Due largely to the cost of housing, seasonal workers in Mono County hold an average of 1.4 jobs.

Mono County has a comparatively high overall cost of living index rating of 133 (100 is the US average). Housing is by far the highest Mono County cost of living component (with an index of 192), followed by health (114), and transportation (106). Groceries are near the national norm (with a Mono County index of 102.6), and utilities are lowest (92).³⁸

With respect to health care, it is not known at this time whether the Tioga employees would be provided with or have access to health insurance programs. The Bureau of Labor Statistics indicates that as a whole, 67% of private employers offered medical insurance to their employees as of 2016.³⁹ However, the numbers are much lower for service workers: 42% of service workers in the private sector have access to insurance programs. Of this group, 62% choose to participate. Thus, on average, only 26% of all service workers in the private sector are covered by medical care benefits.⁴⁰

The Tioga project is intended to offset the disproportionately high regional cost of housing by providing housing units to project employees at affordable rents (anticipated to be at or below 30% of household income). Residents' utility costs would be reduced through the provision of onsite solar panels, onsite propane service, and a subsurface wastewater irrigation system to offset the cost of using potable water for landscaping irrigation during summer months.

Summary. Approval and implementation of the proposed Tioga Workforce Housing project would increase the population in the Lee Vining CDP by more than 400% (from approximately 90 residents at present to 390 residents with the project). This represents a significant increase over current population levels, but well within the range of planned General Plan population forecasts for the Mono Basin. The one new job position related to the current project (i.e., the housing manager) would not represent a significant increase in local employment. Future occupants of the workforce housing project are anticipated to be employed primarily in the leisure and hospitality sector, which is a lower paying industry. These residents would benefit from availability of affordable housing, and from access to reduced utility costs as a result of onsite energy conservation features. Based on data presented in this section, it is concluded that the project would induce substantial population growth, but would not induce growth beyond planned population or housing or employment forecasts for this region. Impacts would be ***less than significant***, and no mitigation is required.

MITIGATION MEASURES – POPULATION GROWTH

POP5.6(a) (Population Growth): The project does not have potential to induce population or employment or housing growth beyond planned levels for the region, and no mitigation measures are required.

IMPACT 5.6(b): Would implementation of the proposed Tioga Workforce Housing Project displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere?

LESS THAN SIGNIFICANT IMPACT. Project approval would result in the elimination of 6 existing cabin units currently located a short distance south of the promontory flagpole. These six units are not part of the approved Tioga Inn

³⁸ Sperling's Best Places, https://www.bestplaces.net/cost_of_living/county/california/mono

³⁹ Note that the percentage had risen from 67% to 69% as of 2018: <https://www.bls.gov/opub/ted/2018/69-percent-of-private-industry-workers-had-access-to-medical-care-benefits-in-march-2018.htm>

⁴⁰ Bureau of Labor Statistics, Medical care benefits: Access, participation, and take-up rates (Table 1), March 2018: <https://www.bls.gov/news.release/pdf/ebs2.pdf>

Specific Plan. All are currently occupied on a seasonal basis by onsite employees. The 6 existing units would be replaced by new workforce housing as part of the overall workforce housing village, and the existing residents would be relocated to the new housing complex. There would be no requirement for construction of replacement housing outside of the project boundaries, and no employees would be required to seek offsite housing.

The project would have no impact on the existing 8 hilltop workforce housing units located in the southwestern portion of the property. ***No significant impacts*** are foreseen, and no mitigation measures are required.

MITIGATION MEASURES – HOUSING DISPLACEMENT

POP5.6(b) (Housing Displacement): No residents would be displaced to offsite housing by the project, and there would be no need to construct replacement housing elsewhere. No mitigation measures are required.

5.6.7 SIGNIFICANCE AFTER MITIGATION

All potential project impacts associated with population, housing and employment on the site would be less than significant.

TIOGA WORKFORCE HOUSING PROJECT DRAFT SUBSEQUENT EIR



SECTION 5.7 PUBLIC HEALTH, SAFETY, HAZARDS and HAZARDOUS MATERIALS

5.7.1 INTRODUCTION AND SUMMARY

This section describes human health, safety, hazards and hazardous materials on the Tioga project site, and potential impacts that may occur with implementation of the proposed workforce housing project. NOP comments that pertained to health, safety and hazards included questions about pedestrian and traffic safety (addressed in EIR §5.11, Traffic and Circulation), impacts related to Lee Vining Airport (addressed in this section and in §5.5, Land Use, relative to growth potential), and whether the Lee Vining fire and emergency response resources are adequate to serve the project. Key findings are summarized below.

SUMMARY OF IMPACTS & MITIGATIONS FOR HEALTH, SAFETY, HAZARDS, HAZARDOUS MATERIALS

IMPACT SFTY 5.7(a):	<u>HAZARDOUS MATERIALS RELEASE</u>
Mitigation:	No Mitigation Required.
Significance:	Less than Significant Impact
IMPACT SFTY 5.7(b):	<u>HAZARDOUS MATERIALS SITES</u>
Mitigation:	No Mitigation Required
Significance:	Less than Significant Impact
IMPACT SFTY 5.7(c):	<u>AIRPORT HAZARDS</u>
Mitigation SFTY 5.7(c):	Compliance with FAA and California Dept. of Aeronautics Regulations
Significance:	Less than Significant with Mitigation
IMPACT SFTY 5.7(d):	<u>EMERGENCY RESPONSE</u>
Mitigation SFTY 5.7(d):	Evacuation Plan for use by residents and businesses in case of natural disaster.
Significance:	Less than Significant Impact
IMPACT SFTY 5.7(e):	<u>WILDLAND FIRE RISKS</u>
Mitigation SFTY 5.7(e-1):	Implementation of Wildland Fire Protection Measures
Mitigation SFTY 5.7(e-2):	Multiple hydrants to reach all site areas, with breakaway design
Significance:	Less than Significant Impact with Mitigation
IMPACT SFTY 5.7(f):	<u>AVALANCHE, LANDSLIDES, STORMS, ROCKFALL, VOLCANIC ACTIVITY</u>
Mitigation:	No Mitigation Required
Significance:	Less than Significant Impact

5.7.2 KEY TERMS USED IN THIS SECTION

Airport Safety and Compatibility.¹ Airport safety and compatibility are determined through evaluation of locations around an airport that are at greatest risk of an aircraft accident. Proper safety and airspace protection minimizes the risks associated with potential aircraft accidents and avoids flight hazards that interfere with aircraft navigation. Approximately 65% of general aviation takeoff/landing accidents occur during the initial climb phase, when aircraft engines are under greatest stress. The remaining 23% occur as the aircraft approaches the runway for landing; common

¹ California Department of Transportation, Division of Aeronautics, *Airport Land Use Planning Handbook*, 2011.

causes during this phase include pilot misjudgment, poor visibility, unexpected downdrafts, or tall objects beneath the final approach.

Cortese List. California Government Code requires the Dept. of Toxic Substances Control (DTSC) to compile and regularly update lists of hazardous sites and conditions.² Collectively, these data represent the “Cortese List” and include: (a) hazardous waste facilities where DTSC has taken or contracted for corrective action because a facility owner/operator has failed to comply with an order, or because DTSC determined that immediate corrective action was necessary; (b) all land designated under HSC §25220 as a hazardous waste property or border zone property; and (c) all information received by DTSC per HSC §25242 on hazardous waste disposals on public land. In turn, HSC §25242 requires any city, county, or state agency that owns or leases land to notify DTSC if it believes that an unauthorized disposal of hazardous waste has occurred on the site; and to identify all hazardous substance release sites subject to a response. The Cortese List includes sites regulated by DTSC and SWRCB. Cortese-listed sites in the planning area are discussed in Impact 5.7(b); there are no listed sites on the Tioga property.

State Responsibility Area (SRA). PRC §4102 defines “state responsibility areas” as areas of the state in which the financial responsibility for preventing and suppressing fires has been determined by the State Board of Forestry and Fire Protection to be primarily the responsibility of the State.

5.7.3 BASELINE OVERVIEW

5.7.3.1 Hazardous Materials Transport, Use, Disposal, and Releases

The Mono County *Emergency Operations Plan* (EOP)³ defines a hazardous material as ‘any substance that is flammable, combustible, corrosive, poisonous, toxic, explosive or radioactive.’ Mono County is vulnerable to the release of hazardous materials as a result of transportation accidents, and spills and leaks of stored hazardous materials. The degree of risk to the environment, human health and property depends on the type, location and quantity of the material released.

Areas at higher risk of a release include communities located near roadways that are frequently used for transporting hazardous materials, and jurisdictions with industrial facilities that use, store, or dispose of such materials. Industrial facilities in Mono County are fairly limited. The 2015 *General Plan Land Use Element* zoned only 81 acres countywide for industrial use, plus an additional 22 acres zoned for Industrial Park. The Mono County *EOP* indicates that there are no production facilities for the manufacture of hazardous materials in the county, nor are there commercial ‘Treatment Storage Disposal’ facilities. Hazardous materials stored and used in Mono County include:

- Underground fuel storage tanks at service stations (such as the Tioga Mart gas station), airports (no fuel is stored at Lee Vining Airport⁴) and public agency storage facilities owned by Mono County, USFS, the California Highway Patrol (CHP), Caltrans facilities and the Town of Mammoth Lakes;
- Private above-ground storage tanks of gasoline, diesel and liquefied petroleum gas (LPG) at homes and ranches;
- Dynamite and other blasting products at Caltrans maintenance yards and ski resorts;
- Propane and LPG storage tanks near major communities, used by distributors;
- Large quantities of scale, brine and isobutane used at the geothermal plant along with solvents, lubricants, and paints used in maintenance and repair;
- Refuse at the three solid-waste landfill sites and six transfer stations that are managed by Mono County;
- Limited amounts of compressed gases used for industrial purposes (chlorine, acetylene, oxygen, argon, nitrogen)
- Limited amounts of pesticides, herbicides, and paint products; and
- Compressed chlorine gas stored at and used by Mammoth Community Water District for water treatment.

² CalEPA DTSC website: <http://www.calepa.ca.gov/sitecleanup/CorteseList/SectionA.htm>. Note that the Abandoned Site Assessment Program is no longer active.

³ Mono County: https://volcanoes.usgs.gov/vsc/file_mgr/file-133/mono_county_oa_eop_2012.pdf.

⁴ Online airport information: <http://www.fltplan.com/Airport.cgi?O24>.

The threats associated with hazardous materials have been reduced through a wide range of laws and regulations as profiled in the regulatory setting (see §5.7.4). The Mono County Health Department has been certified by the California Environmental Protection Agency (CalEPA) as the Certified Unified Program Agency (CUPA) for implementing the County's hazardous materials programs which include both an Underground Storage Tank (UST) and Aboveground Storage Tank (AST) program. All known underground storage tanks are inspected annually.

Per California HSC §25503.5, all businesses that manage hazardous materials and/or wastes in quantities at or above 55 gallons (liquids), 200 cubic feet (compressed gases) and/or 500 pounds (solids) are required to prepare and submit a Hazardous Materials Business Plan. Hazardous materials haulers and users are listed with the Health Department and regulated and monitored by the County.⁵ The Office of Emergency Services (OES, in the Mono County Sheriff's Office) administers an Emergency Response Plan and Inventory Program. Caltrans and CHP are the primary agencies responsible for response to a hazardous materials spill on major highways during transportation, and the fire departments routinely maintain records and check regulatory compliance for stored quantities of hazardous materials. The Tioga Gas Mart operates under CUPA Permit #655, which is reissued annually following compliance review.

Policies to address hazardous waste spills are provided in the County's Integrated Waste Management Plan (IWMP), and household hazardous wastes (oil, paint & batteries) are collected at County-operated CUPA facilities managed by the Public Works Department. The County's Solid Waste Management Plan includes waste reduction practices that reduce, avoid or eliminate the need for off-site hazardous waste facilities (source reduction, recycling and treatment), and the Hazardous Waste Management Element of the Solid Waste Management Plan provides objectives, policies and potential actions to implement a hazardous waste management and reduction program for County generators.

5.7.3.2 Airport Hazards

There are three public airports in Mono County (Lee Vining Airport, Mammoth-Yosemite Airport and Bryant Field in Bridgeport) as well as several helipads. The Lee Vining Airport, located directly adjacent to the easternmost boundary of the Tioga Mart site, is owned LADWP, and managed under a long-term lease with Mono County. The airport is designated as a "Limited Use-Recreational Access" facility, serving only general aviation uses. The airport has a pilot-activated lighting system and a navigational beacon but no aviation fuel. The California Aviation System Plan (CASP) identifies all three airports in Mono County as high priority eastern Sierra facilities in terms of system capacity and safety enhancement. Land use compatibility issues associated with the project proposal and Lee Vining Airport are discussed in EIR §5.5 (Land Use).

5.7.3.3 Emergency Response & Evacuation

Emergency Operations Plan (EOP). This is the primary planning document for ensuring a coordinated response to emergency events in Mono County. The EOP provides detailed guidelines for preparation (actions taken before an emergency to optimize readiness), response (including pre-emergency actions, actual emergency response actions, and sustained emergency response actions as needed), recovery (to access assistance funds and programs) and mitigation (to avoid or reduce the impact of future emergency events).

The EOP describes duties at the state and local level. State responsibilities include the power to: a) create, amend, or rescind rules or directives to provide the necessary supplies and equipment; b) direct state and local law enforcement officers to incorporate National Guard units; c) prescribe evacuation routes, transportation modes, and destinations; d) control ingress and egress and the occupancy of premises in a disaster area; and e) order, direct, compel, or recommend an evacuation. The fire department generally decides whether to alert the public and evacuate an area; the authority to carry out these actions usually rests with law enforcement. The evacuation notice can be advisory (when the threat to lives is not yet imminent), or mandatory. Primary evacuation routes in Mono County include US 395 (providing access to western Nevada and communities in southern California), US 6 (providing access to central Nevada), and SR 120 and SR

⁵ Mono County Health Department: <http://monohealth.com/environmental-health/page/electronic-reporting-and-hazardous-materials-business-plan-requirements>.

108 which cross the Sierra Nevada and provide summer access to the Central Valley and the coast. All of these major routes are subject to closure by avalanches, landslides, snow, fog, and flooding.

Emergency Medical Services and Facilities.⁶ Oversight of the Emergency Medical Services (EMS) system is provided by a local EMS agency known as Inland Counties Emergency Medical Agency (ICEMA), which includes participation by San Bernardino, Inyo, and Mono counties. In a recent review, it was recommended that Mono County expand its system reporting, utilize 'Advanced EMT' service levels, transition from Quality Assurance to a Quality Improvement process, and implement medical priority dispatch and pre-arrival instructions countywide. The long-term goal is to integrate EMS with public health and healthcare delivery to create 'Community Paramedicine.' Mono County is served by one critical access hospital in Mammoth Lakes (about 30 miles south of Tioga site) and a tribal clinic in Walker (about 55 miles to the north). With 3,132 square miles and mountainous terrain, fire and EMS providers are challenged to deliver timely fire protection and emergency medical services. All fire departments outside of the Town of Mammoth Lakes have volunteer staffing; the availability of first responders has an impact on Mono County Paramedics if medical first response is unavailable or committed to other activities.

5-7-3-4 Fire Hazards

Fire Protection Services. The Mono County MEA (Ch. IV, Services) notes that fire protection for community areas is provided by local volunteer FPDs. Wildland fires on private property are the responsibility of the California Department of Forestry and Fire Protection ('CalFire'), and wildland fires on public lands are the responsibility of the USFS and BLM. The 11 County fire districts have mutual aid agreements with each other and with federal fire protection agencies. In order to serve new development, the FPDs have implemented mitigation fees to ensure that new development pays for the equipment and capital improvements necessary to protect new development. The project site falls within the service area of both CalFire and the Lee Vining FPD.

CalFire. The project site (like the vast majority of privately owned lands in Mono County) is in the State Responsibility Area (SRA), where the State has primary financial responsibility for preventing and suppressing fires. California recently updated Fire Safe Standards for wildland fire protection in SRA development areas. The regulations address emergency access, signage, building numbering, private water supply reserves for emergency fire use, and vegetation modification. Mono County's Fire Safe Regulations have the same practical effect as the Cal Fire regulations.

During February 2015, Cal Fire adopted new Fire Safe Regulations pursuant to Rule 1270.⁷ The regulations update the basic wildland fire protection standards and significantly expand the scope of fire safety requirements pertaining to emergency access, signing and building numbering, private water supply reserves for emergency fire use, and vegetation modification. The expanded regulations reflect Forestry Board findings that California fire agencies are no longer able to assure fire protection. Of the 5,300+ homes destroyed by wildfire since 1923, nearly 10% (500) were lost during the single year of 2013; in whole, more than 2 million residents now live in wildland areas of the state. The updated regulations establish new "defensible space" measures as one means to bridge the gap between fire protection demand and available manpower, equipment and funding.

Lee Vining Fire Protection District (LVFPD). The Lee Vining Fire Protection District has a single station located in downtown Lee Vining (note that Mono City has a separate Fire Protection District). The LVFPD service area encompasses about 4.9 square miles of land area that extends from Oil Plant Road on the south (about 2 miles south of the project site) to Mono Lake County Park area on the north. The District provides emergency medical response (6 of the volunteer firefighters are qualified EMTs), but the closest Advanced Life Support ambulances are in Bridgeport and June Lake.⁸ LVFPD has no adopted fire ordinances.⁹

⁶ Mono County, 2012 Emergency Medical Services Assessment. Prepared by Fitch & Associates, LLC, August 2012

⁷ CAL FIRE, *Rule 1270 Fire Safe Regulations – Administration Section*, February 5, 2014

⁸ Mono County LAFCO, *Lee Vining FPD Municipal Services Review*, February 2009: https://www.monocounty.ca.gov/sites/default/files/fileattachments/local_agency_formation_commission_lafco/page/3562/leeviningfireprotectiondistrict_02.2009.pdf.

⁹ Tom Strazdins, Chief, LVFPD, personal communication 25 July 2018.

The Insurance Service Office (ISO) uses a credit rating system to determine fire insurance rates in different areas. The grading system compares the fire protection that is needed in an area with the fire protection that is locally available. A rating of "1" represents the highest level of fire protection and lowest fire hazard, while a rating of "10" indicates the lowest level of fire protection. Where two ISO ratings are given, the lower (better) number applies to properties that are located within 1000 feet of a fire hydrant, and the higher applies to properties that are located beyond 1000 feet of a hydrant ('rural' areas). The Lee Vining Fire Protection District has an ISO rating of 4/6.

Emergency Medical Services (EMS).¹⁰ The EMS Program provides emergency medical services to people living in or passing through Mono County, and responds to requests for emergency medical service in other areas through mutual aid agreements. EMS also provides administrative direction for the County's Paramedic Firefighter Program in coordination with Fire District first responders and volunteer ambulances. EMS is solely responsible, by ordinance, for all emergency medical calls and ambulance inter-facility transfers in the county. Mutual aid agreements with surrounding counties extend the area of coverage in times of need. As noted, the County has 11 fire departments that provide first responder medical aid, extrication and manpower support to the Paramedics.

Sierra Nevada Conservancy (SNC, or Conservancy) Fire Threat Assessment.¹¹ In the 5th of a series of overall health assessments for the 25 million-acre Sierra Nevada region, the SNC looked at wildfire in terms of both negative and positive impacts. The report sought to understand how fire intensity, size, and location are affecting the long-term health of natural systems. The Conservancy notes more than two-thirds of the 17.5 million-acre SNC region is classified as 'High and Above' fire threat. However, the East Subregion (including Mono County) more closely parallels statewide trends with just under half of the total area in that category.

Wildfire Hazards and Fire Hazard Zones. Wildfires are among the most prevalent natural hazards in Mono County due to their repeated occurrence, the damage caused, and the geographically widespread nature of the hazard. Cal Fire, through its Fire and Resources Assessment Program (FRAP), periodically assesses California wildlands in terms of fire potential. In its most recent assessment in 2003, FRAP used housing density classes (see Table 5.7-3) to analyze areas exposed to significant fire risk. All classes other than wildland are considered wildland-urban interface, the area where the threat from wildland fires is greatest. In Mono County, most community areas would qualify as urban. Areas surrounding the communities and some of the more widely dispersed residential areas would qualify as interface. The Tioga project site has a 'moderate' fire hazard rating on the CalFire Fire Resource Assessment Program Fire Hazards Severity Map.¹² This classification is echoed in Cal Fire mapping of fire hazard severity zones, which depict most of the lands in Mono County (including the Tioga property) are having moderate fire hazard.¹³

Public Resources Code (PRC) §4290 and §4291. PRC §4290 (enacted in 1989) and 4291 (enacted in 1991) give to CalFire the authority to adopt SRA fire safety standards and implementing regulations that apply to all residential, commercial, and industrial building construction within State Responsibility Areas. As shown in Table 5.7-1, the codes address standards for fire equipment access, signage, minimum private water supply reserves requirements for emergency fire use, and fuel breaks and greenbelts.

TABLE 5.7-1: CalFire Fire Safe Regulations

Fire Safe Regulation PRC §4290

(a) The board shall adopt regulations implementing minimum fire safety standards related to defensible space which are applicable to state responsibility area lands under the authority of the department. These regulations apply to the perimeters and access to all residential, commercial, and industrial building construction within state responsibility areas approved after January 1, 1991. The board may not adopt building standards, as defined in Section 18909 of the Health and Safety Code, under the authority of this section. As an integral part of fire safety standards, the State Fire Marshal has the authority to adopt regulations for roof coverings and openings into the attic areas of buildings specified in Section 13108.5 of the Health and Safety

¹⁰ http://www.monocounty.ca.gov/departments/fire_rescue/fire_rescue.html

¹¹ SNC, *System Indicators, Fire Threat, Final Report*. September 2013.

¹² CalFire Fire Resource Assessment Program: http://frap.fire.ca.gov/webdata/maps/mono/fhszlo6_1_map.26.pdf.

¹³ CAL FIRE Wildland & Building Codes, Mono Co. FHSZ maps, http://www.fire.ca.gov/fire_prevention/fhsz_maps_mono.php.

Code. The regulations apply to the placement of mobile homes as defined by National Fire Protection Association standards. These regulations do not apply where an application for a building permit was filed prior to January 1, 1991, or to parcel or tentative maps or other developments approved prior to January 1, 1991, if the final map for the tentative map is approved within the time prescribed by the local ordinance. The regulations shall include all of the following:

- (1) Road standards for fire equipment access.
- (2) Standards for signs identifying streets, roads, and buildings.
- (3) Minimum private water supply reserves for emergency fire use.
- (4) Fuel breaks and greenbelts.

(b) These regulations do not supersede local regulations which equal or exceed minimum [state] regulations.

Fire Safe Regulation PRC §4291

(a) A person who owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining a mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or land that is covered with flammable material, shall at all times do all of the following:

(1) **Maintain defensible space** of 100 feet from each side and from the front and rear of the structure, but not beyond the property line except as provided in paragraph (2). The amount of fuel modification necessary shall take into account the flammability of the structure as affected by building material, building standards, location, and type of vegetation. Fuels shall be maintained in a condition so that a wildfire burning under average weather conditions would be unlikely to ignite the structure. This paragraph does not apply to single specimens of trees or other vegetation that are well-pruned and maintained so as to effectively manage fuels and not form a means of rapidly transmitting fire from other nearby vegetation to a structure or from a structure to other nearby vegetation. The intensity of fuels management may vary within the 100-foot perimeter of the structure, the most intense being within the first 30 feet around the structure. Consistent with fuels management objectives, steps should be taken to minimize erosion. For the purposes of this paragraph, "fuel" means any combustible material, including petroleum-based products and wildland fuels.

(2) **A greater distance than that required under ¶1 may be required** by state law, local ordinance, rule, or regulation.

Clearance beyond the property line may only be required if the state law, local ordinance, rule, or regulation includes findings that the clearing is necessary to significantly reduce the risk of transmission of flame or heat sufficient to ignite the structure, and there is no other feasible mitigation measure possible to reduce the risk of ignition or spread of wildfire to the structure. Clearance on adjacent property shall only be conducted following written consent by the adjacent landowner.

(3) **An insurance company that insures an occupied dwelling or occupied structure may require a greater distance** than that required under paragraph (1) if a fire expert, designated by the director, provides findings that the clearing is necessary to significantly reduce the risk of transmission of flame or heat sufficient to ignite the structure, and there is no other feasible mitigation measure possible to reduce the risk of ignition or spread of wildfire to the structure. The greater distance may not be beyond the property line unless allowed by state law, local ordinance, rule, or regulation.

(4) **Remove that portion of a tree that extends within 10 feet of the outlet of a chimney or stovepipe.**

(5) **Maintain a tree, shrub, or other plant adjacent to or overhanging a building free of dead or dying wood.**

(6) **Maintain the roof of a structure free of leaves, needles, or other vegetative materials.**

(7) **Prior to constructing a new building or structure or rebuilding a building or structure damaged by a fire in an area subject to this section, the construction or rebuilding of which requires a building permit, the owner shall obtain a certification from the local building official that the dwelling or structure, as proposed to be built, complies with all applicable state and local building standards**, including those described in subdivision (b) of [CGC §51189], and shall provide a copy of the certification, upon request, to the insurer providing course of construction insurance coverage for the building or structure. Upon completion of the construction or rebuilding, the owner shall obtain from the local building official, a copy of the final inspection report that demonstrates that the dwelling or structure was constructed in compliance with all applicable state and local building standards, including those described in subdivision (b) of CGC §51189, and shall provide a copy of the report, upon request, to the property insurance carrier that insures the dwelling or structure.

(b) A person is not required under this section to manage fuels on land if that person does not have the legal right to manage fuels, nor is a person required to enter upon or to alter property that is owned by any other person without the consent of the owner of the property.

(c) (1) Except as provided in §18930 of the Health and Safety Code, **the director may adopt regulations exempting a structure** with an exterior constructed entirely of nonflammable materials, or, conditioned upon the contents and composition of the structure, the director may vary the requirements respecting the removing or clearing away of flammable vegetation or other combustible growth with respect to the area surrounding those structures.

(2) **An exemption or variance under ¶1 shall not apply unless and until the occupant of the structure, or if there is not an occupant, the owner of the structure, files with the department, in a form as the director shall prescribe, a written**

consent to the inspection of the interior and contents of the structure to ascertain whether this section and the regulations adopted under this section are complied with at all times.

(d) **The director may authorize the removal of vegetation that is not consistent with the standards of this section.** The director may prescribe a procedure for the removal of that vegetation and make the expense a lien upon the building, structure, or grounds, in the same manner that is applicable to a legislative body under CGC §51186.

(e) The Dept. of Forestry and Fire Protection shall develop, periodically update, and post on its Internet Web site a guidance document on fuels management pursuant to this chapter. Guidance shall include but not be limited to regionally appropriate vegetation management suggestions that preserve and restore native species, minimize erosion, minimize water [use], and permit trees near homes for shade, aesthetics, and habitat; and suggestions to minimize or eliminate the risk of flammability of nonvegetative sources of combustion such as woodpiles, propane tanks, decks, and outdoor lawn furniture.

(f) As used [herein], "person" means a private individual, organization, partnership, limited liability company, or corporation.

Fire Safe Regulations. Mono County Fire Safe Regulations are contained in Chapter 22 of the General Plan *Land Use Element*. As outlined in Table 5.7-2 below, the regulations are designed to increase safety and reduce the spread of fire from structure to structure.

TABLE 5.7-2: Mono County Chapter 22 Fire Safe Regulations

Road Standards	<ul style="list-style-type: none"> • Road Width: All roads to be constructed with at least two 9' traffic lanes providing 2-way traffic flow. • Roadway Surface: The surface shall provide unobstructed access to conventional-drive vehicles, including sedans and fire engines. Surfaces should be capable of supporting a 40,000- pound load. • Roadway Grades: The grade for all roads, streets, private lanes and driveways shall not exceed 16%. • Roadway Radius: No roadway shall have a horizontal inside curve radius less than 50' & additional surface width of 4' shall be added to curves of 50-100' radius; 2 feet to those from 100-200'. • The length of vertical curves in roadways (excluding gutters, ditches, and drainage structures designed to hold or divert water), shall be not less than 100'. • Turnarounds: Turnarounds are required on driveways & dead-end roads, with a minimum turning radius of 40' from centerline. If a hammerhead/T is used, the top of the "T" shall be at least 60' long. • Turnouts: Turnouts shall be a minimum 10' wide and 30' long with a minimum 25' taper on each end. • Roadway Structures: All driveway, road, street, and private lane roadway structures shall be constructed to carry at least the maximum load with specified minimum vertical clearances. • Bridge signing shall at a minimum specify weight and vertical clearance capability. A bridge with only one traffic lane may be allowed provided there is unobstructed visibility and turnouts at both ends. • 1-Way Roads: All 1-way roads shall be constructed with at least one 10' traffic lane, shall connect to a 2-lane roadway at both ends, shall provide access to no more than 10 dwellings, shall not exceed 2,640' in length, with a turnout near the midpoint of each one-way road. • Dead-End Roads: Regardless of the number of parcels served, the max length of a dead-end road shall not exceed 800' for parcels less than 1 acre, 1,320' for parcels of 1.0- 4.99 acres, 2,640' for parcels of 5-19.99 acres, and 5,280 for parcels of 20+ acres. For parcels 5 acres or larger, turnarounds shall be provided at intervals of 1,320'. Each dead-end road shall have a turnaround at its terminus. • Driveways: All driveways to provide a minimum 10' traffic lane & unobstructed 15' vertical clearance along entire length. Driveways 150-799' in length to provide a turnout near the driveway midpoint. Where a driveway exceeds 800', turnouts to be provided no more than 400' apart. A turnaround shall be provided within 50' of all buildings on driveways over 300' in length. • Gate Entrances: Gate entrances shall be at least two' wider than the width of the traffic lane(s) serving that gate. All gates providing access from a road to a driveway shall be located at least 30' from the roadway and shall open to allow a vehicle to stop without obstructing traffic on that road.
Signing & Building Numbering Standards	<ul style="list-style-type: none"> • Signage: All new and existing or approved roads, streets, and buildings shall be designated by legible names or numbers that are visible from the adjoining street or road. • Size: The size of letters, numbers, and symbols for street and road signs shall be a minimum of 4" letter height, 1/2" stroke, reflectorized, contrasting with the background color of the sign. • Addresses: All buildings to be issued an address conforming to the County address system. Each dwelling in a building shall be separately identified. Addresses to be placed at the driveway entrance & visible from both travel directions. Address to be posted upon start of construction and maintained thereafter. Multiple addresses sharing a single driveway shall be mounted on a single post.

	<ul style="list-style-type: none"> Commercial & Industrial: Where a roadway provides access solely to a single commercial or industrial business, the address sign shall be placed at the nearest intersection providing access to that site.
Emergency Water Standards	<ul style="list-style-type: none"> Emergency water shall be available and accessible in quantities and locations needed for a wildfire, with at least 2,500 gallons of water year round; in the Wheeler Crest & Long Valley FPDs, water access shall be acceptable to the fire district. Emergency water shall be available on site before completion of road construction where a community water system is approved, or before completion of building construction where an individual system is approved. Freeze protection shall be provided as required by the California Plumbing Code and NFPA 13. Hydrant/Fire Valve: The hydrant serving any building shall be not less than 50' nor more than ½ mile by road from the building it is to serve; in the Long Valley and Wheeler Crest FPDs. Distance shall be not less than 50' or more than 1,000' by road from the building served. The hydrant shall be located at a turnout or turnaround, 18" above grade, 8' from flammable vegetation, no closer than 4' nor farther than 12' from a road & in a location where fire apparatus will not block the road. Signing: Each hydrant/fire valve or access to water to be identified with a reflectorized blue marker Maintenance of required water supply(s) shall be the responsibility of the property owner.
Roof Cover Standards	<ul style="list-style-type: none"> CBC Class A roof covering(s) shall apply for every new building(s) and all reroofing of existing building(s), with certification, installation, and weather test capabilities as per established standards.
Defensible Space Standards	<ul style="list-style-type: none"> Tree branches within 10 feet of a chimney outlet or stovepipe outlet; Dead or dying tree branches adjacent to or overhanging a building; Leaves, needles, or other dead vegetative growth on the roof of any structure; Flammable vegetation or other combustible growth within 30 feet of an occupied dwelling or structure which prevents the creation of a Firebreak; Brush, flammable vegetation, or combustible vegetation located between 30-100' of an occupied dwelling; or brush or other flammable material within 10' of a propane tank.
Local Enforcement	<ul style="list-style-type: none"> Compliance may be verified by authorized and trained local personnel. A correction notice shall be issued for noncompliance If required, a second correction notice is issued warning that noncompliance may lead to enforcement. If required, Code Compliance Officers may take enforcement action, based on the degree of danger posed.

5.7.3.5 Avalanche, Landslides, Rockfall, Winds, Volcanic Activity

Multi-Jurisdictional Local Hazard Mitigation Plan (LHMP).¹⁴ The LHMP notes that portions of Mono County are vulnerable to avalanches, dam failures, flooding, landslides, seismic hazards, severe winds and severe winter storms, volcanic hazards, and wildfires. Avalanche hazards are among the most prevalent natural hazards in Mono County. Most avalanches occur in the backcountry, on USFS lands in western Mono County, but several community areas along the eastern mountain slopes have also experienced avalanches including properties in or near the northwestern edge of Lee Vining and the area north of Lee Vining. The Tioga site is not in an identified avalanche hazard area. Landslides are not among the most common natural hazards in Mono County due to the relatively small number of identified risk areas; most communities (including the Tioga site) are located away from landslide-prone canyon slopes. Rockfalls and landslides are particularly common along the eastern Sierra scarp and in the backcountry, where landslides have prompted the closure of many wilderness areas. The Tioga site is not located in an identified rockfall or landslide hazard area. Volcanic hazards are not considered to be among the most prevalent natural hazards in Mono County mainly due to the uncertain timing, frequency and intensity of such events. The California *State Hazard Mitigation Plan* (SHMP) classifies the Long Valley Caldera/Mono-Inyo Craters region as a high threat for volcanic activity. Eruptions along the this chain of craters have occurred every 250-750 years, most recently at Paoha Island in Mono Lake about 4 miles east of the project site. This region lacks modern USGS hazard assessment tools and is a priority for update.¹⁵ Mudflows involve very rapid downslope movement of saturated soil, sub-soil, and weathered bedrock. The Tioga site is at risk of mudflows resulting from a winter volcanic event (see discussion in Impact 5.7(f)).

¹⁴Mono County and Town of Mammoth Lakes, *Multi-Jurisdictional Local Hazards Plan*, October 2006.

¹⁵ Office of Emergency Services, *Hazard Mitigation Plan*: https://www.caloes.ca.gov/HazardMitigationSite/Documents/002-2018%20SHMP_FINAL_ENTIRE%20PLAN.pdf.

Propane. Propane is an odorless, colorless, highly flammable liquefied compressed gas packaged in cylinders under its own vapor pressure. It poses an immediate fire and explosion hazard when mixed with air. Propane is heavier than air and may collect in low areas or travel along the ground. Though nontoxic and noncarcinogenic, direct contact with liquid propane can cause irritation, frostbite and suffocation; propane gas competes with oxygen binding on hemoglobin molecules.

Radon. Radon is a naturally occurring radioactive gas that is released during the natural decay of uranium; the gas is odorless, invisible, and tasteless. Its occurrence is influenced primarily by geology, and it is considered the greatest source of natural radiation because it moves easily through the soil into homes, emits radiation that is hazardous to lung tissue, and emits radiation at a high rate. Certain areas of the state, including Mono County, are more likely to contain higher radon levels; the EPA ranks Mono County as Zone 2 (of 3 zones).¹⁶ EPA advises that homes be modified to prevent radiation exposure if the radon level is 4 pCi/L (picocuries per liter) or more; the State Radon Officer estimates that about 11% of Mono County homes have exposure at or above this level. EPA also recommends that Americans consider fixing their home for radon levels between 2-4 pCi/L; an estimated 21% of Mono County homes fall in this category.¹⁷ Testing is the only way to detect radon,¹⁸ using kits that are available from state and local health departments at low or no cost; High levels can be avoided or reduced through home design elements.

Severe Winter Storms: Severe winter storms occur every year throughout the county, but are most common along the eastern slopes and at higher elevations. Vulnerability is linked to the age of structures; the County's *Housing Element* estimates that about 21% of Mono County structures were built 40+ years ago. Proposed uses would be constructed under modern building codes (most likely the upcoming 2020 CBC) and designed to withstand winter storm damage while minimizing energy costs.

5.7.4 REGULATORY SETTING

5.7.4.1 Federal Regulations

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This comprehensive 1980 Act paved the way for active Federal involvement in emergency response, site remediation, and spill prevention, including the Superfund program. CERCLA provides mechanisms for reacting to acute and chronic hazardous materials emergencies and releases. In addition to setting procedures for the prevention and remedy of problems, CERCLA also established a system for compensating injured parties and for assigning liability. CERCLA anticipates and addresses failure in other regulatory programs, and frequently remedies problems that result from actions taken before regulatory protections and standards were in place.

Hazardous Materials Transportation Act. This Act, as amended, is the basic statute regulating hazardous materials transportation in the United States. The purpose of the law is to provide an adequate level of protection against the risks to life and property inherent in transporting hazardous materials in interstate commerce. Under this Act, the US Department of Transportation (USDOT) regulates transportation of hazardous materials between states, and the USDOT Federal Railroad Administration (FRA) enforces Hazardous Materials Regulations for rail transportation, as set forth by the Pipeline and Hazardous Materials Safety Administration. These regulations require that transporters of hazardous materials (including gasoline and propane) maintain and enforce security plans and train their employees in safety and security matters associated with the transport of hazardous materials.

Obstructions to Navigable Airspace FAR. Part 77 of the Code of Federal Regulations provides guidance for determining hazards and obstructions to navigable airspace and establishes the slope and dimensions of airport safety zones including the horizontal surface, conical surface, primary surface, approach surface, and transitional surface. The FAA also addresses wildlife hazards on or near airports, including direction on where public-use airports should restrict land uses that have the potential to attract hazardous wildlife. FAA recommends that wildlife attractants (including natural

¹⁶ EPA Map of Radon Zones, EPA website: <http://www.epa.gov/radon/pdfs/zonemapcolor.pdf> accessed 3-13-15.

¹⁷ Mono County: <http://county-radon.info/CA/Mono.html>

¹⁸ California Dept. of Public Health website: <http://www.cdph.ca.gov/HealthInfo/environhealth/Pages/Radon.aspx> accessed 3-13-15.

and manmade areas) be separated from aircraft movement areas by a distance of 10,000 ft. Native bitterbrush vegetation is an existing wildlife attractant in the vicinity of Lee Vining Airport.

Occupational Safety and Health Administration (OSHA). OSHA sets federal standards for implementation of workplace training, exposure limits, and safety procedures for the handling of hazardous substances (as well as other hazards). OSHA also establishes criteria by which each state can implement its own health and safety program.

Resource Conservation and Recovery Act (RCRA). The Environmental Protection Agency (EPA) is the principal agency regulating the generation, transport, and disposal of hazardous substances at the federal level. RCRA establishes a comprehensive program that regulates the generation, transportation, treatment, storage, and disposal of hazardous substances. RCRA was amended in 1984 by the Hazardous and Solid Waste Amendments (which prohibit certain disposal methods for specified hazardous substances), and the Federal Emergency Planning and Community Right to Know Act of 1986 (which imposed requirements for emergency planning and "Right-to-Know" reporting with the goal of increasing public access to information about chemical use, storage, and releases into the environment..

Superfund Amendments and Reauthorization Act. EPA compiles a list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the USA, known as the National Priorities List. These locations are commonly referred to as "Superfund sites." There are no Superfund sites in Mono County; only the Marino Corps Mountain Weapons Training Center is listed by EPA as releasing chemicals under the Toxics Release Inventory (TRI) Program.¹⁹

Toxic Substances Control Act (TSCA). TSCA was enacted in 1976 to ban the manufacture, processing, distribution, and use of polychlorinated biphenyls (PCBs) in enclosed systems. EPA Region 9 regulates remediation and labeling of products containing PCBs in California. In 1992, TSCA was amended to include Title IV, Lead Exposure Reduction standards for lead-based paints and lead dust cleanup levels in most pre-1978 housing and child-occupied facilities.

USGS Volcanic and Earthquake Hazards and Response for the Long Valley Caldera-Mono Lake Area, 2014.²⁰ As part of the USGS multi-hazards project, the California Geological Survey (CGS) developed several earthquake scenarios and evaluated potential seismic hazards in the Long Valley Caldera-Mono Lake area including ground shaking, surface fault rupture, liquefaction, and landslide hazards associated with these earthquake scenarios. The results of these analyses can be useful in estimating the extent of potential damage and economic losses because of potential earthquakes and in preparing emergency response plans. The report notes that while methodologies are well developed for estimating ground shaking, the methodologies for estimating surface fault displacement are still being developed; accordingly, the report provides a more in-depth and detailed discussion of the available methodologies.

5.7.4.2 State Regulations.

EPA has delegated to California the primary responsibility for administering and enforcing hazardous waste management programs; the state regulations are equivalent to or more stringent than those set by the federal government. The California programs are administered through DTSC, SWRCB and the Integrated Waste Management Act, as discussed below along with other state legislation for hazards management.

Underground Storage Tank Regulations. The California Water Resources Control Board (CWRCB) regulates the operation and maintenance of gasoline underground storage tanks (UST) through the Underground Storage Tank Program. Proposed USTs are subject to CCR Title 23, Chapter 16 (Underground Tank Regulations). These regulations establish (1) construction requirements for new underground tanks; (2) separate monitoring requirements for new and existing underground storage tanks; (3) uniform requirements for the reporting of unauthorized releases, (4) requirements for the repair, upgrade, and closure of underground storage tanks; and (5) variance request procedures.

¹⁹ EPA: http://iaspub.epa.gov/triexplorer/tri_factsheet.factsheet?pstate=CA&pcounty=Mono&pyear=2013&pDataSet=TRIQ1.

²⁰ USGS, Scenario Earthquake Hazards for the Long Valley Caldera-Mono Lake Area, East-Central California, 2014; R. Chen, et al.

Hazardous Materials Delivery Regulations. As with the existing gas pumps, the proposed third gas pump island will require continued regular transport of gasoline to the project site. The deliveries are regulated by the California Dept. of Transportation, Motor Vehicle standards. Delivery vehicles are required to prominently display shipping papers that identify the name of the transported hazardous materials, their class (gasoline is classified as 'Class 3'), quantities, containment type, source and recipient, emergency contact information, and emergency response procedures.. Transport vehicles must prominently display at least 4 identification placards, their associated risk profile, and the 4-digit material ID number assigned by the U.S. Dept. of Transportation (the ID number for gas is 1203).

Emergency Services Act. The Emergency Services Act directed California to prepare an emergency response plan to coordinate the efficient interaction of emergency services provided by federal, state, and local agencies. The plan is administered through the Office of Emergency Services and includes coordination with EPA, CHP, Regional Water Quality Control Boards (RWQCBs), air quality management districts, and County disaster response offices (emergency response in Mono County is detailed in the EOP, as discussed in this section).

Hazardous Waste Control Act (HWCA). The HWCA sets forth requirements for the proper management of hazardous waste, as implemented through the state hazardous waste management program, which is similar to but more stringent than the federal RCRA program. The program includes criteria for hazardous wastes including identification and classification; generation and transportation; design and permitting of recycling, treatment, storage, and disposal facilities; treatment standards; operation of facilities and staff training; and closure of facilities and liability requirements. More than 800 potentially hazardous materials are regulated under the program.

Hazardous Waste and Substances Sites List. DTSC compiles and regularly updates the Hazardous Waste and Substances Sites List ('Cortese List') as required by CGC §65962.5. The list identifies potentially contaminated sites throughout the state and is used by California agencies and developers to comply with CEQA requirements for providing information about the location of hazardous materials release sites.

Hazardous Materials Transport. The California Vehicle Code contains regulations governing hazardous materials transport. The regulations require that all hazardous materials transporters be registered through DTSC, with specific identification numbers (for transporters as well as facilities used in the storage, treatment and disposal of hazardous materials) that track wastes from their point of origin to their final point of disposal. In the event of a spill, release or mishap, all handlers are required by Title 22 to take immediate action to protect human health and the environment.

Integrated Waste Management Act. AB 939, known as the Integrated Waste Management Act, was passed in 1989 to address the increase in waste stream and the decrease in landfill capacity. AB 939 resulted in creation of the California Integrated Waste Management Board, and waste reduction targets were set, along with a framework for program implementation, solid waste planning and solid waste facility and landfill compliance.

Alquist-Priolo Earthquake Fault Zoning Act. The Alquist-Priolo Earthquake Fault Zoning Act of 1972 sets forth the policies and criteria of the State Mining and Geology Board, which governs the exercise of governments' responsibilities to prohibit the location of developments and structures for human occupancy across the trace of active faults. The policies and criteria are limited to potential hazards resulting from surface faulting or fault creep in Earthquake Fault Zones, as delineated on maps officially issued by the State Geologist. Working definitions include a) Fault (a fracture or zone of closely associated fractures where one side has been displaced with respect to the other side); b) Fault Zone (a zone of related faults (often braided and subparallel but occasionally branching and divergent) that can range in width from a few feet to several miles; c) Sufficiently Active Fault (a fault with evidence of surface displacement along one or more of its segments or branches within the last 11,000 years); and d) Well-Defined Fault (a fault where the trace is clearly detectable as a physical feature at or just below the ground surface). The state uses two criteria ("Sufficiently Active" and "Well Defined") to determine if a fault should be zoned under the Alquist-Priolo Act.

California Toxics Rule and State Implementation Policy. The California Toxics Rule (CTR) was promulgated in 2000 in response to requirements of the EPA National Toxics Rule (NTR), and establishes numeric water quality criteria for approximately 130 priority pollutant trace metals and organic compounds. The CTR criteria are regulatory criteria adopted for inland surface waters, enclosed bays, and estuaries in California that are on the CWA Section 303(c) listing

for contaminants. The CTR includes criteria for the protection of aquatic life and human health. Human health criteria apply to all waters with a Municipal and Domestic Water Supply Beneficial Use designation as in the Basin Plans.

Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays & Estuaries of California.

Also known as the State Implementation Plan (SIP), SWRCB adopted this policy in 2000 to establish provisions for translating specific criteria (CTR, NTR (see above) and basin plan water quality objectives for toxic pollutants) into NPDES permit standards. The standards cover effluent limits, effluent compliance determinations, monitoring, long-term toxicity control provisions, development of site-specific water quality objectives, and the granting of effluent compliance exceptions. The SIP created a standardized approach for the permitting of toxic effluent discharges to inland surface waters, enclosed bays, and estuaries throughout the state.

Board of Forestry and Fire Protection (CalFire Board). The Board is authorized under PRC §4290 to adopt regulations for wildfire protection. In 2014, the Board adopted §1270 SRA Fire Safe Regulations to modify PRC §4290. The 2012 statute established minimum wildfire protection standards in designated SRAs, including standards for design and construction of structures, subdivisions and developments. The statute also addressed basic emergency access and perimeter wildfire protection including emergency access; signage and building numbering; private water supply reserves for emergency fire use; and vegetation modification. The new regulations clarified PRC §4290 administrative requirements and concerns associated with residential development in areas with hazardous fuel and wildfire conditions.

California Building Code (CBC). Title 24 of the CCR, known as the California Building Code (CBC) contains regulations that govern building construction in California. The CBC includes 12 parts: a Building Standards Administrative Code, Building Code, Residential Building Code, Electrical Code, Mechanical Code, Plumbing Code, Energy Code, Historical Building Code, Fire Code, Existing Building Code, Green Building Standards Code, and the Reference Standards Code. Through the CBC, the State provides minimum standards for building design and construction, with specific requirements for seismic safety, excavation, foundations, retaining walls, and site demolition. CBC also regulates grading activities, including drainage and erosion control.

California Health and Safety Code (HSC). California Health & Safety Code §19100 et seq. establishes the State's regulations for earthquake protection. This section of the code requires structural designs to be capable of resisting likely stresses produced by phenomena such as strong winds and earthquakes.

California Emergency Services Act. The Emergency Services Act of 2011 establishes tools to ensure effective emergency response utilizing all resources and manpower available within California. To this end, the Act assigns emergency powers to the Governor and chief executives and governing bodies of the state, provides for state assistance in organizing and maintaining the emergency programs of various levels of governance, assigns duties and responsibilities for emergency response and coordination as well as mutual aid cooperation, and authorizes actions and the establishment of organizations as needed to achieve the goals so identified.

Caltrans Seismic Design Criteria. Caltrans' Seismic Design Criteria (SDC) provide design and analysis methodologies for the design of new bridges in California. The SDC uses a performance-based approach that sets minimum levels of structural system performance, component performance analysis, and design practices for ordinary standard bridges. The SDC has been developed with input from the Caltrans Offices of Structure Design, Earthquake Engineering and Design Support, and Materials and Foundations.

Certified Unified Program Agencies (CUPA). Under CUPA, CalEPA grants to qualifying local agencies the responsibility for oversight and permitting of certain state hazardous waste and hazardous materials programs. Program elements include consolidation, coordination, and administration of requirements, permits, inspections, and enforcement activities for the specified emergency and management programs including a) hazardous materials release response plans and inventories; the California Accidental Release Prevention Program (CalARP); the UST Program; Aboveground Petroleum Storage Act Requirements for Spill Prevention, Control and Countermeasure plans; and the Hazardous Waste Generator and On-site Hazardous Waste Treatment Programs. CUPA is implemented at the local level by 83 government agencies certified by the Secretary of CalEPA. Mono County Health Department has been certified by CalEPA as the CUPA for implementing the hazardous materials program in Mono County. Transporters and users of hazardous materials are listed with the Health Department and regulated and monitored by the County.

Department of Forestry and Fire Protection (Cal Fire). Cal Fire provides fire protection for SRAs and is responsible for protecting and maintaining privately owned wildlands, providing emergency services, and responding to wildland fires. Fire prevention and suppression in non-SRA areas are the responsibility of local or federal agencies. CalFire regulates wildfire protection standards for building, construction and development in the SRAs including the design and construction of SRA structures, subdivisions and developments, and basic emergency access and perimeter wildfire protection. The CBC also establishes fire safe requirements, including building materials and cleared space around buildings in Wildland-Urban Interface (WUI) areas. Mono County is served by the San Bernardino administrative unit of Cal Fire. Each unit prepares an annual Fire Management Plan as part of the California Fire Plan for wildland protection. Overall goals are to enhance initial fire response, and reduce costs through 'prefire management prescriptions.'

Seismic Hazards Mapping Act. The 1990 Seismic Hazards Mapping Act addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically-induced landslides. Under the Act, seismic hazard zones are mapped by the State Geologist to aid local governments in land use planning. The Seismic Hazards Mapping Act program resembles the Alquist-Priolo Earthquake Fault Zoning Act, which addresses only surface fault-rupture.

State Geological Survey. The California Geological Survey is responsible for assisting in the identification of fault locations and other geological hazards.

Senate Bill 1241 (SB 1241). SB 1241 of 2013 modifies General Plan Safety Element requirements to better protect California communities from unreasonable risks of wildfire and urban fires, with a focus on SRAs and very high fire hazard severity zones (VHFHSZ). SB 1241 requires local agencies to provide certain information in the Safety Element including fire hazard severity zone (FHSZ) historical data on wildfires; the general location and distribution of existing and planned uses of land in SRA or VHFHSZ LRAs; the agencies responsible for fire protection; consideration of the OPR "Fire Hazard Planning" document; goals, policies, and objectives to protect communities from the unreasonable risk of wildfire; feasible implementation measures; and updates to incorporate changing guidelines and requirements.

Underground Storage Tank (UST) Program. The California Department of Public Health and SWRCB monitor USTs. The program focuses on sites that have been identified for remedial action due to unauthorized release of toxic substances from USTs. The UST Program is administered by the SWRCB and includes leak prevention, cleanup, enforcement, and tank testing certification.

5.7.4.3 Regional and Local Regulations²¹

Mono County Emergency Operations Plan. The EOP addresses the County's planned response to extraordinary situations associated with natural disasters and/or technological incidents including both peacetime and national security operations. With a focus on coordinating mutual aid, the plan provides an overview of operational concepts for various emergency situations, identifies components of the emergency response organization, and describes responsibilities of participating agencies. The EOP provides a consistent framework for emergency management and operations, and is maintained and updated annually.

Floodplain Regulations. New development and substantial improvements¹ to existing development in Mono County are subject to the requirements of the Floodplain Regulations (Ch. 21, Land Development Regulations). The regulations contain standards for construction, utilities, subdivisions, and manufactured homes. The Floodplain Regulations are applied during the building permit or development permit phase of new construction or improvements, and the floodplain administrator makes recommendations for projects outside of regulatory flood zones (i.e., outside of the 200-year flood plain and flood awareness map areas).

National Flood Insurance Program. The County maintains floodplain regulations as required for participation in the National Flood Insurance Program. This program allows local residents to purchase federal flood insurance.

²¹ Mono County Multi-Jurisdictional Local Hazard Mitigation Plan (LHMP), October 2006.

FEMA Flood Zones. The County and the Town utilize the FEMA Flood Insurance Rate Maps (FIRM) to identify the 100-year floodplain in Mono County. Policies in the Land Use Element and the Safety Element regulate development in the 100-year floodplain in conjunction with the County Floodplain Regulations. In the June Lake and Chalfant areas, subsequent floodplain studies have been completed to administer Floodplain Regulations in those areas.

Fire Safe Regulations. New construction in the unincorporated area of the county is subject to the provisions of the Fire Safe Regulations (Chapter 22 of the Land Development Regulations) consistent with the requirements of Fire Safe Rule 1270. Those regulations establish basic wildland fire protection standards for emergency access, signing and building numbering, private water supply reserves for fire use, and vegetation modification. The Fire Safe Regulations are applied during the building permit or development permit phase of new construction.

Fire Prevention Property Inspections. Cal Fire and USFS conduct fire prevention property inspections throughout Eastern Sierra communities. Eastern Sierra Regional Fire Safe Council volunteers assist both agencies with inspections. A secondary objective of volunteer inspections is community outreach to provide residents with information about living at the wildlands interface, i.e. creating and maintaining defensible space, firescaping, building defensible homes, fire preparedness, and emergency response.

Cal Fire and FPD Project Plan Check. Cal Fire and FPD staff review project plans for proposed development located in SRAs and LRAs, respectively, to ensure that the development complies with California Fire Safe Requirements and the CBC for proper access, signage, water supplies, and building materials.

Eastern Sierra Regional Fire Safe Council (ESRFSC). The ESRFSC is a non-profit organization created to advise citizens in Mono and Inyo counties how best to deal with the threat of wildfire. The council works with local volunteer fire departments and assists CDF as they train volunteers to perform residential fire hazard inspections. Volunteers also work with homeowners to raise awareness about wildfire risks and methods of home hazard reduction. ESRFSC has also created a community fuel break.

Local Fire Safe Councils. The Fire Safe Council works on a variety of projects to help reduce the threat of wildfire, including a fuels reduction grant and a chipping program for woody debris in neighborhood areas. Fire Safe Councils have also been established in communities in the county (June Lake, Wheeler Crest, Mono Basin, Benton, Devil's Gate/Swauger Creek and Twin Lakes) to increase fire safety in those communities and the surrounding areas.

Mono County Public Health Department Special Needs Database. To prepare for emergencies, the Mono County Public Health Department maintains a database of special needs clients on a GIS file. The file contains the GPS coordinates of participants' daytime and nighttime driveways and front door, a building outline, and assessor's parcel numbers. Once in the database, the Public Health Officer sends each participant a letter thanking them for being proactive in emergency planning, with informative brochures from FEMA, the Red Cross, and OES on emergency and disaster preparation and response. The database is reviewed annually and revised as necessary.

5.7.5 SIGNIFICANCE CRITERIA

Consistent with Appendix G of the CEQA Guidelines, the proposed Tioga Workforce Housing project will be considered to have a significant impact on human health, safety, hazards, and hazardous materials if it will:

- a) Create a hazard to the public or environment through routine transport, use or disposal of hazardous materials, or release of hazardous materials into the environment, including within 1/4 mile of a school?
- b) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to CGC §65962.5 and, as a result, would it create a significant hazard to the public or the environment?
- c) Create a safety hazard for people living or working in an area located in an airport land use plan or within 2 miles of a public airport or public use airport or private airstrip?
- d) Impair implementation of or physically interfere with an adopted emergency response or evacuation?
- e) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands, or exacerbate wildfire risk or expose people or structures to significant risk of fire-related flooding?

- f) Expose people or structures to significant risk of avalanche, landslides, destructive storms or winds, seiches or tsunamis, rockfall or volcanic activity?

5.7.6 ENVIRONMENTAL IMPACTS AND MITIGATING POLICIES AND ACTIONS

IMPACT 5.7(a): Would project implementation create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials, or release of hazardous materials into the environment, including within one-quarter mile of an existing or proposed school?

LESS THAN SIGNIFICANT IMPACT (Gasoline). The Tioga Mart currently provides commercial retail gasoline services through 2 gas pump islands, each with 1 underground fuel storage tank and 4 fueling pumps. The project proposal includes construction of a third gas pump island with 4 additional fueling pumps, 1 new underground gasoline storage tank, and reconfiguration of the gas station access and parking areas. The addition of a third gas island would increase the volume of certain hazardous materials transported to, used and stored at the Tioga Mobil Station. Gas station hazards include the transport and delivery and storage of fuel, the transfer of fuel between the delivery tanker trucks and the underground storage tanks (2 now in place, and 1 more proposed for a future total of 3 underground storage tanks), and the delivery of fuel into customer vehicles via gas pumps. Each stage is subject to regulation.

The U.S. Dept. of Transportation Pipeline and Hazardous Materials Safety Administration regulates the transport of hazardous materials through Title 49 of the Code of Federal Regulations (49 CFR), Subchapter C, "Hazardous Materials Regulations." Parts 171-177 provide general information on hazardous materials and regulation for their packaging and their shipment by rail, air, vessel, and public highway. Title 49 regulations apply to both interstate and intrastate transport of hazardous materials, and are applicable to all persons transporting hazardous materials including transportation for commercial purposes, transportation by state or local governments, and private individuals.^{22 23} The California Vehicle Code (CVC §32000.5) requires transporters to obtain a Hazardous Materials Transportation License from the CHP (again for both intrastate and interstate carriers). The License is required if the shipment requires the display of hazard warning placards, if the hazardous material being shipped is 500 pounds or greater, if the hazardous material is being transported for a fee, and if the material would normally require placards if shipped in a greater quantity. Reporting is also required. The Petroleum Industry Information Reporting Act (PIRA) requires all retail transportation fueling stations in California to fill a Retail Fuel Outlet Annual Report. The report includes information about the sale of gasoline, diesel fuel and other transportation fluids. Based on PIRA reporting, the California Energy Commission estimates that there were 8,456 gasoline and 4,790 diesel fueling stations in California in 2016, fewer than 100 of which were located in Mono County.²⁴

To reduce the release of unburned fuels into the environment, California has adopted mandatory 'Enhanced Vapor Recovery' requirements for gasoline dispensing facilities.^{25, 26} Requirements include more stringent certification, dripless nozzles to reduce spillage, added control of fugitive emissions, better facility components to reduce leakage potential, updated compatibility with vapor recovery systems on newer vehicles, and vapor recovery system monitors.

The County's Emergency Response Plan includes detailed discussion of potential local hazards and interdepartmental/interagency response and management procedures to address a full range of emergency stages and scenarios, from pre-

²² EPA, Summary of Regulations Controlling Air Emissions from Gasoline Dispensing Facilities (GDF) National Emissions Standards for Hazardous Air Pollutants NESHAP (SUBPART CCCCC) FINAL RULE. <https://www3.epa.gov/airtoxics/area/gdfb.pdf>

²³ California Highway Patrol, *Vehicles Transporting Hazardous Materials*, CHP 800C (Rev. 9-15) OPI 062: <https://www.chp.ca.gov/CommercialVehicleSectionSite/Documents/chp800c.pdf>

²⁴ California Energy Commission website: http://www.energy.ca.gov/almanac/transportation_data/gasoline/piira_retail_survey.html

²⁵ Hilpert, M., et al, *Hydrocarbon Release During Fuel Storage and Transfer at Gas Stations: Environmental and Health Effects*, December 2015: <https://link.springer.com/article/10.1007%2Fs40572-015-0074-8>

²⁶ Enhanced Vapor Recovery (EVR) For Gasoline Dispensing Facilities, San Diego County APCD, https://www.sandiegocounty.gov/content/dam/sdc/deh/hmd/presentations/hmd_2008_ust_apcd.pdf

planning efforts (to reduce the likelihood of occurrence), to evacuation, mitigation and recovery. The Plan identifies system shortcomings as well as limitations on the degree to which hazards can be reduced. Identified shortcomings include (a) the difficulty of controlling clandestine dumping; (b) the probable need to transport wastes out of the county when Benton Crossing Landfill closes around 2023; (c) the increasing threat, frequency and severity of wildland fire hazards; (d) the lack of alternate transportation routes and the fact that access routes are subject to closure; (e) the high concentration of visitors during peak winter months; (f) the relatively high exposure of some communities to natural hazards; (g) the limited number of medical facilities and beds available to handle multi-casualty incidents; and (h) the difficulty of safeguarding human health in the event of catastrophic emergencies.

Compliance with applicable federal, state and local regulations as reviewed in this section will reduce to less than significant levels the public and environmental hazards associated with the routine transport, use and disposal of hazardous materials at the project site. The Tioga Workforce Housing project is not located within one-quarter mile of any school; Lee Vining Elementary School is about 2,500 feet north of the project site, and Lee Vining High School is approximately 4,500 feet north of the project site. No supplemental mitigation is required.

LESS THAN SIGNIFICANT IMPACT (Propane). The propane industry is regulated by a number of federal agencies including the U.S. Department of Transportation (DOT), the Occupation Safety & Health Administration (OSHA), the U.S. Department of Energy (DOE), the Pipeline & Hazardous Materials Safety Administration (PHMSA), and the Federal Motor Carrier Safety Administration (FMCSA) within DOT. OSHA and DOT regulate employee training and communication on emergency procedures for propane, and the Department of Energy regulates the energy efficiency standards for propane.

The applicant anticipates that the proposed 30,000 gallon propane tank will be serviced by a commercial propane dealer. The commercial dealer will also be responsible for delivery of liquid petroleum gas (LPG) to the tank, compliance with regulations pertaining to propane transport and storage, tank siting and maintenance and use, and distribution to offsite customers (if any). Impacts would be *less than significant*, and no mitigation is required.

MITIGATION MEASURES – HAZARDOUS MATERIALS

SFTY 5.7(a) (Transport of Hazardous Materials): Compliance with mandatory existing regulations would reduce potential impacts to less than significant levels. No supplemental mitigation measures are proposed.

IMPACT 5.7(b): Is the proposed Tioga Workforce Housing Project location included on a list of hazardous materials sites with potential for creating a significant hazard to the public or the environment?

LESS THAN SIGNIFICANT IMPACT. The DTSC Cortese List provides information about hazardous materials sites in California, including Mono County. The lists compiled and presented therein indicate that there are no Mono County sites contained on the CalEPA Hazardous Waste and Substances Site List, or on the DTSC List of Hazardous Waste Facilities subject to Corrective Action,²⁷ or on the CalEPA list of Mono County sites with Waste Constituents above Hazardous Waste Levels.²⁸

Eight Mono County sites are included on the SWRCB List of Active Cease and Desist Orders (CDOs) and Clean-up and Abatement Orders (CAOs).²⁹ SWRCB notes that the list contains many Orders that do not concern the discharge of hazardous wastes (for example, many involve discharges of domestic sewage, food processing wastes, or nonhazardous sediment), but the Water Boards' database does not distinguish between these types of orders. None of the 8 Mono County sites on this list are located in Lee Vining.

²⁷ CalEPA: <http://www.calepa.ca.gov/sitecleanup/corteselist/#sthash.PHd1SHF3.dpuf>

²⁸ CalEPA: <http://www.calepa.ca.gov/sitecleanup/corteselist/CurrentList.pdf>

²⁹ CalEPA: <http://www.calepa.ca.gov/sitecleanup/corteselist/#sthash.ix2VLJPG.dpuf>

There are no Mono County locations among the more than 500 sites on the CalEPA Hazardous Waste and Substances Site List,³⁰ and there are no Mono County sites on the list of Sites Identified with Waste Constituents Above Hazardous Waste Levels Outside the Waste Management Unit.³¹ The Tioga Mart Gas Station is shown on the SWRCB Geotracker mapping site³² as a 'Permitted UST.'³³

In summary, neither the Tioga Mart Gas Station nor any other uses on the property are included on any list of hazardous materials sites compiled under CGC §65962.6, and no significant hazard to the public or to the environment associated with hazardous materials violations associated with facilities and/or sites identified as meeting Cortese List requirements. Impacts would be **less than significant**, and no mitigation measures are required.

MITIGATION MEASURES – CORTESE LIST

SFTY 5.7(b) (Cortese List): The site is not included on any Cortese List, and no mitigation measures are required for this potential impact.

IMPACT 5.7(c): Would project implementation pose a safety hazard for people residing or working in an area located in an airport land use plan or within 2 miles of a public airport or public use airport or private airstrip?

LESS THAN SIGNIFICANT IMPACT WITH MITIGATION. The safety hazards associated with airports are generally related to objects that could interfere with airplane flight paths (primarily topographic and structural), features that attract wildlife (lakes, wetlands, waste disposal areas), and land uses that draw people into airport safety zones. Table 5.7-3 summarizes selected air safety zone information for the Lee Vining Airport.

TABLE 5.7-3: Air Safety Zones – Lee Vining Airport³⁴	
DESIGN CRITERIA	LEE VINING AIRPORT
Runway Obstacle Free Area	250' from runway centerline 200' from runway termini
Building Setback Line	Varies
Runway Safety Area	60' from runway centerline
Runway Protection Zone	Length: 1,000'

The Mono County *Land Use Element* reviews major issues, opportunities and constraints for the Lee Vining airport planning area as summarized below:

- Airport operations pose certain safety risks, particularly in the Safety Zone (the primary surface, runway and clear zones, the area under the runway approach and transitional surfaces, and the primary traffic pattern area).
- Approach/departure surfaces carry the highest volume of air traffic and tend to have more safety and noise problems since aircraft change power settings to take off or land [...] Because terrain west of the Airport penetrates portions of the horizontal surface, it is appropriate that the aircraft traffic pattern is to the east of the runway.
- Lee Vining airport is not situated on a site that significantly conflicts with existing land use.
- Several structures are located in the Bryant Field clear zone, and some residential structures are located in the Bryant Field approach surface. The County is pursuing acquisition of buildings and property in the clear zone.

³⁰ CalEPA: <https://www.envirostor.dtsc.ca.gov/public/>

³¹ CalEPA: <https://calepa.ca.gov/wp-content/uploads/sites/62/2016/10/SiteCleanup-CorteseList-CurrentList.pdf>

³² SWRCB: <https://geotracker.waterboards.ca.gov/>

³³ SWRCB: <https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=Mono+County>

³⁴ Mono County, *Lee Vining Airport Master Plan*, Wedell Engineering, 2002; *Mono County Airport Layout Master Plan*, R. Brandley, 2017: https://monocounty.ca.gov/sites/default/files/fileattachments/public_works_-_facilities/page/4027/lee_vining_alp-2017.pdf.

- e. Lee Vining Airport is classified as a basic utility general aviation airport serving aircraft with approach speeds up to 91 knots (Category A). Basic Utility Stage 1 airports serve about 75% of the single- and small twin-engine airplanes used for personal and small business purposes.
- f. Lee Vining Airport capacity exceeds aviation demand throughout the ALUC planning period (2000-2020).
- g. The Runway Protection Zone is located at ground level beyond the runway. These zones are the most critical in terms of human and property safety and also most critical in terms of noise exposure.

Exhibit 5.7-1 on page 5.7-20 depicts the safety zones around Lee Vining Airport. As shown, the project site is located outside of 5 of the 6 safety zones, including the Runway Protection Zone (shown on the map as '1'), the Inner Approach/Departure Zone (2), the Inner Turning Zone (3), the Outer Approach/Departure Zone (4), and the Sideline Zones (5). Essentially all of the Tioga Mart site and Lee Vining are located within the Traffic Pattern Zone.

The Traffic Pattern Zone is identified as 'Zone 6' in the *California Airport Land Use Planning Handbook*.³⁵ The Handbook indicates that the Nature of Risk in Zone 6 includes (a) normal maneuvers (aircraft within a regular traffic pattern and pattern entry routes), (b) altitude (ranging from 1,000 to 1,500 feet above runway), (c) common accident types (pattern accidents in the airport proximity for arrival, and emergency landings for departure), and (d) Risk Level (Low for Zone 6, with a 16-29% percentage of near-runway accidents; the Handbook notes that the comparatively high percentage is due to the large area encompassed).

The Handbook also identifies basic compatibility policies for Zone 6, including: (a) Normally Allowed (residential uses, provided that noise and overflight impacts are considered when ambient noise levels are low), (b) Limits (children's schools, large day care centers, hospitals and nursing homes; and processing and storage of bulk quantities of highly hazardous materials); (c) Avoid (outdoor stadiums and similar uses with very high intensities); and (d) Prohibit (no prohibited uses in Zone 6). Table 5.7-4 lists the compatibility criteria set forth in the Handbook for Zone 6.

TABLE 5.7-4. Zone 6 Airport Land Use Compatibility Guidelines

	Maximum Residential Intensities	Maximum Nonresidential Intensities	Maximum Single Acre
	Average number of dwelling units per gross acre	Average number of people per gross acre	4X the Average number of people per gross acre
Rural	No limit – See Note A	150-200	600-800
Suburban	No limit – See Note A	200-300	800-1,200
Urban	No limit – See Note A	No Limit – See Note B	No Limit – See Note B
Dense Urban	No limit – See Note A	No Limit – See Note B	No Limit – See Note B

Note A: Noise and overflight should be considered.

Note B: Large stadiums and similar uses should be avoided.

Proposed uses would fall in the range of acceptable uses. Regarding hazardous materials, the Handbook identifies bulk storage as 'aboveground bulk fuel storage-tank size greater than 6,000 gallons, based on Uniform Fire Code criteria,' noting that flammable, explosive, corrosive and toxic materials constitute special safety concerns due to the potential for an aircraft accident to cause a release and thereby pose dangers to nearby people and property. The propane tank does meet the definition of 'bulk storage of highly hazardous materials.' However, due to the very large area encompassed by Safety Zone 6, the very low number of aircraft operations at Lee Vining Airport, the Mono County Department of Public Works has concluded that the proposed tank presents an overall low level of risk, and is

³⁵Caltrans, Div. of Aeronautics, <http://dot.ca.gov/hq/planning/aeronaut/documents/alucp/AirportLandUsePlanningHandbook.pdf>.

compatible with the Airport Layout Plan and Airport Land Use Compatibility Plan.³⁶ The third gas pump island would also fall within the range of acceptable uses.

A more significant airport safety issue pertains to the fact that much of the project site encroaches into the 'imaginary surface' shown on the 2017 Airport Layout Plan, particularly the horizontal surface at elevation 6,952.' The surface is based on California Public Utilities Code (PUC) §21659(a) which states:

No person shall construct or alter any structure or permit any natural growth at a height which exceeds the obstruction standards set forth in Title 14 Code of Federal Regulations, Part 77, Subpart C (FAR Part 77), relating to objects affecting navigable airspace... (See [14 CFR § 77.19\(a\)](#))

With respect to Object Clearing, FAA Advisory Circular 140-5300 13A §306 states: *"Safe and efficient landing and takeoff operations at an airport require that certain areas on and near the airport are clear of objects or restricted to objects with a certain function, composition, and/or height. These clearing standards and criteria are established to create a safer environment for the aircraft operating on or near the airport. The airport operator is not required to prevent or clear penetrations to the Part 77, Subpart C, imaginary surfaces when the FAA determines these penetrations are not hazards. However, any existing or proposed object, whether man-made or of natural growth that penetrates these surfaces is classified as an "obstruction" and is presumed to be a hazard to air navigation. These obstructions are subject to an FAA aeronautical study, after which FAA issues a determination stating whether the obstruction is in fact considered a hazard."*

During October 2018, the project applicant submitted Forms 7460-1 and 7460-2 to the FAA, requesting a Determination as to whether proposed or approved land uses on the project site would pose a hazard to air navigation.³⁷ Following completion of an aeronautical study, FAA issued a Determination of No Hazard to Air Navigation; a copy of the FAA Determination letter is provided as Appendix K and the application materials are on file with Mono County. Based on results of their analysis, FAA determined that the previously approved but as-yet unbuilt promontory restaurant (the onsite structure of greatest exposure with respect to airport safety) does exceed obstruction standards, but would not be a hazard to air navigation provided FAA is notified within 5 days after the construction reaches its greatest height, or in the event the project is abandoned. Marking and lighting were not found to be necessary for aviation safety. The FAA determination expires on June 7, 2020 unless construction has been initiated, or FAA has granted an extension, or a Federal Communications Commission construction permit is under review. Impacts would be ***less than significant with mitigation***.

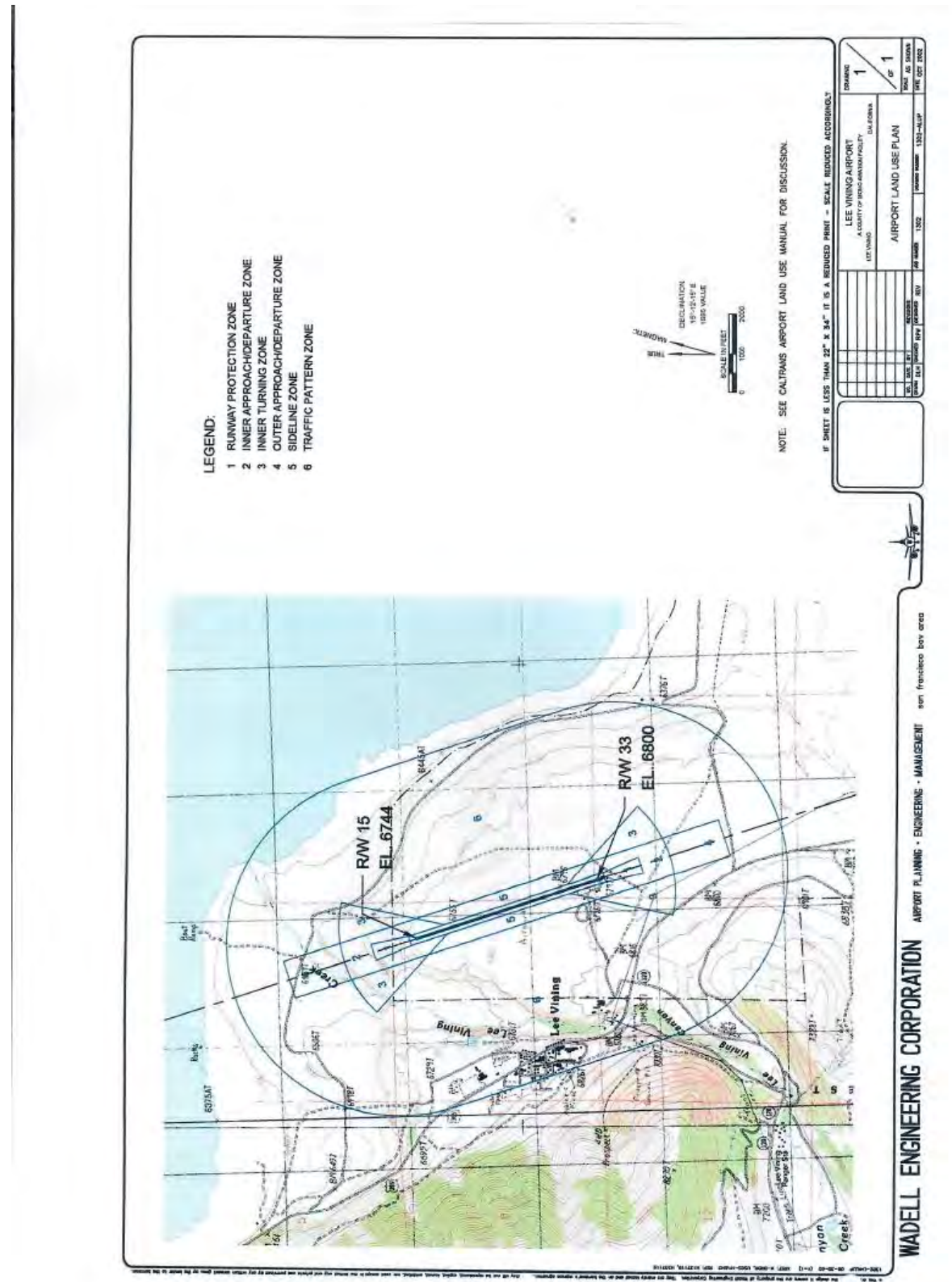
MITIGATION MEASURES – AIRPORT SAFETY

MITIGATION MEASURE SFTY 5.7(c) (Air Navigation Safety): The project shall comply with established regulations set forth by the Federal Aviation Administration (FAA) (i.e., [Title 14, Chapter I, Subchapter E, Part 77](#)), and by the California Department of Transportation Aeronautics Division (i.e., Section 21659 of the California Public Utilities Code), and FAA Advisory Circular 150-5300 13A.

³⁶ Communication with Garrett Higerd, Mono County Engineer, 25 September 2018.

³⁷ FAA requires submittal of Forms 7460-1 and 7460-2 for construction or alteration projects that are not located on an airport site. Source: FAA Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) portal: <https://oeaaa.faa.gov/oeaaa/external/portal.jsp>.

EXHIBIT 5-7-1: LEE VINING AIRPORT SAFTEY ZONES.



IMPACT 5.7(d): Would implementation of the proposed Workforce Housing project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

LESS THAN SIGNIFICANT IMPACT. As described in the baseline overview, the Mono County Emergency Operations Plan sets forth all aspects of the County's response to emergency events. As such, the EOP provides detailed guidelines for the management of emergencies (actions taken before an emergency to optimize readiness), emergency response (pre-emergency actions, initial emergency response, and sustained emergency response as needed), recovery (to access assistance funds and programs) and mitigation (to avoid or reduce the impact of future emergency events).

The EOP identifies 4 primary evacuation routes in Mono County: US 395 (providing access to western Nevada and southern California), US 6 (providing access to central Nevada), and State Routes 120 and 108, both of which cross the Sierra and provide access to the Central Valley and California coast. All of these major routes and their community access roads are subject to periodic closure (due to avalanches, landslides, snow, fog, wildfire and flooding) and several Mono County communities have only one access route (Wheeler Crest, Lundy Lake, Virginia Lakes, Twin Lakes, and part of June Lake). The EOP also notes that the 3 general aviation airports, including Lee Vining, play important roles in mass casualty evacuations that require airlifting of patients to hospitals out of the region; the Plan also notes that airports are vulnerable to transportation-targeted terrorism.

The Tioga Mart site has proximate direct access to US 395 (generally open through all seasons), and to SR 120 (generally open to the west only during the summer months). An informal dirt road links the site to SR120 through the southwestern-most corner of the property; this road is not owned by the applicant or approved for general use, but would be available under emergency conditions. The project site is also located adjacent to the Lee Vining Airport, where the property owner keeps a private plane. Though the deli closes in winter, the Tioga Mobile Station remains open throughout the winter months, providing fuel for larger vehicles with otherwise limited winter fueling opportunities on US 395. Further, because the Tioga site provides ample parking areas for oversize vehicles, it has on occasion served as a staging area for emergency response. The Tioga project site will continue to serve as a staging area for emergency response activities if the proposed workforce housing project is approved and implemented.

The layout and dimensions of proposed onsite roads has been reviewed with the Lee Vining Fire Protection District, and found to be consistent with applicable fire response equipment access requirements.³⁸ Based on the foregoing considerations, none of the existing or proposed project elements would impair implementation of or interfere with an adopted emergency response plan or emergency evacuation plan, and mitigation is provided below to require an evacuation routing plan to be used by onsite residents and business in the event of natural disaster. Impacts would be *less than significant*.

MITIGATION MEASURES – EMERGENCY RESPONSE

SFTY 5.7(d) (Emergency Evacuation): A public safety evacuation plan shall be prepared for use by onsite residents and businesses in the event of a natural disaster.

IMPACT 5.7(e): Would project implementation expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands adjoin urbanized areas or where residences are intermixed with wildlands, or exacerbate wildfire risk or expose people or structures to significant risk of fire-related flooding?

³⁸ Tom Strazdins, Chief, LVFPD, personal communication 25 July 2018.

LESS THAN SIGNIFICANT WITH MITIGATION. The baseline overview describes wildland fire as a constant risk in Mono County and throughout the Sierra Nevada region. Cal Fire mapping classifies most of Mono County as having moderate fire hazard severity risks, with only pockets of land (generally west of Coleville) classified as Very High hazard severity. CalFire rates fire risk on the Tioga Mart project site as 'moderate.'³⁹

Mono County has analyzed wildland fire hazards in each community through the Community Wildfire Protection Plan (CWPP)⁴⁰. The CWPP has identified 17 of the 36 communities in Mono County to be at extreme or very high fire risk; Lee Vining is not identified as a high risk community. With a CWPP rating of 30, Lee Vining ranks among the communities with the lowest fire hazard; only Bridgeport has a rating more favorable than Lee Vining. The ranking reflects community access to dual access routes, relatively low road gradients (none higher than 8%), adequate road widths, a good hydrant network, the local volunteer fire station and USFS fire station, discontinuous light fuel loading and moderate to low topography.

The report identifies adverse fire conditions in Lee Vining as including variable levels of structural repair with frequent occurrence of flammable decks and projections, poor address markings, and the presence of power lines and propane tanks that pose a hazard to firefighters. Based on these factors, the CWPP recommendations for Lee Vining (all of which are part of Mitigation Measure 5.7(e-1)) include maintenance of adequate defensible space for all homes; use of noncombustible materials for decks, siding and roofs; screening or enclosing of open areas below decks and projections, to prevent the ingress of embers; routine clearing of leaf and needle litter from roofs and gutters and away from foundations; routine clearing of flammable vegetation away from power lines near homes; routine clearing of weeds and flammable vegetation to at least 30 feet away from propane tanks; use of fire and drought tolerant plantings, especially within 30-feet of homes, and avoidance of flammable ornamentals such as conifers; routine thinning of vegetation along access roads and driveways; provision of turnarounds at the end of all driveways and dead-end roads; and reflective address markers on all driveways and homes.

During the project review, a meeting was held with the Chief of the Lee Vining Fire Protection District.⁴¹ The Fire Chief discussed onsite fire flow capacity, emergency access provision, and hydrant design and location with the project engineer. The Chief indicated that the onsite maximum fire flow capability of 2,500 gpm was more than adequate, anticipating that 1,500 gpm may be sufficient to meet requirements on this site. The Chief also found emergency access provisions and roadway widths to be adequate, with roadway widths that will more than accommodate the 8' 6" wide LVFPD fire truck. Because District water hoses are comparatively short, the Chief requested that multiple hydrants be provided throughout the site, and expressed a preference for the breakaway hydrant design where flows shut down if the hydrant is damaged; the Chief had no preference regarding use of wet or dry sprinkler systems, and noted that CalFire and National Fire Standards should govern fire safe building design. These recommendations are contained in Mitigation Measure 5.7(e)-2.

The project will comply fully with CalFire Fire Safe Regulation PRC §4290 and §4291, as well as Mono County Chapter 22 Fire Safe Regulations as detailed in §5.7.3.5 of this section. Compliance with mandatory Fire Safe regulations, in combination with the CWPP-based provisions in mitigation measure 5.7(e)-1 and the supplemental LVFPD measures outlined in Mitigation Measure 5.7(e)-2, will reduce to less than significant levels the threat of loss, injury or death involving wildland fires. Project impacts are ***less than significant with mitigation*** with respect to wildland fire hazards.

³⁹ CalFire, Fire Hazard Severity Zones in SRA, November 2007: http://frap.fire.ca.gov/webdata/maps/mono/fhszs_map.26.pdf

⁴⁰ Mono County: <https://monocounty.ca.gov/community-development/page/community-wildfire-protection-plan>.

⁴¹ Communication with Tom Strazdins, LVFPD Fire Chief, 25 July 2018.

MITIGATION MEASURES – WILDLAND FIRE RISK

MITIGATION SFTY 5.7(e-1) (Fire Risk): The project shall incorporate the wildland fire protection measures listed below and detailed in the Community Wildland Fire Protection Plan – Home Mitigation section, CWPP pages 36-40 (or as updated):

- Maintenance of adequate defensible space for all homes;
- Use of noncombustible materials for decks, siding and roofs;
- Screening or enclosing of open areas below decks and projections, to prevent the ingress of embers
- Routine clearing of leaf and needle litter from roofs and gutters and away from foundations;
- Routine clearing of flammable vegetation away from power lines near homes;
- Routine clearing of weeds and flammable vegetation to at least 30 feet away from propane tanks;
- Use of fire and drought tolerant plantings, especially within 30-feet of homes, and avoidance of flammable ornamentals such as conifers;
- Routine thinning of vegetation along access roads and driveways;
- Provision of turnarounds at the end of all driveways and dead-end roads; and
- Reflective address markers on all driveways and homes.

MITIGATION SFTY 5.7(e-2)(Fire Hydrants): Multiple fire hydrants shall be provided on the project site, at locations that will enable all project elements to be reached with use of existing LVFPD water hoses. All hydrants shall feature a breakaway design feature wherein flows shut down if the hydrant is damaged.

IMPACT 5.7(f): Would project implementation expose people or structures to significant risk involving avalanche, landslides, destructive storms or winds, rockfall or volcanic activity?

LESS THAN SIGNIFICANT IMPACT. As detailed in the baseline discussion, Mono County is subject to a wide range of significant hazards including avalanches, dam failures, flooding, landslides, seismic hazards, severe winds and severe winter storms, volcanic hazards, radon exposure, and wildfires. While risks are widespread, some areas of the county are at higher risk of exposure than other areas. The County has reviewed GIS data and land use designations to determine where parcels may be affected by hazards, and local hazard concerns have been identified by community planning advisory committees. Findings and concerns identified for Mono Basin are summarized in Table 5.7-5 below.

TABLE 5.7-5: Vulnerability of Mono Basin to Hazards		
AREA	HAZARDS	COMMUNITY CONCERNS
Mono Basin	Avalanche, dam inundation, flood (minor), wildfires (extensive), seismic (strong shaking & parcels in Alquist-Priolo Fault Hazard zones), volcanic (ash fall and pyroclastic flows from the Mono-Inyo Craters)	Some areas in Mono Basin need brush clearing in order to fully function as overflow channels in the case of flooding.

Avalanche Hazards. Discussion in the Mono County Multi-Jurisdictional Local Hazards Plan⁴² notes that avalanche hazards in the Mono Basin are limited to roadway sections along US 395 just north of Lee Vining (outside of the Tioga project site).

Dam Failure: The Mono County *Multi-Hazards Plan* defines dam failure as the uncontrolled release of impounded water from a dam and notes that flooding, earthquakes, blockages, landslides, lack of maintenance, improper operation, poor construction, vandalism, and terrorism can all cause a dam to fail. Three of the twenty-one dams in Mono County are located along Lee Vining Creek (at Tioga Lake, Saddlebag Lake, and Ellery Lake), as profiled in Table 5.7-6.

⁴² Mono County and Town of Mammoth Lakes, *Multi-Jurisdictional Local Hazards Plan*, October 2006: https://monocounty.ca.gov/sites/default/files/fileattachments/planning_division/page/10087/adopted_haz_plan.pdf

TABLE 5.7-6: Dams and Reservoirs on Lee Vining Creek					
Reservoir	Dam	AF Impounded	Stream/River	Owner	Location
Ellery Lake	Rhinedollar	749	Lee Vining Ck	LADWP	Lee Vining
Saddlebag Lake	Saddlebag	385	Lee Vining Ck	LADWP	Lee Vining
Tioga Lake	Tioga	150	Lee Vining Ck	LADWP	Lee Vining

All non-federal dams in California are regulated through the Department of Water Resources Dam Safety Program. Since 1950, there has been only one dam failure in California (the Dam Safety Program was revised after that failure to address additional concerns), and there have been no dam failures in Mono County. The three dams and reservoirs listed in Table 5.7-5 impound relative small amounts of water that would drain into Lee Vining Creek, which is located at an elevation lower than the project site. The risk of harm to people or structures on the project site from dam failure is considered less than significant.

Landslides. The Mono County General Plan discussion of Issues/Opportunities and Constraints notes that the California Department of Conservation, Division of Mines and Geology has yet to prepare maps of earthquake-induced landslide hazards for Mono County as required by the Seismic Hazards Mapping Act. However, it states that rockfalls and landslides are particularly common along very steep slopes. Landslides in hilly and mountainous terrain can be triggered by ground shaking, heavy rains and human activities including road cuts, grading, construction removal of vegetation, and changes in drainage. The California State Multi-Hazard Mitigation Plan shows only southeast corner of Mono County (White Mountains and Oasis) as having significant landslide incidence and/or susceptibility. The risk of landslide on the project site is considered to be less than significant.

Destructive Storms or Winds. The Mono County Safety Element notes that severe winter storms occur throughout Mono County, particularly along the eastern Sierra slopes, in the western part of the county, and at higher elevations. Severe winter storm hazards include road closures, power outages, school closures, avalanche hazards, heavy winds, heavy snow, whiteout conditions, and ice storms, and snow and ice shedding in the developed areas. Factors that exacerbate storm vulnerability include lack of cell phone or radio service, and unreinforced masonry structures. The Tioga Mart property has an onsite cell tower, and all structures are reinforced.

Seiches and Tsunamis. Although small seiches (one to two tenths of a foot in amplitude) are common on Mono Lake during windstorms, no large and damaging seiches have occurred in Mono County Lakes and reservoirs. Tsunamis too have been observed in some large bodies of water (such as Lake Tahoe, which has been identified as having tsunami risk⁴³); however, no tsunami risk has been identified in Mono County.

Rockfall. Rockfall can be caused by earthquakes, landslides and heavy rains. The County's Multi-Jurisdictional Local Hazards Plan identifies two nearby community areas (Lundy Canyon, about 5 miles north of the project site, and June Lake Loop mainly in the Down Canyon area, about 6 miles to the south) that are affected by rockfall hazards, noting that other rockfall hazard zones occur outside of community areas. Rockfall hazards on the project site are considered less than significant.

Volcanic Activity. The Mono-Inyo Craters chain from Mammoth Mountain to Mono Lake has produced explosive eruptions with pyroclastic flows (violent eruptions of lava fragments) and tephra fall (solid material transported through the air). USGS scientists estimate that explosion from the vents along this chain could result in pyroclastic flows or surges traveling 7-8 miles to the east (flows to the west would be blocked by the mountains), with downwind ash deposits of 8 inches or more as far as 22 miles from the eruption. Based on past event, USGS anticipates that the next eruption in the Long Valley area will probably occur along the Mono-Inyo volcanic chain; the probability of such an eruption is estimated to be roughly 1 in 200 (~0.5%) per year. As noted in the baseline discussion, pyroclastic flows and

⁴³ USGS, Tsunami-generated boulder ridges in Lake Tahoe, California-Nevada Geology: <https://pubs.er.usgs.gov/publication/70028988>

surges along the Mono-Inyo Craters could affect up to 3,694 developed parcels over an area extending from Mammoth Lakes to the north shore of Mono Lake, and from partially up the Sierra Nevada to the eastern shore of Mono Lake. Eruption during winter months would be a worst case scenario, with the potential for rapid snowmelt to create mudflows or lahars carrying debris throughout the hazard zone. This scenario would affect not only Lee Vining, but the entire Town of Mammoth Lakes, the community of June Lake, and developed areas in the Mono Basin and the western portion of Long Valley. Although catastrophic, USGS notes that pyroclastic flows are often slow-moving events and there would likely be warning of an event. Despite the significant hazard risk, volcanic hazards are not considered to be one of the most prevalent natural hazards in Mono County due to the uncertainty of such an event and the fact that USGS has established a monitoring system for the Long Valley Caldera.

Volcanic potential was also addressed in the Geologic Report prepared for the 1993 Tioga Inn FEIR. The report noted that the region is volcanically active, with the last known rupture occurring around 1890. Volcanic areas near the project site include the Mono Craters (about 5 miles from the site), and the Long Valley caldera (about 15-20 miles from the site). Ash fall was considered the type of eruption with highest potential at the project site due to site elevations and distance to known volcanic sources. The report found that the project is in a region with potential for collapse and subsidence associated with due to the Long Valley-Mono Craters. However, the review did not find onsite evidence of factors that would contribute to subsidence (down-faulting along bordering fault zones, significant groundwater withdrawal, or hydrocompaction). The 1993 FEIR report concluded that the site potential for areal subsidence or ground fissures would be no greater than at nearby locations. The reader is referred to EIR §5.2 (Hydrology), Impact 5.2(g) (Mudflow) for discussion of the potentially significant and potentially unavoidable exposure of people and structures to mudflows from winter volcanic eruptions.

Summary. The future probability of catastrophic events as well as the type of risk exposure varies by community. There are essentially no communities or areas in Mono County that are entirely free of significant risks from natural hazards. However, the Lee Vining community has a comparatively low hazard risk profile: avalanche hazards are limited to areas along US 395 north of Lee Vining, no dam failure has ever been recorded in Mono County, the Lee Vining community is not in an identified landslide or rockfall risk area, neither of the severe storm risk factors (lack of cell phone service and unreinforced structures) is present on the project site, and Lee Vining is not in an identified rockfall hazard zone. Volcanic hazards are significant on the project site and in the region as a whole, but the likelihood of an event is low. Both the County and the State have developed extensive regulations to govern construction, development, occupancy, access and other elements of risk; these regulations will apply to the proposed project. For the above reasons, the potential that the project would expose people or structures to hazards involving avalanche, landslides, destructive storms or winds, rockfall or volcanic activity (apart from potential mudflows as discussed in EIR §5.2) is considered ***less than significant***, and no mitigation is proposed.

MITIGATION MEASURES – HEALTH AND SAFETY

SFTY 5.7-3(f) (Avalanche, Seiche, Landslide, Rockfall): The potential that the project would expose people or structures to mitigable risk involving avalanche, seiche, landslides, destructive storms or winds, rockfall or volcanic activity is considered less than significant, and no mitigation measures are required.

5.7.7 SIGNIFICANCE AFTER MITIGATION

Potential health and safety impacts associated with proximity to Lee Vining Airport, and wildland fire risk would be reduced to less than significant levels through adoption and implementation of the mitigation measures identified above. Potential impacts associated with materials transport, hazardous materials, emergency response, and natural hazards (including avalanche, landslide, volcanic activity and storms) would be less than significant.

TIOGA WORKFORCE HOUSING DRAFT SUBSEQUENT EIR



SECTION 5.8 PUBLIC SERVICES, ENERGY & UTILITIES

5.8.1 INTRODUCTION, SUMMARY AND KEY TERMS

This section describes services and utility systems in Mono County and in the Lee Vining area, and the potential impacts on these services and systems that may occur in association with the proposed Tioga Workforce Housing Project. Information for this section is drawn from the Mono County General Plan and associated Final EIR, and other source documents and direct communications as referenced in this section. The reader is referred to EIR §5.6 for discussion of hazards (including fire hazards and emergency services), and to §5.2 for discussion of hydrology and water supply.

Comments received during scoping and in response to the NOP raised a number of issues pertaining to potential project impacts on services and utilities, including (1) increased demands on police and paramedic services; (2) increased demands on local schools; (3) increased demands on social services, and (4) project energy requirements, energy costs, and conservation features and design elements. Findings of the analyses contained in this section are summarized below.

SUMMARY OF IMPACTS & MITIGATIONS FOR SERVICES, ENERGY AND UTILITIES

IMPACT SVCS 5.8(a):	REQUIRE NEW POLICE, SCHOOL, OR OTHER SERVICES
HUD Mitigation SVCS 5.8(a-1):	Grant application for development of safe pedestrian/cycling access from site to Lee Vining
Significance:	SIGNIFICANT and Potentially Unavoidable impacts to safety of pedestrians and cyclists
IMPACT SVCS 5.8(b):	RESULT IN WASTEFUL, INEFFICIENT CONSUMPTION OF ENERGY
Mitigation:	Less than Significant Impact; No Mitigation Required
Significance:	Less than Significant
IMPACT SVCS 5.8(c):	BE SERVED BY A LANDFILL WITH INSUFFICIENT PERMITTED CAPACITY
Mitigation:	Less than Significant Impact; No Mitigation Required
Significance:	Less than Significant

5.8.2 KEY TERM USED IN THIS SECTION

Transfer station. A major facility at which municipal solid waste from collection vehicles is consolidated into loads that are transported by larger trucks or other means to more-distant final disposal facilities, typically landfills.

5.8.3 BASELINE CONDITIONS

Mono County provides a wide range of general governmental services to residents of the unincorporated areas. County services are provided in Bridgeport (the County seat) as well as branch offices in Mammoth Lakes. County services relevant to the proposed Tioga Workforce Housing Project are described below.

5.8.3.1 Police Services¹

The Mono County Sheriff's Department provides police services in the unincorporated areas. The Sheriff's Department is responsible for jail operations, and also processes and serves civil paperwork, provides coroner operations, and

¹ Mono County Sheriff's Dept. website: <https://www.monosheriff.org/>.

conducts search and rescue operations. Most of the work conducted by the Sheriff's Department occurs in Mammoth Lakes, including 70% of the civil division workload, about 60% of jail bookings, and about 50% of the coroner's activities. However, 95% of search and rescue operations occur outside of the Town limits.

The Mono County Sheriff is the designated county Director of Emergency Services, responsible for implementing the Emergency Operations Plan (please see §5.6 for discussion of emergency services). The California Highway Patrol has primary responsibility for traffic control and accident investigation on state and federal highways throughout the county, including US 395 and SR 120. The Sheriff's Department has mutual aid agreements with surrounding jurisdictions, and maintains a main office in Bridgeport as well as substations in June Lake and Lake Crowley.

5.8.3.2 Schools and Education²

Communities in the Mono Basin are served by the Eastern Sierra Unified School District, which operates elementary schools in Lee Vining, Coleville, Bridgeport and Benton, and high schools in Lee Vining and Coleville. High school students in Bridgeport are bused to Coleville and high school students in Benton attend school in Bishop; most students from June Lake attend school in Lee Vining. Students living in Lee Vining attend Lee Vining Elementary School for grades K-8, and Lee Vining High School for grades 9-12. Lee Vining Elementary School is located at 132 Lee Vining Avenue, and Lee Vining High School is located at 51710 US 395; both schools are within 1.2 miles of the project site.

5.8.3.3 Superior Courts and District Attorney³

The Superior Court of California operates two courthouses in Mono County. The north County branch is located in the historic Bridgeport Courthouse in central Bridgeport on US 395. Directly adjacent to the county jail, the north County Superior Court branch is used almost exclusively for arraignments. The South County branch (completed in 2011) is located in Mammoth Lakes and contains two courtrooms in a 20,000-sf structure located at the intersection of SR 203 and Sierra Park Road. The facility is part of an evolving regional government center in Mammoth Lakes. The South County courthouse handles a majority of the civil and criminal workload as well as most jury trials. The Mono County MEA notes that most of the case filings involve recreational visitors. The District Attorney is responsible for promoting and protecting public peace and safety in Mono County. The DA prosecutes all criminal matters in the county, and provides legal and investigative assistance to other County law enforcement agencies.

5.8.3.4 Public Works and Solid Waste⁴

The Mono County Public Works Department is responsible for maintaining County facilities including parks, buildings, cemeteries, campgrounds and airports. The facilities division is also responsible for a wide range of capital improvement projects, energy efficiency projects, and ADA accessibility. The Department inspects facilities regularly including weekly playground inspections, quarterly inspections of Community Centers, and bi-annual maintenance and inspection of heating and cooling systems county wide. The Department maintains roads, provides snow removal, and operates road yards including one in Lee Vining.

Public Works also operates and manages solid waste services in Mono County, including 3 active landfills and 6 low-volume transfer stations. Two of the landfills (Pumice Valley and Walker) accept only commercial and demolition waste for burial, and transfer all municipal solid waste off-site for disposal; the regional Benton Crossing Landfill is the only municipal solid waste disposal landfill. Some solid wastes originating in northern Mono County (north of Lee Vining) are taken to Lockwood Regional Landfill in Sparks, Nevada. The 6 transfer stations accept municipal solid waste; recyclable materials (about 30% of the total received) are transported to other facilities for processing. About 30% of the material received at the transfer stations is recycled. Two commercial haulers (Mammoth Disposal in Mammoth Lakes, and D&S Waste in Yerington, Nevada) provide residential and commercial waste collection services; self-hauling of waste

² Eastern Sierra USD website: www.esusd.org/; communication with Mollie Nugent, ESUSD Business Manager, June 2018.

³ Mono Co. Superior Court & District Attorney websites: <https://monocountydistrictattorney.org/da>, <http://www.monocourt.org/>.

⁴ Mono County Public Works Department website: <https://monocounty.ca.gov/facilities>.

and recyclables is also available to all residents. The solid waste facility closest to Lee Vining is the Pumice Valley Landfill and Transfer Station, located about 1 mile east of US 395 on SR 120.

5.8.3.5 Community Development Department (CDD)⁵

The CDD provides a wide range of services including planning, building and code compliance. The CDD also provides varied development services and staff services for the Mono County Planning Commission, the Local Transportation Commission, the Land Development Technical Advisory Committee (LDTAC), LAFCO, the Long Valley Hydrologic Advisory Committee, the Airport Land Use Commission, the Mono County Collaborative Planning Team, and Regional Planning Advisory Committees (RPACs) located in communities throughout the county including Lee Vining.

5.8.3.6 Libraries⁶

The Mono County Free Library District operates a countywide system that is administered by the County Board of Education. The main library is located in Bridgeport, and branch libraries are located in Coleville, Lee Vining, June Lake, Crowley, Mammoth, and Benton. A Bookmobile circulates throughout the county. The Interlibrary Loan System has been discontinued, but books, articles, and other materials are available through the 'Zip Books' program, which is funded by a California State Library grant.

5.8.3.7 Public Health Department⁷

The Public Health Department provides immunizations, HIV and related disease programs, communicable disease prevention and surveillance, tuberculosis programs, health promotion, emergency preparedness, children's services, programs for child health and disability prevention as well as women and infants and children and other similar services. Hospital and emergency care services are provided at Mammoth Hospital; more serious cases are transported to facilities in Bishop, Reno, Fresno, or southern California depending on the case. Basic health care services are available at the Toiyabe Health Care Clinic in Walker (which provides health care services to Native Americans). The Department provides a variety of health care services at medical facilities located in Mammoth Lakes and acts as an information and referral center, providing health education materials and varied preventive services such as immunizations and screenings. The Department also administers state-mandated public health programs. Mental health services are provided by the Mental Health Department, with offices in Mammoth Lakes.

5.8.3.8 Social Services and Child Support Services⁸

The Social Services Department provides a wide range of assistance and service programs to aid elderly and disabled residents (CalFresh, Medical, County medical program, and temporary cash assistance), as well as disaster relief shelters, senior programs, and a wide range of programs through the Inyo-Mono Advocates for Community Action ('IMACA', including food and garden assistance, community gardens, holiday food baskets, holiday gifts for children, head start and preschool, home energy assistance and weatherization and appliance replacement, and low income housing projects in Bishop and Mammoth Lakes). The Department also provides foster care, health care reform, welfare fraud detection, and related services to needy and vulnerable children and adults living in Mono County.

5.8.3.9 Behavioral Services⁹

The Behavioral Health Department offers counseling, therapy, case management, psychiatry and alcohol and other drug treatment services to county residents. The Department manages two wellness centers (one in Mammoth Lakes and one in Walker), offers out-patient counseling and provides all Court-mandated services including DUI and PC1000 (drug abuse) programs.

⁵ Mono County Community Development Department website: <https://monocounty.ca.gov/community-development>.

⁶ Mono County Free Library website: <https://www.monocolibraries.org/>.

⁷ Mono County Public Health Department website: <https://monohealth.com/public-health>.

⁸ Mono County Social Services website: <https://monocounty.ca.gov/social-services/page/mono-county-social-services>.

⁹ Mono County Behavioral Health website: <https://monocounty.ca.gov/behavioral-health>.

5.8.3.10 Environmental Health¹⁰

Environmental Health regulates food establishments, sewage disposal facilities (including small package systems such as is proposed for the Tioga Workforce Housing Project), swimming pools, potable water systems, well construction, recreational health facilities, occupied housing, underground storage tanks (including existing and proposed gasoline storage tanks at the project site), solid waste facilities, radon testing kits (note that Mono County is not shown as a region with elevated radon potential¹¹), land development, rabies and vector control, and the management of hazardous wastes.

5.8.3.11 Mono County Economic Development¹²

The Economic Development Department is responsible for improving and enhancing economic conditions for Mono County residents and businesses to ensure long-term sustainability. The Department promotes tourism and offers a wide range of services including workforce assistance programs (subsidized employment benefits to employers for qualified trainees), on-the-job training (to help employers with the cost of hiring and training new employees), job skill placement services, and other state and federally funded programs that combine wage-paid work, job skills training, and supportive services to help workers find employment and employers find staff. The Department collaborates with a variety of local and regional agencies, organizations and individuals.

5.8.3.12 Lee Vining Public Utility District¹³

The Municipal Services Review (MSR) prepared by the Local Agency Formation Commission (LAFCO) indicates that the Lee Vining PUD provides water and sewer services to the Lee Vining townsite. As a Public Utility District, the district is also authorized to provide lighting, power, heat, transportation, telephone service, other methods of communication, garbage disposal, golf courses, fire protection, mosquito abatement, parks and recreation, public buildings, and drainage improvements. The MSR notes that LVPUD has no long-term planning documents or other reports to indicate how it will meet future water and sewer demands in Lee Vining, and recommends that such plans be prepared based on existing and anticipated growth patterns and population projections in this popular recreation destination and year-round residential community.

5.8.3.13 Electricity and Heating Fuels^{14, 15}

Electricity in Mono County is supplied by Southern California Edison (SCE) and Liberty Utilities. The SCE service area includes Lee Vining as well as Benton, Bridgeport, Chalfant, June Lake and Toms Place. Liberty Utilities provides service to the northern portion of Mono County, including the unincorporated communities of Coleville, Topaz, and Walker. In 2010, approximately 201.17 kWh were consumed in Mono County (total of all uses and sources). Over the next 6 years, consumption fell by about 7% to a 2016 total of 189.77 kWh.

Wood and propane are the primary heating fuels in Mono County. There is no extended network of natural gas pipelines serving the region. Approximately 4.6 million gallons of propane were used in 2010, in both residential (979,070 gallons) and nonresidential buildings (3.63 million gallons). Roughly 9,930 tons of wood were used to heat residential buildings in 2010. The County has set a 2035 goal of reducing propane consumption by 175,600 gallons per year (about 3.8% per year).

¹⁰ Mono County Environmental Health Department website: <https://monohealth.com/environmental-health>

¹¹ California Dept. of Conservation Interactive Radon Map website: <http://maps.conservation.ca.gov/cgs/radon/>.

¹² Mono County Economic Development Dept. website: <http://www.monocountyeconomicdevelopment.com/>.

¹³ Mono County LAFCO website: https://www.monocounty.ca.gov/sites/default/files/fileattachments/local_agency_formation_commission_lafco/page/3562/leevinin_gpublicutilitydistrict_02.2009.pdf.

¹⁴ California Energy Commission website: <http://ecdms.energy.ca.gov/elecbycounty.aspx>;

¹⁵ Mono County Resource Efficiency Plan: http://monoclimateaction.org/wp-content/uploads/2017/04/Mono-REP-38-MW_Final.pdf.

5.8.3.14 Communications¹⁶

Mono County has until recently experienced poor quality broadband access due to its remote location and dispersed population. Capacity issues were largely resolved in 2013-14 through completion of a fiber optic cable ('Digital 395') linking southern California to northern Nevada via the US 395 corridor. Lee Vining is now fully connected to the Digital 395 fiber optic cable system. Schat.net provides wireless service in the Lee Vining community. A cell tower is located on the Tioga project site.

5.8.4 REGULATORY SETTING

5.8.4.1 Federal Regulations

Americans with Disabilities Act (ADA). The 1990 ADA (42 US Code [USC] 12181) prohibits discrimination on the basis of disability in public accommodation and state and local government services. Under the ADA, the Architectural and Transportation Barriers Compliance Board issues guidelines to ensure that public facilities, public sidewalks, and street crossings are accessible to individuals with disabilities. Play areas, meeting rooms, park restrooms, and other public buildings and park structures must comply with ADA requirements.

5.8.4.2 State Regulations

California Occupational Safety and Health Administration (Cal/OSHA). In accordance with CCR Title 8 §1270 "Fire Prevention" and §6773 "Fire Protection and Fire Equipment," Cal/OSHA has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire hose sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all fire-fighting and emergency medical equipment.

California Health and Safety Code. State fire regulations are set forth in §13000 et seq. of the California Health and Safety Code. This includes regulations for building standards (as also set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

California Department of Education (CDE). The CDE School Facilities Planning Division (SFPD) School Site Selection and Approval Guide provides criteria for locating appropriate school sites. School site and size recommendations were modified by the CDE in 2000 to reflect changes in educational conditions (such as lower class sizes and use of advanced technology) and to address concerns over growing use of school buildings and grounds for joint use purposes of the community and local agencies.

Kindergarten-University Public Education Facilities Bond Act of 2002 (Prop 47). Approved by California voters in November 2002, this act provided a bond issue of \$13.05 billion for education facilities to relieve overcrowding and repair older schools. Funds were targeted at areas of greatest need and could also be used to upgrade and build new classrooms in the California Community Colleges, the California State University, and the University of California.

Leroy F. Greene School Facilities Act of 1998 (SB 50). In combination with the \$9.2 billion education bond act approved by the voters in 1998 (Prop 1A), this act reformed methods for the financing of school construction in California. The act: (a) included a new school facility program by which school districts can apply for state construction and modernization funds, (b) imposed limitations on the power of cities and counties to require mitigation of school facilities impacts as a condition of development approval, and (c) authorized districts to levy fees.

California Integrated Waste Management Act (CIWMA) of 1989. As of 1990, the CIWMA required cities and counties to divert 25% of all solid waste from landfill facilities by January 1, 1995, and 50% by January 1, 2000. Each city is required to develop solid waste plans demonstrating integration of the CIWMA requirements, including (in order of

¹⁶ Mono County GIS website: <https://gis.mono.ca.gov/site/projects/Digital395/Residents>.

priority) source reduction, recycling and composting, and environmentally safe transformation and land disposal. The California Legislature has set a goal of 75 % recycling, composting or source reduction of solid waste by 2020

California Public Utilities Commission (CPUC) Decision 95-08-038. CPUC Decision 95-08-038 contains rules for the planning and construction of new transmission facilities, distribution facilities, and substations. The decision requires permits for the construction of certain power line facilities or substations if voltages would exceed 50 kilovolts (kV) or if the substation would require the acquisition of land. Distribution lines and substations with voltages less than 50 kV are not required to comply with this decision but remain subject to nondiscretionary local permits.

California Department of Education. The California Education Code contains various provisions governing the siting, design, and construction of new public schools. Also, to help focus and manage site selection, the California Department of Education's (CDE's) School Facilities and Planning Division has developed screening and ranking procedures based on selected criteria; safety is the foremost consideration and includes such factors as proximity to airports and railroads and high-voltage power transmission lines, and the presence of toxic and hazardous substances.

California Department of Health Services (DHS). DHS regulates recycled wastewater under CCR Title 22, Division 4. Regulations focus on protection of public health through identification and regulation of acceptable levels of constituents for a range of uses, and standards to ensure reliability in the production of recycled water. CDPH has jurisdiction over the distribution of recycled wastewater and the enforcement of Title 22 regulations, while the Regional Water Quality Control Boards (RWQCB) are responsible for issuing waste discharge requirements and reuse requirements associated with the implementation of wastewater reclamation projects. In Mono County, only MCWD engages in water reclamation and reuse activities subject to these requirements.

California Energy Commission (CEC) SB 1037 & AB 2021. Signed into law in September 2005, SB 1037 mandates that all publicly-owned utilities (POUs) must report to the CEC on cost-effective and feasible energy efficiency programs. AB 2021 was chaptered in 2006 and built upon SB 1037, further requiring POUs to develop energy efficiency targets on a triennial basis. The CEC is authorized to set targets for all municipal utilities.

Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000T (AB2838).¹⁷ AB2838 requires Local Agency Formation Commissions (LAFCOs) to prepare Municipal Service Reviews (MSRs) of local municipal services in order to promote orderly growth and development, preserve open space and agricultural lands, and to provide high quality, cost effective public services to California residents. MSRs review and discuss LAFCO determinations concerning infrastructure needs or deficiencies; growth and population projections; financing constraints and opportunities; opportunities for cost avoidance and rate restructuring and sharing of facilities; options for the governmental structure (consolidation or reorganization); management efficiencies; and local accountability.

5.8.4.3 Regional and Local Regulations

Numerous local and regional regulations are in place to ensure that services and utilities are delivered in a manner that protects consumer and worker safety, ensures adequate environmental safeguards, establish standards of adequacy, describe compliance requirements and enforcement mechanisms, set forth operating principles and reporting requirements and achieve other purposes. Plans and regulations reviewed in this EIR section include the Integrated Waste Management Plan, the Emergency Operations Plan, the Communications Policy, governance of special districts and educational and police services, and energy and resource efficiency and conservation.

5.8.5 SIGNIFICANCE CRITERIA

Appendix G of the California CEQA Guidelines offer the following criteria for determining the significance of impacts to public services and utilities.¹⁸ A project would have a potentially significant impact if it would:

¹⁷ California OPR, *Final Local Agency Formation Commission Municipal Service Review Guidelines*, August 2003

¹⁸ EIR §4.8, Hydrology, discusses baseline conditions and potential impacts on water supplies & wastewater treatment requirements.

- a) Create a need for new or modified governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
- Police protection
 - Schools
 - Other public facilities , services and utilities
- b) Result in a wasteful, inefficient, and/or unnecessary consumption of energy.
- c) Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs and fail to comply with federal, state, and local statutes and regulations related to solid waste.

5.8.6 ENVIRONMENTAL IMPACTS AND MITIGATING POLICIES AND ACTIONS

IMPACT SVCS 5.8(a): Would project implementation create a need for new or modified governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services including (a) Police Protection? (b) School Services? (c) Other Public Services and Utilities?

SIGNIFICANT AND POTENTIALLY UNAVOIDABLE IMPACT. Potential project impacts on individual governmental services and facilities (including schools, police, social services, and special districts) are assessed below.

SCHOOL SERVICES. Analysis provided in EIR §5.6 (Population and Housing) indicate that the workforce housing project would generate a maximum total resident population of approximately 300 people. Applying Census Bureau age distribution data for Lee Vining residents to the Tioga employees, the estimated age distribution of future residents would be as shown in Table 5.8-1.

TABLE 5.8-1. Age Distribution of Tioga Workforce Housing Residents			
Age Distribution Category	2010 Lee Vining Population	As a Percentage of Lee Vining Population	Estimated Number of Workforce Residents each Age with 300 residents
Total Population	222	100%	300
Under 5 years	17	7.7	23
ELEMENTARY SCHOOL AGED POPULATION			
5-9 years	9	4.1	12
10-14 years	16	7.2	22
Elementary Subtotal:	42		34
HIGH SCHOOL AGED POPULATION			
15-19 years	21	9.5	28
High School Subtotal	21		28
TOTAL SCHOOL-AGED POPULATION IN PROJECT: 62			
20-29 years	46	20.8	62
30-39 years	31	14.0	42
40-49 years	25	11.3	34
50-59 years	33	14.9	45
60-69 years	15	6.8	20
70+ years	9	4.2	12
Median Age: 30.4 years			

Students living in Lee Vining attend Lee Vining Elementary School for kindergarten through 8th grade, and attend Lee Vining High School for grades 9 through 12 (note that the Lee Vining schools also serve student populations from June Lake). As of the 2013-2014 school year, Lee Vining Elementary School had a total enrollment of 102 students¹⁹ and Lee Vining High School had a total enrollment of 56.²⁰ Applying the 2010 age distribution of Lee Vining residents²¹ to future residents of the Tioga Workforce housing, it can be estimated that the project would generate an elementary school-aged population of 34, and a high school-aged population of 28. Based on these estimates, the project has potential to increase total attendance at the Lee Vining Elementary School by one-third (from 102 at present to 136 with the project), and at the Lee Vining High School by one-half (from 56 at present to 84 with the project).

ESUSD indicates that the project impact on enrollment would depend on the degree to which residents remain in the units on a year-round versus seasonal basis. The enrollment estimates above assume that all residents would remain in the housing on a year round basis; under that scenario, the District anticipates that the additional student population would result in a shortage of classroom space at Lee Vining Elementary. Lee Vining High School currently has the capacity to house the projected student increase with no additional facility requirements.

On January 24 of 2018, the California State Allocation Board increased the amount of "Level 1" developer fees that school districts are authorized to collect; the rate increased to \$3.79 per square foot of residential development and to \$0.61 per square foot of commercial/industrial space.²² Eastern Sierra Unified School District charges developer fees that are significantly below the maximum allowed in California, with a rate of \$1.56 per square foot of residential development and \$0.26 per square foot of commercial/industrial space.²³

Although square footage has not yet been determined for the workforce housing, workforce housing size guidelines provide a rough basis for estimating the future combined square footage of the Tioga workforce housing project.²⁴ Estimated minimum unit sizes are shown in Table 5.8-2 below, and applied to the Tioga project to estimate total square footage that would be subject to the Level 1 development fees.

TABLE 5.8-2. Estimated Square Footage of Workforce Housing Units			
Number of Bedrooms²⁵	Unit Type Square Footage	Number of Workforce Units each Category	Estimated Total Square Footage each Category
0 (studio units) ²⁶	450 sf	30	13,500
1 bedroom	625 sf	28	17,500
2 bedroom	950 sf	22	20,900
3 bedroom	1,200 sf	16	19,200
4 bedrooms	1,350 sf	1	1,350
		97 units	72,450 sf

¹⁹ Ed-Data, Fiscal, Demographic, and Performance Data on California's K-12 Schools:

http://www.eddata.k12.ca.us/App_Resx/EdDataClassic/fsTwoPanel.aspx?#!bottom=/_layouts/EdDataClassic/profile.asp?tab=1&level=07&ReportNumber=16&County=26&fyr=1314&District=73668&School=6025951#studentsbyraceethnicity

²⁰ Ed-Data op cit., http://www.ed-data.k12.ca.us/App_Resx/EdDataClassic/fsTwoPanel.aspx?#!bottom=/_layouts/EdDataClassic/profile.asp?tab=1&level=07&ReportNumber=16&County=26&fyr=1314&District=73668&School=2635001.

²¹ Profile of General Population and Housing Characteristics: 2010 Demographic Profile Data -- Lee Vining CDP: <https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>.

²² California Dept. of General Services, <https://www.dgs.ca.gov/opsc/Resources/AnnualAdjustment.aspx>. The rate for commercial development would increase \$0.61 per square foot.

²³ Communication from Mollie Nugent, ESUSD Business Manager, 26 June 2018.

²⁴ Town of Davidson, N.C.: <http://cltnetwork.org/wp-content/uploads/2014/08/Affordable-Housing-Guidelines-and-Standards-Davidson.pdf>. Note that only the square footage estimates for attached units are included in this table.

²⁵ Based on the EIR §5.9 (Population) estimates of the number of bedrooms in the various workforce housing units.

²⁶ Studio Units would count as 1 bedroom units in the Workforce Housing.

Under the current ESUSD fee structure, the estimated 72,450 square feet of residential area would generate level 1 developer fees of approximately \$113,022. ESUSD indicates that the fees would cover part of the cost of a new portable classroom, should that be necessary.²⁷

Day Care. An onsite day care facility will be constructed in the proposed common area of the workforce housing project (see location in EIR Project Description §3.0, Figure 3-3). Facility size and staffing will be sufficient to fully accommodate onsite residents' needs. Based on the age distribution developed in Table 5.8-1 above, it is anticipated that use of the day care facilities will be highest for the anticipated 23 pre-school residents, with additional use for the estimated 34 elementary school students; use of the day care facilities by the estimated 28 high school-aged residents is expected to be minimal. Day care staffing will be provided by the project owner(s). In whole, project impacts on school services would be **less than significant**, and no supplemental mitigation is required.

POLICE SERVICES.²⁸ The Tioga workforce housing is expected to generate a population of up to 300 new residents, which would more than triple the population of Lee Vining as of 2016. The project will have potential to impact police services due to increased safety risk to area pedestrians and cyclists.

Crime rates in Mono County are low relative to rates throughout California counties. Mono County has an average of 2.5 violent crimes per 1000 people (compared with the statewide average of 3.96), and 13 property crimes per thousand people (compared with the statewide average of 24.41).²⁹ Applying these averages to the additional 293 residents of Lee Vining, the project at buildout would be associated with an estimated 4 new property crimes per year, and less than one (0.73) new violent crimes per year.

Assuming all new Tioga residents were new to Mono County, the added population would increase the overall 2017 County population by 2.1% from 14,168 to 14,461. The 2.1% increase would represent a 'worst case' estimate of the added impact on county services, since some of the workforce housing residents will move to the site from other Mono County locations.

Sheriff Ingrid Braun was contacted regarding potential project impacts on police services. The Sheriff indicated that impacts will depend on the character of the new resident population. If residents are law-abiding, the impacts on police services would be less than significant. Concerns raised during EIR scoping included a possibility that the project may contribute to seasonal squatting. This is an existing issue for the Police Department, and the Sheriff does not anticipate that the Tioga project would increase the problem.

The primary concern cited in the Sheriff's review is the potential for increased foot traffic to and from the project site and businesses and schools in Lee Vining. Under current conditions, access between these locations would be along state highways that are not designed for pedestrian use, and the Sheriff identified this as a safety concern (the concern was also raised in a number of the NOP comment letters). The Sheriff noted that Caltrans has initiated a project to rehabilitate US 395 through Lee Vining. However, Caltrans has indicated to Mono County Community Development Department staff³⁰ that the study will not have sufficient funding to address safe pedestrian movement between Lee Vining and the SR 120/US 395 intersection.

The needed safety improvements are outside the scope and authority of the Tioga Workforce Housing Project. However, Mono County and the project applicant have indicated their intent (if the project is approved) to jointly submit a Sustainable Communities grant application under the Rural Innovation Project Area (RIPA). Under the RIPA program, applicants must demonstrate a reduction in vehicle miles travelled through fewer or shorter vehicle trips, or a mode shift to transit use or bicycling or walking. Funding (up to \$20 million) can be used for sustainable transportation infrastructure, affordable housing, and housing-related infrastructure capital projects. In discussions to date, the county and applicant have indicated that priority improvements would center on (1) the creation of a safe pedestrian

²⁷ Communication from ESUSD Business Manager Mollie Nugent, op. cit., 26 June 2018.

²⁸ Communication from Sheriff Ingrid Braun, 24 August 2018.

²⁹ Wikipedia, California Locations by Crime Rates, 2017: https://en.wikipedia.org/wiki/California_locations_by_crime_rate.

³⁰ Communication with Wendy Sugimura, Planning Director, 28 August 2018.

and cycling route between the site (and environs south of SR 120/US 395) and the community of Lee Vining, and (2) technical studies of the potential for replacing the SR 120/US 395 intersection with a roundabout. The project would be consistent with RIPA requirements including proximity to transit, a proposed residential density of 15 units per acre or higher, and intent to set affordable rents. The intent to collaborate on this grant has been included below as Mitigation Measure 5.8(a)-1 in response to concerns raised the current absence of safe access. Impacts associated with the safety of pedestrians and cyclists are considered to be ***significant and potentially unavoidable***.

SOCIAL SERVICES. The Mono County Department of Social Services³¹ was contacted to review information concerning the proposed Tioga Workforce Housing Project, and to assess potential project impacts on the Social Services Department.

Factors considered during the review included: (1) anticipated income profiles of future residents (as discussed in EIR §5.8), (2) the type of housing to be provided and the projected number and distribution of bedrooms and unit sizes [i.e., studio units, 1-bedroom units, etc., as outlined in EIR §5.6 Population and Housing], (3) the anticipated number of children (as calculated in EIR §5.8, Services), (4) the intent that future residents would be part of the workforce (no unemployed occupants), and that workforce housing rents would be affordable (i.e., comprising 30% or less of household income, as discussed in EIR §5.6); and (5) uncertainties regarding future residents' health insurance coverage (please see discussion in EIR §5.6, Population).

Based on the project description and characteristics as outlined above, the Department concluded that the proposed Tioga Workforce Housing Project would have a ***less than significant impact*** on the workload or services offered by the Social Services Department."

SPECIAL DISTRICTS. The project falls within the service area of one special district: the Lee Vining Fire Protection District (note that the project is also within the Lee Vining Public Utilities District service area, but will use only the water supplies that are produced and distributed on the Tioga project site). The Mono County *General Plan EIR* notes that the Lee Vining Fire Protection District provides emergency medical services, but lacks long-term planning documents to ensure that infrastructure meets future needs. Future growth and aging of the population are expected to place added demands on fire and emergency medical services. The Lee Vining FPD has an Insurance Service Office (ISO) rating³² of 4/6. Existing onsite fire hazards are predominantly classified as Condition Class 1, indicating that fire regimes are within their historical range, with a low risk of losing key ecosystem components. LVFPD Fire Chief Tom Strazdins does not anticipate that the proposed project would place a significant adverse burden on LVFPD operations,³³ and impacts are considered to be ***less than significant***.

MITIGATION MEASURES – IMPACTS ON PUBLIC SERVICES

HUD MITIGATION SVCS 5.8(a)(Pedestrian Safety): If the Tioga Workforce Housing Project is approved, Mono County Community Development Department will, in collaboration with the project applicant, submit a Sustainable Communities grant application under the Rural Innovation Project Area (RIPA) program; this grant is funded by the U.S. Department of Housing and Urban Development. A priority use of program funds, if awarded, will be to develop a safe pedestrian and cycling access route between the project site and the community of Lee Vining.

³¹ Communication with Kathryn Peterson, MPH, Social Services Director, and Francie Avitia, Program Manager, Mono County Eligibility & Employment Services, Mono County Department of Social Services, 12 September 2018.

³² The Insurance Service Office uses a credit rating system to determine fire insurance rates in different areas. The ISO rating is based on total points in 3 categories including fire department (50 points), water supply (40 points) and communications (10 points); each category is further divided into sub-categories. A score of 90 or better earns a 'Class 1' ratings; a score of 80-89.9 earns a 2, etc. Where two ISO ratings are given, the lower (better) number applies to properties that are located within 1000 feet of a fire hydrant, and the higher applies to properties that are located beyond 1000 feet of a hydrant ('rural' areas).

³³ Communication with Tom Strazdins, LVFPD Fire Chief, 25 July 2018.

IMPACT SVCS 5.8(b): Would implementation of the proposed Tioga Workforce Housing Project result in Wasteful, Inefficient, and Unnecessary Consumption of Energy?

LESS THAN SIGNIFICANT IMPACT. Energy supplies to serve the Tioga workforce housing project will come from solar power, propane, and electricity delivered by SCE. The project will comply with all applicable standards of the California Building Code (the 2019 Code, with strengthened building energy efficiency standards, will take effect on 1 January 2020), and the applicant also intends to place solar panels on structures that are eligible in terms of solar orientation and sun exposure, with the goal of meeting a substantial share of total project energy demand through solar power.

Electricity would be used for project lighting, cooling, refrigeration, appliances, computers, electronics, and machinery. Propane would be used for project water and space heating, cooking appliances, clothes drying, and backup power. Several propane tanks (2,500-gallons in total) are located throughout the project site at present. The applicant proposes to replace the existing tanks with a single 30,000-gallon tank that would more than accommodate current and projected future usage. Excess propane capacity would be made available to the Lee Vining community.

Project construction would involve the consumption of fuel energy supplies used by a wide range of equipment and construction vehicles. Fossil fuels used for construction vehicles and other energy-consuming equipment would be used during site cleaning, grading and paving, construction and periodic maintenance of project facilities. Most of the construction equipment will be powered by gasoline which is currently sold on the project site, and proposed for expansion to include a 3rd gas island with four additional fuel pumps. Construction-related fuel consumption would cease upon completion of project improvements, superseded by fuel consumption related to long-term operational activities. EIR §5.10 (Air Quality and Greenhouse Gases) provides estimates of fuel consumption and related emissions for both the construction and long-term maintenance and operational phases.

The project is not expected to meet formal LEED standards because stringent adherence would reduce overall affordability of the workforce units. However, the project will comply with Title 24 of the California Building Code, which includes strict building efficiency standards; California has among the highest energy standards of any state. The applicant intends to minimize long-term operational fuel consumption through the project features cited below:

- Provision of onsite workforce housing to reduce the fuel costs associated with commuting;
- Provision for onsite propane to reduce the energy costs associated with transport trucking;
- Dedicated space for a community park and ride facility to facilitate car-pooling and transit, and reduce commuting fuel consumption costs for project and Lee Vining area residents;
- Continued provision of a dedicated space for a YARTS parking and loading to facilitate transit use by Yosemite visitors;
- Provision of onsite solar to reduce demand for imported electricity;
- Installation of a subsurface treated wastewater irrigation system to minimize fuel costs associated with irrigation pumping and distribution, and
- Construction of an internal trail system with walking paths and bicycle parking areas to reduce onsite vehicular travel (by guests and residents) between the workforce housing, the hotel, the deli, the restaurant and other onsite uses; and
- The applicant will partner with the County to seek funds for a safe pedestrian/bicycle trail system to link the project site to Lee Vining and thereby reduce guest use of cars to visit Mono Basin attractions.

In consideration of these factors, it is not anticipated that the construction of future projects consistent with the proposed Tioga Workforce Housing Project would result in wasteful, inefficient, and unnecessary consumption of energy. This impact would be *less than significant*.

MITIGATION MEASURES – ENERGY CONSUMPTION

SVCS 5.8(b) (Energy Use): No significant impacts associated with to energy consumption have been identified, and no mitigation measures are required.

IMPACT SVCS 5.8(c): Would the project be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs and fail to comply with federal, state, and local statutes and regulations related to solid waste?

LESS THAN SIGNIFICANT IMPACT. The proposed project elements (particularly the workforce residential units) will introduce additional waste loads requiring disposal. As noted in the baseline discussion, California has identified a reduction of wastes as a statewide priority; source reduction is the preferred method of waste management since it best protects public health and the environment, and avoids the costs and liabilities associated with waste generation and disposal. These broad goals are codified in the Integrated Waste Management Act of 1989, which established a requirement that 50% of solid wastes be diverted from municipal landfills by 2000. According to the EPA³⁴ the 50% diversion rate has been achieved, and the state has now set a new goal of 75% recycling, composting or source reduction by the year 2020 with an emphasis on recycling and recovery as the preferred methods.

To comply with state mandates and local planning goals and policies, Mono County has prepared a comprehensive Integrated Waste Management Plan (IWMP). The IWMP focuses on reduction of waste loads, tools to monitor landfill capacity, expansion of new non-disposal transfer facilities in accordance with siting criteria that emphasize minimum separation from incompatible uses and use of pre-disturbed lands, all in accordance with the statewide policy emphasis on waste reduction and recycling. Two components of the IWMP are solely for planning purposes: the Source Reduction and Recycling Element is a menu of actions to educate residents about waste load reduction (flyers, early education, advertisements, labeling, etc.). The Countywide Siting Element identifies how the County will provide long-term disposal for waste that is not recycled or diverted. The remaining two components focus on providing the needed facilities: the Household Hazardous Waste Element (HHWE) concerns the collection, handling and processing of hazardous wastes generated in the County, and the Non-Disposal Facility Element (NDFE) identifies existing and proposed facilities to receive and process non-hazardous recyclable materials. The HHWE priorities are to ensure that facilities are located near population centers (Mammoth and Bridgeport) to minimize transportation impacts and maximize reuse. The HHWE and NDFE do not propose specific facilities, but describe existing programs and offer guidance on how and where those programs should be continued in the future. Future facilities would be developed in separate planning studies, along with CEQA documentation as needed. The Countywide Siting Element incorporates countywide policy proposals that call for a) development of engineered design plans for Pumice Valley Landfill (located about 3 miles southeast of the Tioga project site) and the Walker Landfill, using disposal capacity in the existing waste footprint, and b) provision for Long Haul Transfer Infrastructure that would allow Mono County to send its waste outside of the County.

The County's adoption of a comprehensive IWMP indicates that the available landfill and transfer station services will be sufficient to accommodate the Tioga project's solid waste disposal needs. The project will comply with all applicable statutes and regulations pertaining to solid waste. This impact would be *less than significant*.

MITIGATION MEASURES – SOLID WASTE DISPOSAL

SVCS 5.8(c) (Landfill Capacity): No significant impacts on landfill capacity have been identified, and no mitigation measures are required.

5.8.7 SIGNIFICANCE AFTER MITIGATION

Potential project impacts on school services, social services, energy consumption, and landfill capacity would be less than significant. Impacts associated with safe pedestrian and bicycle access would be significant, and potentially

³⁴ EPA Region 9 website: <http://www.epa.gov/Region9/waste/features/calif-waste/index.html>.

unavoidable. Although the planned grant application would have potential to reduce these risks to less than significant levels, there is no assurance that the grant application would be successful. The potential exposure of future project residents and visitors to unsafe pedestrian and cycling conditions is therefore considered to be a **significant and potentially unavoidable adverse project impact**. All other potential project impacts on public services would be less than significant, and no mitigation measures are required.

TIOGA WORKFORCE HOUSING DRAFT SUBSEQUENT EIR



SECTION 5.9 TRAFFIC AND CIRCULATION

5.9.1 INTRODUCTION AND SUMMARY

This section provides an overview of baseline circulation and transportation on and around the Tioga Mart property, and the potential impacts that may occur in association with the proposed workforce housing project. Information in this section is summarized from a Traffic Impact Analysis prepared by MAT Engineering and provided in Appendix L in its entirety, as well as information obtained from the Mono County 2015 Regional Transportation Plan (RTP).

A number of NOP comments were received that raised issues pertaining to circulation, including the need for: (a) consultation with YARTS regarding adequacy of the existing YART bus stop location; (b) driving and parking movements, and the status of ownership and use, of Caltrans' SR 120 easement adjoining the project site; (c) review of the intersections, turning movements and vehicle weaving at SR 120/US 395 and SR 120/Vista Point Drive, (d) safety review for pedestrian and bicycle use on the site and between the site and Lee Vining; (e) parking to accommodate proposed new uses, and use of porous surfaces to enhance infiltration; (f) updated traffic counts at US 395 and SR 120, to reflect increased Yosemite traffic movements; (g) project impacts on parking and unsafe speeding through downtown Lee Vining; (h) analysis of impacts pertaining to Lee Vining Airport (please see EIR §5.7 for discussion of airport impacts); and (i) consideration of ridesharing, carpooling, increased bus service and pathways connecting to Lee Vining.

SUMMARY OF PROJECT IMPACTS & MITIGATIONS FOR TRANSPORTATION

<u>IMPACT TFFC 5.9(a):</u>	<u>REGULATORY COMPLIANCE</u>
Mitigation TFFC 5.9(a-1):	Grant application to create dedicated non-motor path between site and Lee Vining
Recommendation TFFC 5.9(a-2):	Free shuttle passes for guests and residents
Caltrans Mitigation TFFC 5.9(a-3):	Caltrans consideration of designated Vista Point entry/egress
Caltrans Mitigation TFFC 5.9(a-4):	Caltrans modifications to apron parking
Caltrans Mitigation TFFC 5.9(a-5):	Caltrans relocation of YARTS bus stop
Significance:	Significant and Potentially Unavoidable Impact
<u>IMPACT TFFC 5.9(b):</u>	<u>VEHICLE MILES TRAVELLED</u>
Mitigation:	Less than Significant Impact; no mitigation required
Significance:	Less than Significant
<u>IMPACT TFFC 5.9(c):</u>	<u>AIR TRAFFIC PATTERNS & SAFETY</u>
Mitigation and Significance:	Please see discussion in EIR §5.7(c), Public Health and Safety
<u>IMPACT TFFC 5.9(d):</u>	<u>DESIGN HAZARDS</u>
Caltrans Mitigation 5.9(c-1):	Caltrans Signalization of the US 395/SR 120 Intersection
Caltrans Mitigation 5.9(c-2):	Caltrans construction of a Roundabout at the US 395/SR 120 Intersection
Significance:	SIGNIFICANT and Potentially Unavoidable Impact
<u>IMPACT TFFC 5.9(e):</u>	<u>EMERGENCY ACCESS</u>
Mitigation and Significance:	Please see discussion in EIR §5.7(d), Public Health and Safety

5.9.2 KEY TERM USED IN THIS SECTION

Level of Service (LOS) is a qualitative measure describing operational conditions as perceived by motorists within a traffic stream. LOS generally describes these conditions in terms such as speed and travel time, freedom to maneuver,

traffic interruptions, comfort and convenience, and safety. Current LOS conditions are based on the latest traffic counts. Projected LOS conditions are based on growth factors derived from historical growth trends.

5.9.3 EXISTING CIRCULATION SYSTEM

5.9.3.1 Roads and Highways

Roads within the Tioga project site are privately owned and maintained. Consistent with the 1993 Specific Plan and Final EIR, the project site includes three road classes as shown in Table 5.9-1:

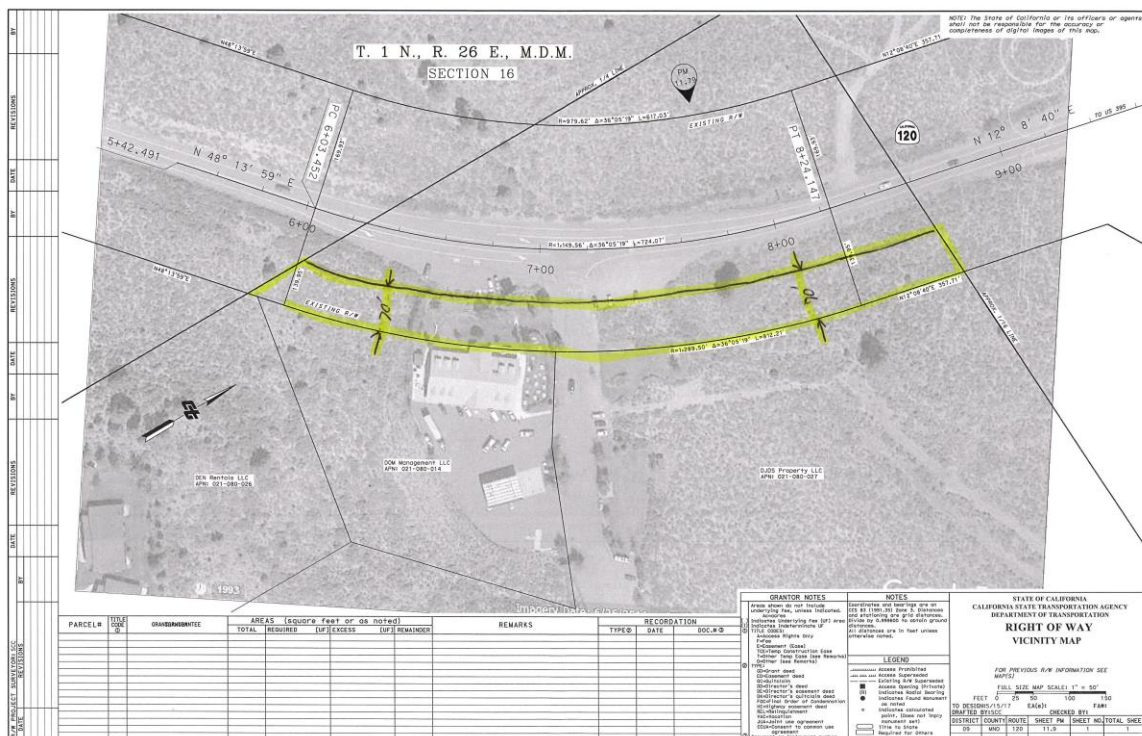
TABLE 5.9-1. Tioga Specific Plan Private Road Standards

Private Road Classification	Easement Width	Pavement Width	Special Notes
Main Access Road	60 feet	24 feet	3-foot shoulder
Existing Residential Access	40 feet	16 feet	10% grade
Existing Utility Access	Driveway	12 feet	No public use

The 1993 EIR proposed that access to the project site be taken from SR 120 via Vista Point Drive. The access was constructed as proposed (with one entry lane and two exit lanes), and remains in use to the present time. The access point is approximately 800 feet west of the junction with US 395.

The amended plan calls for a reconfiguration of the access drive, retaining the existing single entry and two exit lanes but shifting the interior circulation for improved efficiency. Additionally, Caltrans has completed the sale of a portion of the SR 120 right-of-way easement to the applicant (Exhibit 5.9-1 shows the area decertified by Caltrans as part of the ownership transfer). The area has long been used informally by minimart customers as a picnic and play area; the ownership transfer will formalize long-term private use of the land by project customers. Caltrans also owns the right of way apron on SR 120 just north of the Tioga Mart access. This apron has an expansive view of Mono Lake, and is used heavily as a vista point for motorists.

EXHIBIT 5.9-1. Caltrans Easement Acquisition Area



The 1993 project included single ingress and egress lanes and ample public parking spaces for the minimart/deli and the promontory restaurant, plus private parking for the hilltop residential area. Although the full service restaurant has not been constructed, a total of 50 parking spaces (including oversize parking for RVs) have been provided adjacent to the restaurant site.

5.9.3.2 Onsite Parking

The 1993 project included minimum parking standards to serve the hotel, the minimart, the full service restaurant, and private parking for the residential area. Although the full service restaurant has not been constructed, a total of 50 parking spaces (including several oversize spaces for RVs) have been provided adjacent to the restaurant site; additional parking has been provided for transit (ESTA and YARTS) that was not discussed in the 1993 EIR.

Amendment #3 meets or exceeds the minimum parking requirements in the approved Specific Plan for all onsite uses. Parking requirements outlined in the 1993 Specific Plan are summarized in Table 5.9-2, along with parking provisions included in the current project plan. All parking will comply with Building Code ADA (Americans with Disabilities Act) requirements.¹

TABLE 5.9-2. Minimum Project Parking Standards						
LAND USE CATEGORY	1993 SPECIFIC PLAN			PROPOSED AMENDMENT #3		
	AUTO PARKING	RV + TRAILER PARKING	OTHER PARKING	AUTO PARKING	RV + TRAILER PARKING	OTHER PARKING
Hotel	120+2	2	1 space per 2 employees	120+2	2	1 space per 2 employees
Full-Service Restaurant	50	2 (buses) 5 (trailers)	None	50	2 (buses) 5 (trailers)	None
Convenience Store/Fuel Sales	10	2 (buses) 2 (trailers)	None	10	2 (buses) 2 (trailers)	None
Hilltop Residential Units	Attached private garage or covered parking	None	None	Attached private garage or covered parking	None	None
Open Space	No parking required or proposed			No parking required or proposed		
Workforce Housing	NA	NA	NA	190	0	None

5.9.3.3 Area Roads, Circulation and Access

The project site is bisected by Interstate Highway 395 (US 395), and takes primary access from Vista Point Drive, which connects to SR 120. SR 120 is the only eastern access into Yosemite National Park. Primary access to the small portion of the project site that is located east of US 395 is from Pumice Road, which connects to US 395. Route. Pumice Road also provides the only access to Lee Vining Airport. Intersections in the project area include US 395 at SR 120, and Vista Point Drive at SR 120. Table 5.9-3 shows average daily traffic ('ADT') volumes on the surrounding highways. Average daily traffic volumes on both roads, and in all directions, are below design capacity.

TABLE 5.9-3. Average Daily Traffic Volumes on Surrounding Highways	
Roadway Segment	Existing ADT
US 395 south of SR 120	5,098
US 395 north of SR 120	4,266
SR 120 west of US 395	1,384
SR 120 west of Project Access	1,384

¹ ADA parking requirements require 1 ADA space per 25 standard spaces, with spaces that are 18' deep x 9' wide with a white symbol of accessibility (36" x 36"). Spaces are to be located on the shortest accessible route from the parking area to an accessible entrance. Between the ADA parking spaces there must be a 5' x 18' "No Parking" area with hatched marks (36" between marks).

Both of the study intersections are part of the California State Highway system and in the jurisdiction of Caltrans District 9, which is responsible for the State Highway system in central-east portions of California including Inyo, Mono, and eastern Kern Counties. Study area traffic conditions are very seasonal in this area and vary by the time of the year. Tioga Road (SR-120) in particular experiences peak traffic conditions during summer months, and is closed during winter months (generally from November into May).

The efficiency of intersection operation is generally described in terms of 'Levels of Service,' and based on a methodology provided in the Highway Capacity Manual (HCM). The 2010 *HCM* analysis describes intersection operation using a range of LOS A (free-flow conditions, with a per vehicle wait of less than 10 seconds) to LOS F (severely congested conditions, with per-vehicle delays upward of 80 seconds for signalized intersections and 50 seconds for unsignalized intersections). "F" is the lowest LOS classification, describing 'breakdown' traffic flow conditions. Caltrans endeavors to maintain a target LOS between "C" and "D" on State Highway facilities, and LOS D is the lowest acceptable LOS for study intersections evaluated in the current EIR Traffic Analysis (see Appendix L).²

5.9.3.3 Airport Transportation Facilities

Lee Vining Airport is a general aviation facility serving the Mono Basin and surrounding area; the airport is located about ½ mile northeast of the US 395/SSR 120 intersection, and serves single- and twin-engine general aviation aircraft. The 70.7 acre site is leased by Mono County from LADWP, and features three individual tee hangar spaces (all privately owned). Currently one aircraft (owned by the project applicant) is based at the airport, and approximately 2,150 aircraft operations occur at the airport each year. The airport consists of 3 hangar buildings and one runway, Runway 15-33 (3,920 feet long and 60 feet wide). There are currently approximately 2,250 aircraft operations per year at this airport, with one aircraft based at the airport year round. There are no published instrument approaches at the airport. The 2017 FAA-approved Airport Layout Plan for Lee Vining Airport updates the prior plan, which FAA approved in 2005.

Lee Vining Airport is located very near to Mono Lake, the east entrance to Yosemite, and popular ski areas. As a result it experiences a significant number of itinerant operations, and the number is expected to increase in future years. Forecasts for operations in the year 2036 range from 2,450 (based on airport forecasts) to 3,942 (based on FAA's Terminal Area Forecast [TAF]). The Airport Layout Plan identifies the airport forecast as being more realistic, and forecasts that the number of based aircraft will also remain at 1 by the year 2036.

Short-term improvements focus on sealing the pavement on the tie-down apron, using funds previously 'banked' by Mono County for airport improvements. Long-term improvements cover a wide range and include expansion of the cross taxiway stub at the end of Runway 15, construction of a perimeter fence, installation of a fully automated aviation weather observing and reporting system ('AWOS AV'), a new aircraft parking apron, a new hangar area, construction of a 25-foot wide parallel taxiway, installation of a 1,000-gallon Avgas self-service fuel tank, construction of two new 40'x40' box hangar buildings for winter aircraft storage, construction of a new Fixed-Base Operator maintenance hangar, and construction of a new helicopter landing area.

Lee Vining Airport is an "unclassified" airport in the FAA system, primarily because it has only one based aircraft, is not 30 or more miles from the nearest NPIAS (National Plan of Integrated Airport Systems) airport, and does not provide critical federal community service. Unclassified airports are eligible for federal funding only for high priority projects with strong justification and support. Due to uncertain funding, the timing of recommended improvements is indefinite; however, FAA intends to review unclassified airports every two years. Funds for the short-term pavement sealing are already in reserve; long-term programs are expected to be funded through FAA matching grant programs.

5.9.4 REGULATORY SETTING³

5.9.4.1 Federal Regulations

² Note that LOS D was also used in the 1993 Tioga Inn Final EIR as the significance threshold for traffic impacts.

³ The reader is also referred to the interrelated regulations outlined in EIR §4.3, Air Quality and Greenhouse Gas Emissions.

Moving Ahead for Progress in the 21st Century (MAP-21). MAP-21 (signed into law by President Obama on 6 July 2012) provides over \$105 billion of funding for surface transportation programs for fiscal years (FY) 2013 and 2014, and is the first long-term highway authorization enacted since 2005. By transforming the policy and programmatic framework for investments to guide the system's growth and development, MAP-21 creates a streamlined and performance-based surface transportation program and builds on many of the highway, transit, bike, and pedestrian programs and policies established earlier. To allow more time for development and consideration of a long-term reauthorization of surface transportation programs, Congress has enacted short-term extensions of the expiring law.

US Department of Homeland Security (DHS). DHS was established by the Homeland Security Act of 2002. The primary mission of the DHS is to; 1) prevent terrorist attacks in the United States; 2) reduce vulnerability of the US to terrorism; and 3) minimize damage and assist in the recovery from terrorist attacks that do occur.

Federal Emergency Management Agency (FEMA). FEMA became a department of the DHS during 2003. The primary mission of FEMA is to protect the nation from all hazards (including natural and human-created disasters and acts of terrorism) and reduce the loss of life and property through a risk-based, comprehensive emergency management system of preparedness, protection, response, recovery, and mitigation.

National Response Framework (NRF). The NRF offers a set of guiding principles that enable all response partners to prepare for and provide a unified national response to disasters and emergencies. It establishes a comprehensive, national, all-hazards approach to domestic incident response. An earlier program (the National Response Plan) was replaced by the NRF in March 2008.

Transportation Security Administration (TSA). The TSA is a component of the DHS, responsible for security of the nation's transportation systems. TSA works with state, local and regional partners to provide security for highways, railroads, buses, mass transit systems, and ports. A majority of TSA resources are directed to aviation security (particularly passenger & baggage screening). In Mono County, TSA operates facilities at Mammoth Yosemite Airport.

The Disaster Mitigation Act of 2000 (DMA 2000). DMA 2000 provides an opportunity for states, tribes, and local governments to revitalize mitigation planning efforts. DMA 2000 amended the 1988 Robert T. Stafford Disaster Relief & Emergency Assistance Act by adding §322 (Mitigation Planning), which required governments to develop and submit mitigation plans as a condition for funding through the Hazard Mitigation Grant Program (HMGP).

National Incident Management System (NIMS). NIMS provides a tool to help states, counties, and local jurisdictions respond to catastrophic events through enhanced communication and coordination, based on a nationwide response template. In California, the Standard Emergency Management System (SEMS) offers similar management tools (see §4.2.4.2, State Regulations).

United States Department of Defense (DOD). The DOD is authorized to provide resources when response and recovery requirements are beyond the capabilities of civilian authorities, provided that the DOD efforts do not compromise the Department's core mission of national defense. Requests for Defense Support can be submitted by local, county and state authorities, and generally follow or occur in tandem with a request from a Governor to the President for a disaster declaration. DOD operates one installation in Mono County (the Marine Corps Mountain Warfare Training Center, located south of Topaz).

5.9.4.2 State Regulations

California Transportation Commission (CTC) RTP Guidelines.⁴ CGC §65080 et seq. requires the preparation of RTPs, and the update of those plans at least every four years. §14522 authorizes the CTC to prepare guidelines for the preparation of RTPs. The RTP guidelines prepared by CTC in turn encourage all areas to follow the federally mandated comprehensive planning process to ensure uniform plans statewide. The guidelines also recommend that RTP projections be based on available data, use acceptable forecasting methodologies, and be consistent with Dept. of Finance (DOF) projections for the planning region. The guidelines require an RTP to identify and discuss differences (if

⁴ Caltrans website: http://www.dot.ca.gov/hq/transprog/ocip/archives/stip2014/2014_itip.pdf, accessed 2-5-15.

any) between the agency and DOF projections. The most recent update to the RTP guidelines was published in 2010, with new provisions for complying with Senate Bill 375 (SB375, discussed below), and new guidelines for regional travel demand modeling, scaled to reflect differences in the size of California metropolitan planning organizations (MPOs).

State Transportation Improvement Program (STIP). STIP is a multi-year capital improvement program of transportation projects on and off the State Highway System, funded with revenues from the federal Transportation Investment Fund and other funding sources. STIP programming generally occurs every two years. The programming cycle begins with release of a proposed fund estimate (to identify the amount of new funds available for the programming of transportation projects), followed by CTC adoption of the fund estimate. Once the fund estimate is adopted, Caltrans works with regional planning agencies to prepare and submit transportation improvement plans for CTC review and approval. Implementation begins once projects are programmed. In 1997, the California STIP process was amended by Senate Bill 45, which divided STIP into two sub-programs: the 75% Regional Transportation Improvement Program (RTIP) and the 25% Interregional Transportation Improvement Program (ITIP).

Caltrans' Interregional Transportation Improvement Program (ITIP).⁵ The ITIP program funds projects to improve interregional mobility on California highways and strategically important rail corridors. The ITIP complements congestion-reduction activities in urban areas of the state that are funded by the Regional Transportation Improvement Program (RTIP) and other funds. ITIP priorities include improving state highways, improving intercity passenger rail systems; and improving interregional movement of people, vehicles, and goods. Projects selected for ITIP funding must be consistent with Caltrans' Interregional Transportation Strategic Plan (ITSP) and the CTC STIP Guidelines.

Sustainable Communities Strategy (SCS). MPOs (Metropolitan Planning Organizations) are required to incorporate an SCS into their RTP to establish a process for meeting emissions-reduction goals. The SCS integrates land use and transportation planning programs as a way of reducing GHG emissions, and uses smart growth planning concepts to focus housing and transportation projects in areas that are near jobs, shopping, and schools. Mono County is not an MPO, and therefore not required to develop and implement a Sustainable Communities Strategy as part of the RTP. However, Mono County has long sought to focus development in existing communities and to work with existing transportation facilities, and has taken an equally proactive stance toward achieving reductions in GHG emissions. The Mono County RTP carries these long-standing policies into the future, with strengthened emphasis on developing a multi-modal transportation system that serves the needs of residents and visitors while protecting natural resources and reducing GHG emissions.

Standard Emergency Management System (SEMS). SEMS is the California version of the federal NIMS program. SEMS is mandated under CGC §8607(a), and California Executive Order S205 requires the state to integrate NIMS into SEMS where and as appropriate.

Transportation Development Act (TDA).⁶ The California TDA provides two major sources of funding for public transportation: the Local Transportation Fund (LTF), and the State Transit Assistance fund (STA). Both funds support the development of public transportation to meet needs in California, and both are allocated to areas of each county based on population, taxable sales and transit performance. Some counties have the option of using LTF for local streets and roads projects, if they can show there are no unmet transit needs. The branch provides oversight of the public hearing process used to identify unmet transit needs, and also provides interpretation of and initiates changes or additions to legislation and regulations concerning all aspects of the TDA. The branch also provides training and documentation regarding TDA statutes and regulations, and works to ensure that local planning agencies complete performance audits as required for TDA participation.

5.9.4.3 Local Regulations

Mono County LTC.⁷ The LTC is Mono County's designated Regional Transportation Agency. The LTC is comprised of three board members appointed by Mammoth Lakes Town Council and three appointed by the Mono County Board of

⁵ Caltrans Division of Transportation Programming, 2014 *Interregional Transportation Improvement Program* December 15, 2013.

⁶ Caltrans website: <http://www.dot.ca.gov/hq/MassTrans/State-TDA.html>, accessed 2-3-15.

⁷ Mono County LTC website: <http://www.monocounty.ca.gov/ltc>, accessed 2-3-15.

Supervisors, as well as the director of Caltrans District 9. The LTC acts autonomously in fulfilling the mandates of the TDA and other transportation-related state statutes. Primary LTC duties include preparation of an RTP every four years, preparation every two years of a Regional Transportation Improvement Program (RTIP) for submittal to Caltrans and the CTC, review and comment on the STIP Transportation Improvement Plan, ongoing administration of TDA funds, preparation of an annual Overall Work Program, and funding allocation for Transportation Alternatives.

Coordinated Public Transit Plans.^{8,9} Sponsored by Caltrans, the 2008 Coordinated Public Transit-Human Services Transportation Plan for Inyo and Mono counties was part of a larger planning effort for 23 non-urbanized counties. An Existing Conditions Report was prepared during phase one that described transportation services and programs and identified service gaps and needs. The second phase focused on identification of strategies and solutions to mitigate service gaps and implement the strategies. The Final Report encompasses results and findings from both phases. Plan preparation allowed Inyo and Mono counties to qualify as eligible for Federal Transit Administration (FTA) funding sources that require a coordinated plan. The Plan includes a needs assessment and projects to improve the mobility of disabled, elderly, and low-income residents. ESTA updated the Plan in 2014 with strategies to increase mobility for individuals with disabilities, older adults, and people with low incomes through public and stakeholder input for the period of 2014 to 2019.

Eastern Sierra Transit Authority (ESTA) Short-Range Transit Plan (SRTP).¹⁰ In 2008, public transportation services in Inyo and Mono counties transitioned from Inyo Mono Transit to the ESTA. ESTA provides a wide range of local, regional and interregional service (CREST) extending from Reno, Nevada to Lancaster, California with connections to the Los Angeles area. Dial-a-Ride services are provided in Mammoth, Bishop, Lone Pine and Walker. The 2009 SRTP was prepared as a first Short-Range Transit Plan for ESTA. Plan objectives are to guide the development of public transportation services in Inyo and Mono counties over one five-year period. The Plan incorporates public input, establishes goals and performance standards, documents transit needs, provides service plan recommendations, establishes a detailed operating and capital financial plan, and (in Volume II) provides a comprehensive marketing plan. The 2009 plan is currently being updated by ESTA.

Social Services Transportation Advisory Council (SSTAC). The SSTAC is a broadly representative group of local citizens appointed by the Local Transportation Committee (LTC) to (1) participate in the annual identification of transit needs, (2) annually review and recommend LTC action within the jurisdiction of the council, and (3) advise the LTC on other major transit issues, including the coordination and consolidation of specialized transportation services.

Yosemite Area Regional Transit System (YARTS) Short-Range Transit Plan (SRTP).¹¹ YARTS provides public transit services in all areas of the three counties served, including Mono, Mariposa and Merced counties. The YARTS SRTP was prepared to guide development of the YARTS over a five-year period. Plan components were based on extensive market research, and include goals and performance standards, a comprehensive marketing plan, institutional options to improve the governance of YARTS (including potential expansion of the areas served), service plan recommendations, and a detailed operating and capital financial plan. YARTS services in Mono County are limited to the summer months, and include routes to Mammoth Lakes, June Lake, Lee Vining, and Tuolumne Meadows and Yosemite Valley within Yosemite National Park.¹² A YARTS bus stop is located in the Caltrans easement (on the south side of SR 120 around the Vista Point Drive entry) that is currently being acquired by the project applicant.

Mono County Transit Plan. Specific purposes of the Mono County Transit Plan were to analyze existing transit services and to provide a concise summary of those services, to evaluate the needs of county residents and visitors for transit services, to estimate future demand for transit services, to evaluate funding opportunities to sustain the long-term viability of the transit system, and to delineate policies for the future development and operation of transit systems in

⁸ Inyo & Mono County LTC, *Inyo-Mono Counties Coordinated Public Transit-Human Services Transportation Plan*, Nelson Nygaard, 2008.

⁹ ESTA, *Inyo-Mono Counties Coordinated Public Transit – Human Services Transportation Plan Update*, Final Plan dated April 2014. Prepared by LSC Transportation Consultants, Inc.

¹⁰ ESTA Short Range Transit Plan, Vol 1-Service & Financial Plan Final Report 2009, Transit Resource Center/Transit Marketing.

¹¹ Yosemite Area Regional Transit (YARTS) Short Range Transit Plan (SRTP), Volume I: Service, Institutional and Financial Plan, Final Report, March 2011, prepared by Transit Resource Center/Transit Marketing.

¹² YARTS bus routes and stop locations, YARTS website (<http://www.yarts.com/service.html>), accessed 2-3-1.

the county. Since adoption of the Transit Plan, the Mono County Transit Service has expanded its routes in response to needs identified in the Plan and at annual unmet transit needs hearings. ESTA's SRTP (discussed above) has superseded the Mono County Transit Plan, which is no longer maintained by the County.

5.9.5 SIGNIFICANCE CRITERIA

Appendix G of the California CEQA Guidelines offer the following six criteria for determining the significance of transportation impacts. A project would have a potentially significant impact on circulation if it would:

- a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities;
- b) Conflict with CEQA §15064.3 Guidelines for Determining the Significance of Transportation Impacts;
- c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that would result in substantial safety risks?
- d) Increase hazards due to a geometric design feature or incompatible uses; and
- e) Result in inadequate emergency access.

5.9.6 ENVIRONMENTAL IMPACTS AND MITIGATING POLICIES AND ACTIONS

IMPACT TFFC 5.9(a): Would the proposed Tioga Workforce Housing project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities?

SIGNIFICANT AND POTENTIALLY UNAVOIDABLE ADVERSE IMPACT. Many of the multi-modal elements included in the existing and proposed Tioga project are consistent with recommendations in the Mono County Regional Transportation Plan (RTP). In particular, the RTP identifies the following issues and goals for improving existing and future transportation:

- ***Increase transit services at all levels to improve air quality, reduce congestion, and provide alternative methods of moving people and goods to and through the county:*** The Tioga project site and vicinity incorporates several multi-modal and transit-oriented elements, including a YARTS bus stop that is located in the Caltrans easement on SR 120 just south of Vista Point Drive. The Tioga property provides pedestrian pathways, parking for oversize vehicles (including large tourist busses as well as personal auto-trailer combinations and recreational vehicles), as well as parking areas for carpools from the site to Bishop, Mammoth Lakes, and other area employment centers. Transit information is made available to Tioga Mart customers at the community poster board located just outside the Tioga Mart entry. Onsite facilities and parking areas are also occasionally used for the staging of emergency response activities.

The proposed project will retain existing multimodal features, with new pedestrian pathways to connect the hotel and full-service restaurant and workforce housing areas. Additionally, the applicant and the County have indicated their intent to submit a Sustainable Community Grant application for this project, if approved. The grant monies would be used to fund public-private trail elements (pedestrian and bicycle) to safely link the project site to Lee Vining. The applicant has offered to provide space onsite for a new ESTA bus stop, which would be a requirement in the event that Sustainable Community Grant funds are awarded.

As part of the Traffic Impact Analysis (see Appendix L), additional recommendations have been developed. Although project impacts would be ***less than significant***, recommendations are provided below (please see Recommendations 5.9(a-1) through 5.9(a-4)) that would enhance circulation efficiency in the project area.

- ***Improve and expand non-motorized facilities both within and between community areas. There is the potential to link existing trail systems, which are predominantly on public lands, to newly developed trail systems on private and county lands in community areas:*** Sheriff Ingrid Braun was contacted during the project analysis for concerning project impacts on police services. The primary concern cited in the Sheriff's review is the potential for increased foot traffic to and from the project site and businesses and schools in Lee Vining. Under current

conditions, access between these locations would be along state highways that are not designed for pedestrian use, and the Sheriff identified this as a safety concern (the concern was also raised in a number of the NOP comment letters). The Sheriff noted that Caltrans has initiated a project to rehabilitate US 395 through Lee Vining. However, Caltrans has indicated to Mono County Community Development Department staff¹³ that the study will not have sufficient funding to address safe pedestrian movement between Lee Vining and the SR 120/US 395 intersection.

The needed safety improvements are outside the scope and authority of the Tioga Workforce Housing Project. Mono County and the project applicant have indicated their intent (if the project is approved) to jointly submit a Sustainable Communities grant application under the Rural Innovation Project Area (RIPA). Under the RIPA program, applicants must demonstrate a reduction in vehicle miles travelled through fewer or shorter vehicle trips, or a mode shift to transit use or bicycling or walking. Funding (up to \$20 million) can be used for sustainable transportation infrastructure, affordable housing, and housing-related infrastructure capital projects. In discussions to date, the county and applicant have indicated that priority improvements would center on (1) the creation of a safe pedestrian and cycling route between the site (and environs south of SR 120/US 395) and the community of Lee Vining, and (2) technical studies of the potential for replacing the SR 120/US 395 intersection with a roundabout. The project would be consistent with RIPA requirements including proximity to transit, a proposed residential density of 15 units per acre or higher, and intent to set affordable rents.

- ***Providing adequate community parking facilities in community areas for all types of vehicles:*** The project site provides and will continue to provide parking spaces sized to accommodate a wide range of vehicles including automobiles, trailers, trailer-truck combinations, RVs and some commercial trucks.
- ***Encourage additional carpooling and study the potential to provide additional park and ride facilities:*** Parking on the project site is now and will continue to be used for car-pooling and for YARTS park and ride customers. If the proposed Amendment #3 is approved, ESTA will be invited to provide a formal bus stop on the property, and space will be provided for park-and-ride ESTA customers.

Although none of the project elements would conflict with congestion management plans, potential impacts associated with increased non-motorized transit (particularly pedestrian and bicycle) between the site and Lee Vining would be significant and adverse. The intent of Mono County to collaborate with the applicant on submittal of a Sustainable Communities grant application has previously been identified in EIR §5.8, Mitigation Measure 5.8(a-1). If successful, funds from this grant would be used to establish a dedicated safe pedestrian corridor to link the site and the Lee Vining community (and other improvements). The grant-funded improvements have potential to reduce pedestrian and bicycle safety impacts to less than significant levels. However, there is no guarantee that this mitigation measure (which would require actions by agencies other than Mono County) will be successful.

Additional mitigation recommendations are provided below to strengthen project-related use of transit, roadways, bicycle and pedestrian facilities. All but one of these recommendations fall under Caltrans' jurisdiction. The exception (Measure 5.9(a-1)) would require the project owner to provide free shuttle and bus passes to project guests and employees. Because this measure would not be sufficient to reduce impacts to less than significant levels, it is presented as a recommendation only. Based on the foregoing considerations, the project would have a ***significant and potentially unavoidable adverse impact*** associated with potential exposure of future project residents and visitors to unsafe pedestrian and cycling conditions.

MITIGATION RECOMMENDATIONS – MULTIMODAL TRANSPORTATION

RECOMMENDATION (TO APPLICANT) - TFFC/SVCS 5.9(a-1) (Shuttle Passes): Consider providing free YARTS shuttle and ESTA bus passes during the peak summer season to Tioga Inn guests and employees (optional recommendation).

CALTRANS MITIGATION TFFC 5.9(a-2) (Vista Point apron): To reduce conflicts between vehicles traveling along Tioga Road (SR-120), vehicles accessing the Caltrans' parking apron, and vehicles entering the Tioga Mart site, it is recommended that Caltrans implement a designated point of ingress and egress for the apron parking area.

¹³Communication with Wendy Sugimura, Mono County Community Development Planning Director, 28 August 2018.

CALTRANS MITIGATION TFFC 5.9(a-3) (Apron Parking): To enhance safety and utilization of the apron adjoining the Tioga Mart site, it is recommended that Caltrans modify the apron parking arrangement such that it maintains adequate sight distance for turning movements into and out of the project site.

YARTS/CALTRANS MITIGATION TFFC 5.9(a-4) (Relocation of YARTS Stop): To enhance transit use, it is recommended that Caltrans relocate the existing YARTS bus stop to improve sight distance at the intersection of the project site access road and SR-120. Bus stop relocation may also minimize the potential for conflicts between busses and vehicles parking on the apron and/or entering the project site.

IMPACT TFFC 5.9(b): Would the project conflict with CEQA §15064.3 guidelines for determining the significance of transportation impacts including, for Land Use projects, Vehicle Miles Travelled (VMT) exceeding an applicable threshold? Generally projects within ½ mile of an existing major transit stop or corridor should be presumed to cause a less than significant impact. Projects that decrease vehicle miles travelled in an area compared to existing conditions should be presumed to cause a less than significant impact. If models or methods are not available, VMT may be assessed qualitatively based on factors such as transit availability, proximity to other destinations, etc.

LESS THAN SIGNIFICANT IMPACT. Neither Mono County nor Caltrans have as of yet adopted a threshold of significance for VMT. The traffic analysis therefore provides a qualitative assessment of project-related VMT impacts. Table 5.9-4 summarizes the project's weekday, Saturday, Sunday and overall VMT based on data from the air quality model analysis. The table shows the VMT for both the proposed project as well as the cumulative projects including the approved hotel and restaurant elements.

TABLE 5.9-4. Forecast Vehicle Miles Travelled (VMT)				
LAND USE	VMT (miles)			
	Weekday	Saturday	Sunday	Annual VMT
<i>Proposed Project</i>				
<i>Direct Impacts of Proposed Project</i>				
Housing	208.00	208.00	208.00	595.348
Gas Station	516.00	516.00	516.00	276.785
PROJECT TOTAL	724.00	724.00	724.00	872.133
<i>Cumulative Impacts</i>				
Restaurant	841.00	841.00	841.00	975.782
Hotel	752.40	752.40	752.40	1,429.508
CUMULATIVE TOTAL	1,593.40	1,593.40	1,593.40	2,405.29
PROJECT PLUS CUMULATIVE	2,317.40	2,317.40	2,317.40	3,277.423

Source: Proposed Project's Air Quality Analysis Model.

Results in Table 5.9-4 indicated that the proposed project would result in an annual VMT of 872.133 miles, with a project plus cumulative VMT of 3,277.423 miles. As noted, there is no established threshold of significance against which the VMT forecast can be measured. However, the project is directly adjacent to an existing YARTS bus stop, and the applicant intends to provide space and parking onsite for an ESTA bus stop if the workforce housing project is approved. Based on the qualitative CEQA impact guidelines and the considerations noted above, and in the absence of established significance thresholds, it is anticipated that the project would have a **less than significant impact** on Vehicle Miles Travelled. The measures below are offered only as recommendations, and are not included in the Mitigation Monitoring and Reporting Program presented in EIR §10.

MITIGATION – VEHICLE MILES TRAVELLED

Impact TFFC/SVCS 5.9(b) (VMT): Project impacts would be less than significant, and no mitigation is required.

IMPACT TFFC 5.9(c): Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that would result in substantial safety risks?

LESS THAN SIGNIFICANT IMPACT. Please see discussion provided in DSEIR §5.7, Public Health and Safety, Impact 5.7(c) for an analysis of the project in relation to air traffic patterns and safety.

IMPACT TFFC 5.9(d): Would the project result in hazards due to a geometric design feature or incompatible uses?

SIGNIFICANT AND POTENTIALLY UNAVOIDABLE ADVERSE IMPACT. The Traffic Impact Analysis prepared for this project (see Appendix L) analyzed traffic and intersection conditions relevant to the Tioga Project for the existing condition, future conditions with the project, and future conditions with all cumulative projects. Results of the analysis indicated that all study area intersections are currently operating at an acceptable level of service (LOS D or better) during the peak hours under Existing Conditions. Additionally, the analysis concluded that all study area intersections are forecast to continue to operate at an acceptable level of service (LOS D or better) during the peak hours for 'Existing Plus Project' conditions. Based on agency-established thresholds of significance, the proposed project is forecast to not result in a significant traffic impact at the study intersections for Existing Plus Project Conditions.

With one exception, all study area intersections are forecast to continue to operate at an acceptable level of service (LOS D or better) in the year 2023 forecast scenario without the project; the intersection of US 395/SR 120 is **forecast to operate at a deficient LOS E or worse during the mid-day peak hour (without the project).**

The same outcome was identified for the year 2023 forecast scenario with the project: All study area intersections but one are forecast to operate at an acceptable level of service (LOS D or better) during the peak hours for the forecast workforce housing opening year (2023) with Project Conditions. The exception pertains to the intersection of US 395/SR 120, which is **forecast to operate at a deficient LOS E or worse during the mid-day peak hour (both with and without the project).**

The Traffic Impact Analysis notes that for one-way or two-way stop controlled intersections (such as US 395 and SR 120), LOS is based on the least-functional stop-controlled approach. The identified deficient operation and excess delay at US 395 /SR 120 is experienced only by vehicles on the minor street (stop controlled Tioga Road approach) that are performing a left-turn onto northbound US 395. Vehicles traveling along the US 395 (the major street) have free flow movement with minimal delay and the overall average delay of the intersection is 10.6 seconds (equivalent to LOS B).

The Traffic Impact Analysis also considered vehicle queueing at the study intersections for the year 2023 with project conditions. Results of this analysis indicate that vehicular storage capacities are forecast to be adequate to accommodate the 95th percentile vehicular queues at the study intersections for Forecast Opening Year (2023) With Project Conditions.

Issues pertaining to emergency access were discussed previously in EIR §5.7 (Public Safety), which concluded that none of the existing or proposed project elements would impair implementation of or interfere with an adopted emergency response plan or emergency evacuation plan, and no mitigation is proposed. The reader is referred to EIR §5.7 for additional information concerning emergency access.

As part of the Traffic Impact Analysis (see Appendix L), recommendations have been developed to address the conditions that are forecast to exist at the intersection of US 395 and SR 120 with or without the proposed workforce housing project. Because the recommended actions (provided below as measures 5.9(c-1) and 5.9(c-2)), fall under

Caltrans' jurisdiction, there is no assurance that the measures will be implemented. The impacts are therefore considered to be ***significant and potentially unavoidable adverse project effects***.

MITIGATION RECOMMENDATIONS – DESIGN HAZARDS

CALTRANS MITIGATION TFFC 5.9(d-1) (Intersection Signalization): Installation of a traffic signal is forecast to achieve an acceptable level of service (LOS D or better) at the US 395/SR 120 intersection for Forecast Opening Year (2023) With Project Conditions (and Without Project Conditions), and the project's identified significant impact would be reduced to a level considered less than significant.

CALTRANS MITIGATION TFFC 5.9(d-2) (Round-About): Conversion of the US 395/SR 120 intersection to a single-lane roundabout is forecast to achieve acceptable level of service (LOS D or better) at the study intersection for Forecast Opening Year (2023) With Project Conditions (and Without Project Conditions) and the project's identified significant impact would be reduced to a level considered less than significant. If a two-lane roundabout is installed, it is expected to provide additional increased capacity compared to a single-lane roundabout. When compared to the traffic signal alternative, the roundabout alternative would allow for continuous flow of traffic without vehicles having to stop at a red light. The Traffic Impact Analysis found that the roundabout alternative would require a well prepared design and potentially greater right-of-way to work effectively.

IMPACT 5.9(e): Would implementation of the proposed Workforce Housing project result in inadequate emergency access?

LESS THAN SIGNIFICANT IMPACT. The reader is referred to discussion contained in EIR §5.7, Public Health and Safety, Impact 5.7(d), for an analysis of the project in relation to emergency response and evacuation plans.

5.9-7 SIGNIFICANCE AFTER MITIGATION

With two exceptions, the potential project impacts on traffic and circulation would be less than significant. The exceptions pertain to (1) an anticipated increase in foot traffic to and from Lee Vining and the project site along routes that are not designed for pedestrian use, and (2) unsafe conditions at the US 395/SR 120 intersection as of 2023, both with and without the proposed Workforce Housing Project.

Although grant funding would have potential to reduce to less than significant levels the concerns associated with unsafe pedestrian and bicycle access, there is no assurance that the project grant application would be successful. The potential exposure of future project residents and visitors to unsafe pedestrian and cycling conditions is therefore considered to be a ***significant and potentially unavoidable adverse project impact***.

With regard to unsafe conditions at the intersection of US 395/SR 120, Caltrans has indicated that it does not at this time have any plans to signalize or modify the intersection; the two measures that are recommended to achieve acceptable level of service are therefore considered to be infeasible. **Hence, the project's traffic impact on the US 395/SR 120 study intersection is considered to be a *significant and potentially unavoidable adverse project impact*.**

TIOGA WORKFORCE HOUSING DRAFT SUBSEQUENT EIR



SECTION 5.10 AIR QUALITY AND GREENHOUSE GASES

5.10.1 INTRODUCTION AND SUMMARY

This section describes existing air quality and greenhouse gas (GHG) emissions in the project area, and analyzes how baseline conditions may be impacted by the proposed Workforce Housing Project. Discussion provided in this section is based on an Air Quality and GHG Impact Analysis prepared for this project by Giroux and Associates. The full report is provided as DSEIR Appendix M.

Written comments on the NOP addressed several issues pertaining to air quality and greenhouse gas emissions. Areas of concern included the impact of increased emissions on Lee Vining neighborhoods and schools, recommended use of fuel-efficient building design and lighting and appliances, with 'no vehicle idling requirements' and efficient transportation options, project support for Mono Basin as a 'climate-friendly community' through sustainability standards (such as net zero energy use and graywater recycling), discussion of current federal, state, and local GHG and climate change standards and requirements, and clarification of whether wood-burning fireplaces would be allowed as a primary heating source. Key findings of the air quality and GHG emissions impact analysis and recommended mitigation goals and policies are summarized in the table below.

SUMMARY OF GENERAL PLAN IMPACTS & POLICY MITIGATIONS FOR AIR QUALITY	
IMPACT AQ 5.10(a,b,c):	CRITERIA POLLUTANTS, AIR QUALITY STANDARDS, SENSITIVE RECEPTORS
Recommendation AQ 5.10(a-1):	Supplemental Fugitive Dust Control Measures
Recommendation AQ 5.10(a-2):	Supplemental Exhaust Emission Control Measures
Significance:	Less than Significant
IMPACT AQ 5.10(d):	OBJECTIONABLE ODORS
Mitigation:	Less than Significant, No Mitigation Required
Significance:	Less than Significant
IMPACT GHG 5.10(e,f):	GENERATE GHG EMISSIONS, CONFLICT WITH GHG REDUCTION PLANS
Mitigation:	Less than Significant, No Mitigation Required
Significance:	Less than Significant

5.10.2 KEY TERMS USED IN THIS SECTION

Ozone. Ozone is produced by a photochemical reaction (caused by the chemical action of light) between nitrogen oxides (NOX) and reactive organic gases (ROG). NOX is formed during the combustion of fuels, while ROG are formed during combustion and evaporation of organic solvents. Because ozone requires sunlight to form, it mostly occurs in substantial concentrations between the months of April and October. Ozone is a pungent, colorless toxic gas with adverse human health effects including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to ozone include children, the elderly, persons with respiratory disorders, and people who exercise strenuously outdoors.

Carbon dioxide equivalent (CO₂e). CO₂e is the universal unit for representing the six different GHGs (see below) in one single unit by converting each gas into the equivalent potency of carbon dioxide. CO₂e is commonly expressed in metric tons of carbon dioxide equivalent emissions (MTCO₂e). A metric ton equals approximately 2,205 pounds.

Greenhouse Gases. Gases that trap heat in the earth's atmosphere are called greenhouse gases, or GHGs. GHGs include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). While amounts of some of these gases occur naturally in the atmosphere, modern human activity has led to a steep increase in the amount of GHGs released into the atmosphere over the last 100 years. Collectively, these gases intensify the natural greenhouse effect, thus causing global average surface temperatures to rise, which in turn affects global climate patterns. GHGs are often quantified in terms of CO₂ equivalent, or CO₂e, a unit of measurement that equalizes the potency of GHGs.¹

Carbon Monoxide. The major source of CO, a colorless, odorless, poisonous gas, is automobile traffic. Elevated concentrations are usually found only near areas of high traffic volumes. Health effects from CO are related to its affinity for hemoglobin in the blood. At high concentrations, CO reduces the amount of oxygen in the blood, causing heart difficulty in people with chronic diseases, reduced lung capacity and impaired mental abilities.

Nitrogen Dioxide. NO₂ is a by-product of fuel combustion, primarily from motor vehicles, industrial boilers and furnaces. Nitric oxide (NO) is the principal form of nitrogen oxide produced by combustion, but NO reacts rapidly to form NO₂, creating the mixture of NO and NO₂ commonly called NO_x. Nitrogen dioxide is an acute irritant, and may be associated with chronic pulmonary fibrosis and increased rates of bronchitis in young children at even low concentrations. NO₂ absorbs blue light and gives a reddish brown cast to the atmosphere, reducing visibility. It can also contribute to the formation of PM₁₀ (please see definition under Suspended Particulates, below) and acid rain. It should not be confused with nitrous oxide (N₂O), a GHG.

Particulate Matter. Atmospheric particulate matter ('PM') is comprised of finely divided solids and liquids such as dust, soot, aerosols, fumes, and mists. Particulates of special concern include PM₁₀ (no more than 10 microns in diameter) and PM_{2.5}, (a very fine particulate measuring no more than 2.5 microns in diameter). Major human sources of PM₁₀ include agricultural operations, industrial processes, fossil fuel combustion, construction, demolition, and highway dust. Natural sources include windblown dust and wildfire smoke. The finer PM_{2.5} particulates are generally associated with combustion and also formed in the atmosphere as a secondary pollutant through chemical reactions. PM₁₀ and PM_{2.5} are both inhalable, but PM_{2.5} is more likely to penetrate deep into the lungs and thus poses a serious health threat, particularly to the elderly, children, and those with respiratory problems.

5.10.3 AIR BASIN CHARACTERISTICS & GHG EMISSIONS

5.10.3.1 Mono County Air Basin Setting.

The Mono County project region is part of the Great Basin Valleys Air Basin (Great Basin, or GBVAB) which includes Inyo, Mono and Alpine counties. This basin has generally very good air quality even though the airshed has limited dispersive capacity. Because of the airshed configuration, however, small air pollution increments have a greater impact in the GBVAB than in less-confined basins.

Air basin measurements of gaseous air pollution have shown that the types of air pollutants found in more developed areas of California generally do not occur in significant levels in the Great Basin. The ARB has determined, however, that the primary source of 'imported' pollutants entering Mono County is from the San Joaquin Valley Air Basin (comprising Fresno, Kings, Madera, San Joaquin, Stanislaus and Tulare counties as well as portions of Kern County).

5.10.3.2 Ambient Air Quality Standards and Attainment Status.

Both EPA and the Air Resources Board (ARB) have established ambient air quality standards for common pollutants. These ambient air quality standards are considered levels of pollutants representing safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these

¹ Refer to the Intergovernmental Panel on Climate Change for more information: <http://www.ipcc.ch/>.

standards are classified as nonattainment areas. Mono County meets all state air quality standards with the exception of state PM₁₀ and ozone standards. In addition, the Mono Basin portion of the county is designated as non-attainment for the national PM₁₀ standard.

As part of its enforcement responsibilities, the EPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. The SIP identifies how the state will attain and/or maintain the primary and secondary NAAQS set forth in the CAA as well as the Code of Federal Regulations. Each state must have a SIP which contains control measures, and strategies that demonstrate how each area will attain and maintain the NAAQS. The CAA requires EPA to review each plan and any plan revisions and to approve the plan or plan revisions if consistent with the CAA. The Great Basin Unified Air Pollution Control District (GBUAPCD) is required, pursuant to the federal CAA, to reduce emissions of criteria pollutants for which the basin is in nonattainment. Due to the non-attainment status for the national PM₁₀ standard, the GBUAPCD prepared the Mono Basin PM₁₀ SIP, with rules and regulations to reduce PM₁₀ emissions and achieve NAAQS.²

The PM₁₀ nonattainment problem in the Mono Basin is caused by windblown dust from the exposed lakebed of Mono Lake, primarily caused by City of Los Angeles water diversions from 1941 through 1989. In 1994, SWRCB approved Decision 1631, which limited diversions from the Mono Basin until the lake reaches 6,391 feet above mean sea level (msl). This lake level would submerge most of the shoreline areas that are causing windblown dust. GBUAPCD notes that changing climatic conditions may impact the time for lake level to reach 6,391 feet. The SIP estimated that it would take 26 years for Mono Lake to rise to 6,391 feet (i.e., by 2020) assuming average hydroclimatic conditions; a series of extremely wet years could result in the lake reaching the target level in as little as 9 years, while a prolonged series of drought years could extend the period to 38 years. Given the need to understand lake level fluctuations and develop updated projections, GBUAPCD has recommended that a cooperative process be undertaken by stakeholders to update and recalibrate the hydrologic models.³

5.10.3.3 Greenhouse Gas Emissions

The GBUAPCD has no thresholds for GHG emissions. However, as lead agency, GBUAPCD has opted to use the thresholds adopted by the South Coast Air Quality Management District (SCAQMD) in 2008. The Interim Quantitative GHG Significance Threshold adopted by SCAQMD (for stationary source permit projects, rules, plans, etc.) was set at 10,000 Metric Tons (MT) CO₂ equivalent/year. In September 2010, the SCAQMD CEQA Significance Thresholds GHG Working Group released revisions which recommended a threshold of 3,000 MT CO₂e for all land use projects.

The 3,000 MT CO₂ equivalent/year recommendation has been used as a guideline for the current Tioga Workforce Housing GHG analysis. In the absence of an adopted numerical threshold of significance, project related GHG emissions in excess of the guideline level are presumed to trigger a requirement for enhanced GHG reduction at the project level.

5.10.3.4 Sierra Nevada Climate Change Trends

During 2012, the Sierra Nevada Conservancy issued a report assessing water quality system indicators,⁴ one in a series of reports analyzing 19 Sierra Nevada system indicators. Among the data reviewed for this study, the SNC examined several air quality and climate change issues and trends. Report findings are highlighted below.

Air Quality. High ozone levels transported into Mono County from the Central Valley; the Conservancy notes, however, that ozone levels have declined sharply in recent years.

² GBUAPCD, *Mono Basin State Implementation Plan*, 1995: <https://gbuapcd.org/District/AirQualityPlans/MonoBasin/>

³ GBUAPCD website: <http://www.gbuapcd.org/Air%20Quality%20Plans/MONO-SIP/MonoBasinReasonableFurtherProgressReport2010.pdf>.

⁴ SNC, *System Indicators, Water & Air Quality, Temperature, Precipitation and Snowpack*. December 2012.

- Temperature increases, particularly at higher elevations, and the disproportionate rise of nighttime low temperatures (nighttime lows above 6,000 ft. have increased in the range of 3°F over the past 40 years).
- Impacts on year-to-year precipitation, although erratic baseline levels make it difficult to discern long-changes.

The report assessed 3 pollutants for the air quality Indicators (ozone, PM₁₀ and PM_{2.5}) and analyzed 5 air basins including the Mountain Counties (generally west of Mono County), San Joaquin Valley, Sacramento Valley Basin, the Northeast Plateau, and the Great Basin Valleys (including Mono County, and corresponding to the SNC East Subregion). Some of the applicable report findings are cited below:

- The vast majority of ozone is formed in the Central Valley (or beyond) and transported into the foothills and mountains; San Joaquin Valley has the most unhealthful air, most particularly the southern valley.
- Mountain counties often have air quality worse than Sacramento Valley, indicating that significant pollution is 'blown' out of the Valley into higher ground.
- Air basin trends indicate improved ozone levels since early 2000;
- High PM₁₀ levels in the Great Basin are due largely to arid and windy conditions.
- Long distance transport is not a key factor in PM₁₀ pollution: the particles are too heavy to travel long distances.
- PM_{2.5} carried by wind from China contribute to particulate pollution in the Sierra Nevada.
- PM₁₀ levels tend to be heaviest in summer and fall, while PM_{2.5} is highest in late fall and winter.
- Summer wildfires can produce huge localized spikes in PM₁₀ and PM_{2.5}.
- Winds in the Great Basin can cause huge spikes in PM₁₀; particulate pollution is less seasonal in these remote areas (including Mono County) than in the mountains or Central Valley.

Temperatures. With respect to temperatures, two trends were evident in the SNC data:

- While there is an overall noticeable increase in average annual temperatures over the past 40 years, temperatures have risen more at higher elevations, particularly above 6,000 ft., and
- Nighttime low temperatures have increased at all elevations, and are more pronounced at higher elevations.

Precipitation. The SNC report also analyzed precipitation and concluded that there is no meaningful trend in the amount of rain or snowfall. However, the data did provide a framework for identifying potential future long-term changes in precipitation between Subregions, different elevations, and for the Region as a whole.

- Precipitation is greater above 3,000' than lower elevations for most of the Sierra. An exception is the North Subregion, where the heaviest rain falls below 3,000' and the 3,000-6,000' plateau receives the least precipitation.
- The South Subregion receives proportionally heavier snow above 6,000' than other west facing Subregions.
- The East Subregion (including Mono County) receives the least amount of rain and snow, averaging 5-10" per year between 3,000-6,000'. Elevations above 6,000 ft. receive considerably more precipitation, but still significantly less than what is received at those elevations on the west slope of the Sierra.

Snow Pack. The report noted that snowfall locations and snowpack melting rates vary widely from year to year, a consistent picture was evident to indicate that snowpack is melting earlier (or more late-season snow is falling as rain instead). The analysis demonstrates a decline in April 1st snowpack relative to March 1st, and also indicates a decline in average April snowpack depth that appears to be in the range of several inches of Snow Water Equivalent (SWE).

5.10.3.5 Baseline GHG Emissions in Mono County

In order to identify the most effective and appropriate GHG emissions reduction strategies, the Mono County Resource Efficiency Plan (REP) includes a baseline GHG emissions inventory, a GHG emissions forecast and reduction target, and policies and programs to achieve the adopted target. Consistent with protocols used by local governments throughout California, the inventory includes analysis of County government activities as well as emissions associated with energy use (residential and nonresidential), transportation, off-road equipment, solid waste generation, water and wastewater transportation and processing, agriculture, and landfills.

GHG emissions from Mono County government operations in 2010 totaled approximately 15,050 MTCO_{2e} emissions, of which the solid waste sector (County landfills) represented the largest source (68%). Other sources included emissions from the County's vehicle fleet and equipment (12%), employee travel (10%), and energy used at County

facilities (9%). The remaining government operation emissions, representing less than 1% of GHG emissions, were attributed to public lighting, which includes streetlights owned or maintained by the County.

GHG Emission Sources. Community GHG emissions from activities occurring in unincorporated portions of the county totaled approximately 140,310 MTCO₂e in 2010. In Mono County, as in most California communities, transportation (on-road vehicles) was the largest source of 2010 emissions (38,340 MTCO₂e, 27%), followed by nonresidential energy use (22%), residential energy use (19%), and agricultural activities (16%). The remaining emissions (17%) were attributed to landfills, off-road equipment, water and wastewater, and solid waste disposal activities. For comparison, the State of California emitted approximately 451.61 million MTCO₂e emissions in 2010, of which transportation was the largest source (38% of total); electricity generation emissions were second largest (21%), followed by the industrial sector (19%), and natural gas and other fuel use (10%). The remaining emissions (12%) were attributed to recycling and waste, agricultural activities, forestry, and high global warming potential gases.

The California Global Warming Solutions Act of 2006, also known as Assembly Bill 32, sets a statewide goal to reduce emissions to 1990 levels by 2020. Where 1990 data is unavailable, the ARB recommends that jurisdictions assess emissions for a calendar year between 2005 and 2008, and identifies a reduction of approximately 15% below 2005 emissions by 2020 as equivalent to 1990 emissions.

Although 2010 emissions (the most current complete year available) set the emissions baseline for CEQA, the Mono County community inventory uses 2005 data for the emissions reduction target in order to align with an AB 32 baseline condition. Community GHG emissions from activities occurring in unincorporated portions of the county totaled approximately 124,150 MTCO₂e in 2005. Between 2005 and 2010, emissions increased approximately 11.7%, in all sectors; the largest gains occurred at the landfills (30.1%), in agriculture (19.2%), transportation (18.3%) and residential energy (12.6%); emissions in the solid waste sector decreased by 15% between 2005 and 2010.

These totals can also be presented as per-capita emissions, as shown below in Table 5.10-1. Because Mono County emissions are heavily influenced by tourism, per-capita emissions were calculated both for the permanent population and for the effective annual population. The effective annual population metric relies on 2010 US Census data for the year-round resident populations of the town and county, in addition to data from Mono County's *Economic Impact Visitor Profile Study* (2008)⁵, the *California Travel and Tourism Commission's Annual Report on Travel Impacts by County* (2011)⁶, and the *Mammoth Community Water District's Urban Water Management Plan* (2011)⁷ to estimate annual visitors. This effective annual population metric has been applied to propane use, water use, and on-road transportation to assign countywide results to the unincorporated county.

Table 5.10-1: Per Capita GHG, 2005 & 2010, Unincorporated Areas		
	2005	2010
Total emissions (MTCO₂e)	124,150	140,310
Permanent resident population	5,880	5,970
Emissions per permanent resident population (MTCO₂e)	21.1	23.5
Effective annual population	9,960	11,170
Emissions per effective annual population (MTCO₂e)	12.5	12.6

Since 2005, California has observed a 6.4% decrease in statewide emissions levels. ARB estimates that California was the second largest mass emitting state behind Texas and was responsible for approximately 2% of the world's CO₂ emissions in 2005. However, on a per capital basis California's carbon intensity was relatively low, ranking 46th among

⁵ Mono County Economic Impact Visitor Profile Study, 2008: http://monocounty.ca.gov/sites/default/files/fileattachments/economic_development_and_special_projects/page/1809/monocoeconomicimpactvisitorprofilestudy.pdf

⁶ <http://industry.visitcalifornia.com/media/uploads/files/editor/Research/CATravellImpacts2012.pdf>

⁷ <http://www.water.ca.gov/urbanwatermanagement/2010uwmps/Mammoth%20Community%20Water%20District/DRAFT-MCWD-2010-UWMP-2.pdf>

states. In 2010, California's per capita emissions were estimated at 12.1 MTCO₂e per person, slightly lower than Mono County's per capita emissions at 12.6 MTCO₂e.

The *REP, Baseline GHG Emissions Inventory Report* provides a detailed analysis and emissions calculations for a wide range of activities; these data were used as the technical foundation for developing policies and programs to reduce both GHG emissions and the consumption of resources. The reader is referred to the Mono County website for the full text of the analysis: <http://monocounty.ca.gov/planning/page/mono-county-general-plan-update>.

5.10.4 REGULATORY SETTING

5.10.4.1 Federal Regulations

Clean Air Act (CAA) and Federal and State Ambient Air Quality Standards (NAAQS/CAAQS). The federal and state governments have been empowered by the federal and state Clean Air Acts to regulate the emission of airborne pollutants. EPA is the federal agency designated to administer air quality regulation, while the ARB is the state equivalent. EPA's air quality mandates are drawn primarily from the federal CAA, which required the agency to establish primary and secondary NAAQS, or standards to protect public health and welfare from criteria air pollutants. EPA has set NAAQS for six principal pollutants (the "criteria" pollutants).

Federal and State AAQS. Both the federal and state governments have established ambient air quality standards for outdoor concentrations of various pollutants. Federal and state standards have been established for ozone, CO, NO₂, SO₂, PM₁₀, PM_{2.5}, and lead (Pb). The national and state ambient air quality standards have been set at levels whose concentrations could be generally harmful to human health and welfare and to protect the most sensitive persons from illness or discomfort with a margin of safety.

5.10.4.2 State Regulations⁸

California's major initiative for regulating air quality lies in the SIP, which outlines how the state will achieve air quality standards. The major initiatives for reducing climate change or GHG emissions include legislative action (Assembly Bill 32), an Executive Order (S-3-05) signed during 2006, and regulation established for the purpose of reducing passenger car GHG emissions. Each is outlined below.

State Implementation Plan. Federal clean air laws require preparation of SIPs for areas with unhealthy levels of ozone, inhalable particulate matter, carbon monoxide, nitrogen dioxide, and sulfur dioxide. SIPs are comprehensive plans that describe how an area will attain NAAQS. The 1990 amendments to the federal Clean Air Act set deadlines for attainment based on the severity of an area's air pollution problem.

State Transportation Implementation Plan (STIP). The CAA also required each state to prepare an air quality control plan referred to as a SIP to achieve the NAAQS by a specified date. The 1990 CAA added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. SIPs are modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. The EPA reviews all SIPs to determine if they conform to the mandates of the CAA amendments and determine whether implementation will achieve air quality goals.

California Global Warming Solutions Act (AB 32). Assembly Bill (AB) 32 requires California to reduce its GHG emissions to 1990 levels by 2020 -- a reduction approximately 15% less than would occur without such regulation. AB 32 requires ARB to adopt regulations to achieve the maximum technologically feasible and cost-effective GHG

⁸ For additional information about State Regulations, the reader is referred to the Resource Efficiency Plan which sets forth, in text and graphics, California's efforts to serve as a leader in the United States for climate planning strategies. State efforts to enhance resource efficiency include 17 separate legislative actions addressing climate change, land use & transportation, energy & renewables, water conservation and waste & recycling.

emission reductions. Implementation of AB 32 is expected to help mitigate risks associated with climate change while yielding energy efficiency, expanded use of renewable energy resources, cleaner transportation, and reduced waste.

Executive Order S-3-05. The 2005 Executive Order S-3-05 includes 5 main components: (1) Sets GHG emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80% below 1990 levels; (2) Requires the Secretary of the California EPA to coordinate oversight of efforts to achieve those GHG emission reduction targets with other state agencies; (3) Requires the Secretary to report to the Governor and the State Legislature on progress in achieving the GHG emission reduction targets; (4) Requires the Secretary to report to the Governor and the State Legislature on a biannual basis regarding the impacts of global warming, and to report on mitigation plans to combat these impacts; and (5) Requires that the Order shall be filed with the Secretary of State with public notice. Strategies for achieving the GHG emission reduction targets are outlined in the AB 32 Scoping Plan and Scoping Plan Update. These strategies focus on leveraging existing and new funds to reduce GHG emissions through planning and targeted low carbon investments. In combination, these efforts are expected to enable California to achieve the near-term 2020 goal and also create a framework to achieve longer-term GHG emission reduction targets. The Update focuses on 9 key areas that cross multiple sectors of the California economy: energy, transportation, agriculture, water, waste management, and natural and working lands; also included are short-lived climate pollutants, green buildings, and the cap-and-trade program.

Executive Order B-30-15. Governor Jerry Brown issued Executive Order B-30-15 in April of 2015, building on the targets set in EO S-03-05 to guide California's efforts in reducing statewide GHG emissions. It sets an interim goal for California to reduce GHG emissions to 40% below 1990 levels by 2030 and directs state agencies to establish measures to achieve this target. EO B-30-15 also directs ARB to incorporate the 2030 goal into the AB 32 Scoping Plan, requires state agencies to incorporate climate change into their planning and investment decisions, and requires the California Natural Resources Agency to update the state's climate adaptation strategy every three years. This executive order does not establish any new mandates for local governments.

Pavley Vehicle Standards. In September of 2009, ARB adopted amendments to the "Pavley" regulations that reduce GHG emissions in new passenger vehicles from 2009 through 2016. Beginning in 2009, the amendments will strengthen enforcement of the Pavley rule, a 2002 California tailpipe emissions rule that the federal government adopted in May 2009, which requires vehicle manufacturers (passenger cars, light-duty trucks, and medium-duty vehicles) to meet specified fleet-wide averages for tailpipe emissions of carbon dioxide, nitrogen, carbon monoxide, reactive organic gases and particulate matter.

Renewables Portfolio Standard. Established in 2002 under Senate Bill 1078 (and later expanded in 2006 and 2011), California's RPS is one of the most ambitious renewable energy standards in the country. The program requires investor-owned utilities, electric service providers, and community choice aggregators to increase their purchase of eligible renewable energy resources to a level of 33% of total procurement by the year 2020. This program is implemented jointly by the California Public Utilities Commission (CPUC) and the California Energy Commission (CEC), which share responsibility to (1) Determine annual procurement targets and enforce compliance; (2) Review and approve each utility's renewable energy procurement plan; (3) Review utility contracts for RPS-eligible energy, and (4) Establish the standard terms and conditions used in the utility contracts for eligible renewable energy.

Title 24 Energy Efficiency Standards. Originally enacted in 1978, Title 24 sets energy efficiency standards, for a wide range of building projects. The purpose of Title 24 is to reduce energy use through enhanced efficiency of new and remodeled homes and commercial buildings. Changes to the Title 24 standards occur roughly every 3 years in order to incorporate improvements in conservation technologies and performance analyses, as well as changes in the cost of fuels and energy-conserving strategies. Compliance is regulated through Title 24 energy reports that are required before a city or county in California will grant a building permit. Each report sets forth a set of performance standards that will be met by the applicant in order to fulfill the Title 24 energy efficiency requirements.

2007 Amendments to the State CEQA Guidelines (SB 97). Senate Bill (SB) 97, signed in 2007 and effective in 2010, requires projects to estimate GHG emissions associated with project-related vehicle traffic, energy use, water use, and construction activities as part of the CEQA environmental review process. Projects located in jurisdictions with a Qualified GHG Reduction Strategy can streamline GHG evaluation by showing compliance with the strategy. Such a

Strategy must satisfy 6 requirements per CEQA Guidelines §15183.5(b): a) Quantify existing and forecast GHG emissions from activities in a defined geographic area; b) Establish a level below which GHG emissions from covered activities are not cumulatively considerable; c) Identify & analyze GHG emissions resulting from specific actions anticipated in the defined geographic area; d) Specific measures, including performance standards, to achieve the specified emissions level; e) Establish a mechanism to monitor progress and to require plan revisions if it is not achieving specified levels; f) Be adopted in a public process following environmental review. All 6 requirements are addressed in the Mono County REP, and incorporated into the Land Use, Circulation, and Open Space/Conservation Elements of the General Plan. The County intends to use the General Plan and REP as a Qualified GHG Reduction Strategy, to facilitate tiering of future CEQA documents as identified in the Project Objectives section.

5.10.4.3 Local Regulations

Air Quality Management. Local control in air quality management is provided by the ARB through multi-county and county-level Air Pollution Control Districts (APCDs). ARB coordinates and provides oversight of state and local air pollution control programs in California and implements the California Clean Air Act (CCAA). The CCAA, adopted in 1988, required ARB to establish California AAQS (CAAQS). CAAQS are designed to protect the health and welfare of sensitive groups of people (e.g., children, the elderly, and people with respiratory conditions). The CCAA requires that all local air districts in the state endeavor to achieve and maintain the CAAQS by the earliest practical date. The CCAA specifies that local air districts should focus particular attention on reducing the emissions from transportation and area-wide emission sources and provides districts with the authority to regulate such indirect emission sources. As noted previously, GBUAPCD has prepared a PM₁₀ SIP for the Mono Basin.

GHG Emissions Reductions. The majority of GHG emissions reductions in Mono County have resulted from the Pavley standards and the RPS. Title 24 reductions are inherently related to the amount of new development expected in the community. Title 24 benefits represent a smaller proportion of local reductions, in part because Mono County does not anticipate substantial growth prior to 2020. Considering the 2020 emissions forecast, all of the state reductions combined will reduce 2020 emissions in Mono County by 9,480 MTCO₂e. As described more thoroughly in Impact 4.3-5, Mono County has taken a proactive role in meeting the GHG reduction goals set forth by state and federal governments. Local accomplishments initiated or completed since 2010 that have had a measurable impact on reducing emissions include energy and transportation efficiency measures undertaken in County operations and local communities. It is estimated that these local accomplishments to date will reduce year 2020 emissions in Mono County by 3,420 MTCO₂e per year. As part of the current RTP/General Plan Update, the County retained PMC to prepare a Mono County REP that is based on policies and actions (described in the impact analyses below) best suited to the rural and mountainous nature of the county and also considered politically, technically, and economically feasible to implement in conjunction with the RTP/General Plan Update.

GBUAPCD. GBUAPCD enforces regulations and administers permits governing stationary sources in the Great Basin, which includes Alpine, Mono and Inyo counties. The regulations limit emissions of criteria air pollutants and TACs. GBUAPCD has adopted rules and regulations that regulate visible emissions, nuisance emissions, and fugitive dust emissions as well as toxic air contaminants and criteria air pollutants. Rules of particular note include (a) Rules 200-A and 200-B, which require applicants seeking to construct or operate potential contaminant sources to obtain written authority to construct and a permit to operate from an Air Pollution Control Officer; and (b) Rules 401 and 402, which requires use of mitigation measures to ensure containment of airborne particles at the place of origin under normal wind circumstances. Rule 402 specifies that discharges from any source must be regulated if there is potential for injury, detriment, nuisance, annoyance or damage to any public property or significant number of people. Rule 216-A.A.1 governs secondary sources of air pollution (defined as “any structure, building, facility, equipment, installation or operation... which is located on... properties within the District and which is owned, operated or under shared entitlement to use by the same person.”) through permits that are required for any project that will emit AAQS-listed pollutant(s).

5.10.5 SIGNIFICANCE CRITERIA

Appendix G of the California CEQA Guidelines offer the following five tests of air quality impact significance. A project would have a potentially significant impact if it:

- a. Conflicts with or obstructs implementation of the applicable air quality plan or results in a cumulatively considerable increase of a criteria pollutant for which the project region is non-attainment.
- b. Exposes sensitive receptors to substantial pollutant concentrations.
- c. Results in other emissions (such as those leading to odors) adversely affecting a substantial number of people.
- d. Generates greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- e. Conflicts with an applicable plan, policy or regulation adopted to reduce greenhouse gas emissions?

5.10.6 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

IMPACT 4.3(a,b,c): Would implementation of the proposed RTP/General Plan Update conflict with or obstruct implementation of the applicable air quality plan or result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard, or exposure sensitive receptors to substantial pollutant concentrations?

Less than Significant with Mitigation. Air quality impacts generally occur directly or through chemical changes. Near an individual source of emissions or a collection of sources such as a crowded intersection or parking lot, levels of those pollutants that are emitted in their already unhealthful form will be highest. Carbon monoxide (CO) is an example of such a pollutant. Primary pollutant impacts can generally be evaluated directly in comparison to appropriate clean air standards. Violations of these standards where they are currently met, or a measurable worsening of an existing or future violation, would be considered a significant impact. Many particulates, especially fugitive dust emissions, are also primary pollutants.

Many pollutants, however, require time to transform from a more benign form to a more unhealthful contaminant. Their impact occurs regionally far from the source. Their incremental regional impact is minute on an individual basis and cannot be quantified except through complex photochemical computer models. Analysis of significance of such emissions is based upon a specified amount of emissions (pounds, tons, etc.) even though there is no way to translate those emissions directly into a corresponding ambient air quality impact.

The GBUAPCD has not developed numerical thresholds that define a “substantial” increase in air pollution emissions. However, CEQA procedure will allow reliance on standards or thresholds promulgated by other agencies. For purpose of this project, the CEQA significance thresholds used by SCAQMD have been adopted as representative significance thresholds for this project. Projects with daily emissions that exceed any of the following emission thresholds are considered significant:

TABLE 5.10-2. Adopted Emissions Significance Thresholds (lbs/day)		
Pollutant	Construction	Operations
ROG	75	55
NOx	100	55
CO	550	550
PM-10	150	150
PM-2.5	55	55
SOx	150	150
Lead	3	3

Construction Activity Impacts. CalEEMod was developed by the SCAQMD to provide a computer model by which to calculate both construction emissions and operational emissions from a variety of land use projects. It calculates both the daily maximum and annual average emissions for criteria pollutants (as well as total or annual greenhouse gas (GHG) emissions) and has been adopted for use by most air pollution control districts in California.

Although exhaust emissions will result from on and off-site construction equipment, the exact types and numbers of equipment will vary among contractors such that such emissions cannot be quantified with certainty. However, estimated construction emissions were modeled using CalEEMod2016.3.2 to identify maximum daily emissions for each pollutant during project construction using typical equipment fleets for project activities. The proposed construction related activities are shown in Table 5.10-3 through 5.10-7 for each of the proposed project elements. Each activity was modeled in CalEEMod with the indicated time frame and equipment fleet:

TABLE 5.10-3. Construction Activity Equipment Fleet 100 Workforce Housing Units and 4 Vehicle Fueling Pumps	
ACTIVITY	EQUIPMENT
Grading 20 days	1 Excavator
	1 Grader
	1 Dozer
	3 Loader/Backhoes
Construction 230 days	1 Crane
	3 Forklifts
	1 Welder
	1 Gen Set
	3 Loader/Backhoes
	1 Welder

TABLE 5.10-4. Construction Activity Equipment Fleet Roadway Realignment and Parking Areas	
ACTIVITY	EQUIPMENT
Demolition 10 days	1 Concrete Saw
	1 Dozer
	1 Loader/Backhoe
Grade 20 days	1 Grader
	1 Dozer
	1 Loader/Backhoe
Pave 40 days	1 Mixer
	1 Paver
	1 Roller
	1 Pump

TABLE 5.10-5. CalEEMod Construction Activity Equipment Fleet Replacement Water Tank	
ACTIVITY	EQUIPMENT
Excavate 1 week	1 Bobcat
	1 Loader/Backhoe
Pour Concrete Pad 1 week	1 Mixer
	1 Pump
	1 Roller
Install Tank 1 week	1 Crane
	1 Forklift
	1 Welder

TABLE 5.10-6. CalEEMod Construction Activity Equipment Fleet New Propane Tank	
ACTIVITY	EQUIPMENT
Excavate 1 week	1 Bobcat
	1 Loader/Backhoe
Pour Concrete Pad 1 week	1 Mixer
	1 Pump
	1 Roller
Install Tank 1 week	1 Crane
	1 Forklift
	1 Welder

TABLE 5.10-7. CalEEMod Construction Activity Equipment Fleet New Sanitation and Irrigation System	
ACTIVITY	EQUIPMENT
Excavate 2 weeks	1 Bobcat
	1 Loader/Backhoe
Install 1 week	1 Crane
	1 Loader/Backhoe
	1 Welder
	1 Forklift

Utilizing the equipment fleet and durations shown in Tables 5.10-3 through 5.10-7, worst-case daily construction emissions were calculated by CalEEMod as shown in Table 5.10-8. Emissions were calculated for year 2022 to accommodate an opening year of 2023.

**TABLE 5.10-8. Construction Activity
Maximum Daily Emissions (pounds/day) 2023**

Maximal Construction Emissions	ROG	NOx	CO	SO ₂	PM-10	PM-2.5
Housing and Gas Pumps	16.0	20.9	21.0	0.0	7.6	4.3
Roadways and Parking	1.4	15.5	10.3	0.0	6.9	4.0
New Water Tank	0.5	4.0	4.9	0.0	0.9	0.5
New Propane Tank	0.5	4.0	4.9	0.0	0.9	0.5
Septic System	0.6	5.6	5.3	0.0	0.9	0.5
Total 2022	19.0	50.0	46.4	<0.1	17.2	9.8
Significance Thresholds	75	100	550	150	150	55

The peak daily construction activity emissions shown in Table 5.10-8 are well below all SCAQMD significance thresholds, including the criteria pollutants (PM-10, and the two ozone precursors ROG and NOx). The results indicate that construction-related emissions impacts will be ***less than significant***, and no mitigation is required.

Although impacts are less than significant, it is recommended that construction emissions be further minimized through enhanced dust control measures, and use of reasonable available control measures for diesel exhaust. Recommended measures are outlined in the mitigation recommendations at the end of this section.

Operational Impacts. Operational emissions are primarily attributed to mobile sources. Trip generation estimates used in modeling were obtained from the project traffic report. The traffic report anticipates that project housing will generate 208 daily trips and the additional fueling positions will generate 516 daily trips.

In addition to mobile sources from vehicles, general development causes smaller amounts of “area source” air pollution to be generated from on-site energy consumption (primarily landscaping) and from off-site electrical generation (lighting). These sources represent a minimal percentage of the total project NO_x and CO burdens, and a few percent other pollutants. The inclusion of such emissions adds negligibly to the total significant project-related emissions burden as shown in Table 5.10-9.

TABLE 5.10-9. Daily Operational Impacts of the Tioga Workforce Housing Project						
	Operational Emissions (lbs/day)					
Source	ROG	NO_x	CO	SO₂	PM-10	PM-2.5
Area*	3.4	1.6	8.9	0.0	0.2	0.2
Energy	0.0	0.3	0.1	0.0	0.0	0.0
Mobile	0.4	8.2	11.4	0.0	2.6	0.7
Total	4.8	10.1	20.4	0.0	2.8	0.9
Significance Threshold	55	55	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

Source: CalEEMod2016.3.2

The operational emissions reflect the fact that only Phase II EPA certified wood burning appliances will be permitted in the workforce housing units or other new construction, consistent with General Plan Conservation /Open Space Element Policy 23.A.6 (Reduce emissions from wood-burning appliances), Action 23.A.6.a (Require that all new wood-burning appliances be Phase II EPA certified). With this assumption, the project would not cause operational emissions to exceed their respective adopted CEQA significance thresholds. Operational impacts are therefore concluded to be **less than significant**, and no mitigation for operational activities (including construction emissions and photochemical smog) is required. The measures below are offered only as recommendations, and are not included in the Mitigation Monitoring and Reporting Program presented in EIR §10. As noted, the project applicant intends to implement energy efficient features including solar panels on the roof tops of south-facing structures to minimize use of power, and use of a subsurface dripline irrigation system that directs treated effluent from the package treatment plan to landscaped areas and back in a closed loop.

MITIGATION RECOMMENDATIONS – POLLUTANT EMISSION REDUCTION

AQ 5.10(a-1) (Construction Emission Reduction): Although impacts are less than significant and no mitigation is required, it is recommended that the measures below be incorporated into the project to further minimize construction-related emissions.

Fugitive Dust Control

- Apply soil stabilizers or moisten inactive areas.
- Prepare a high wind dust control plan.
- Address previously disturbed areas if subsequent construction is delayed.
- Water exposed surfaces as needed to avoid visible dust leaving the construction site (typically 2-3 times/day).
- Cover all stock piles with tarps at the end of each day or as needed.
- Provide water spray during loading and unloading of earthen materials.
- Minimize in-out traffic from construction zone
- Cover all trucks hauling dirt, sand, or loose material and require all trucks to maintain at least two feet of freeboard
- Sweep streets daily if visible soil material is carried out from the construction site

AQ 5.10(a-2) (Photochemical Smog Reduction): Although impacts are less than significant and no mitigation is required, it is recommended that reasonably-available measures for diesel exhaust be incorporated into the project to further minimize photochemical smog:

Exhaust Emissions Control

- Utilize well-tuned off-road construction equipment.
- Establish a preference for contractors using Tier 3 or better heavy equipment.
- Enforce 5-minute idling limits for both on-road trucks and off-road equipment.

IMPACT 5.10(d): Would implementation of the proposed project result in other emissions (such as objectionable odors) affecting a substantial number of people?

LESS THAN SIGNIFICANT IMPACT. As discussed in EIR §5.2 (Hydrology), the project incorporates installation of a new Orenco Systems AdvanTex AX-Max package wastewater treatment plant (WWTP). The new package wastewater treatment plant will replace the existing septic system for all wastewater treatment.

Lahontan Regional Water Quality Control Board (LRWQCB) policy concerning package treatment plants is set forth in *Basin Plan* Chapter 4. The policy emphasizes the importance of daily maintenance by a certified plant operator to avoid significant problems with water quality and waste discharge compliance, nuisance conditions and odors. The operator must be certified in California for all appropriate process classifications and LRWQCB must be notified of operator identity. Further, package plants must be owned or controlled by a public agency or private entity with adequate financial and legal resources to assume responsibility for waste discharges; this requirement recognizes that the owner is ultimately responsible for plant performance, and also fully responsible for operational oversight (adding capacity and/or renovations as needed, maintaining supplies, supervising operator performance and securing outside assistance when required).

LRWQCB approval of wastewater treatment plants requires that discharges comply with a maximum total nitrogen level of 10 mg/l and other criteria including design for peak daily flow estimates, odor controls, adequate storage for waste sludge, duplicate onsite equipment components for failure response, compliance with individual waste disposal system requirements for leach field disposal, compliance with all current Regional Board standards, and other requirements where applicable.

Subsurface irrigation would be accomplished via a Geoflow Subsurface Drip System. The drip system will connect directly to the AX-Max treatment system with both an outflow supply line and a separate flush return line. The drip line is made of flexible ½" polyethylene tubing (with an antibacterial coating on the inside). Factory-installed drippers are spaced evenly along the tubing; a pump will be included in the system to circulate the supply.

The drip line would be placed 6-10" below surface. Effluent is pumped on a time-activated dose cycle through a self-cleaning filter out to the dripfield. At the end of each cycle, system flows will return to the treatment tank in a closed loop that is regularly flushed. Quality of the irrigation water will be the same as the quality of the tank effluent. Treated effluent would be distributed to a subsurface irrigation system during the late spring, summer and fall months (7 to 8 months of the year) through a Geoflow subsurface drip irrigation system.

Upon installation of the new wastewater treatment system, the existing septic tank will be eliminated and the existing leachfield will be used only for disposal of treated effluent during the winter months when effluent flows are at a minimum and the subsurface irrigation system is suspended due to freezing conditions. Leachfield size will be determined by LRWQCB requirements, based on the application rate for the treated wastewater effluent. Soil percolation on the project site is very fast (1 minute per inch or less), and the project engineers anticipate that LRWQCB may allow an effluent application rate on the order of 10 gallons per square foot per day which would require a leach field area of 2,200 square feet to accommodate the anticipated 22,000 gpd maximum winter daily wastewater generation rate.

Based on the foregoing considerations, the project is not anticipated to create objectionable odors. Impacts would be ***less than significant***, and no mitigation measures are required.

MITIGATION MEASURES – ODORS

AQ 5.10(d) (Odors): The project is not expected to create objectionable odors, and no mitigation measures are required.

IMPACT 5.10(e, f): Would implementation of the proposed project generate significant greenhouse gas emissions, either directly or indirectly? Conflict with an applicable plan, policy or regulation adopted to reduce greenhouse gas emissions?

LESS THAN SIGNIFICANT. The GBUAPCD has no thresholds for GHG emissions. However, if the lead agency does not have sufficient expertise in evaluating GHG impacts, it may rely on thresholds adopted by an agency with greater expertise. On December 5, 2008 the SCAQMD Governing Board adopted an Interim quantitative GHG Significance Threshold for industrial projects where the SCAQMD is the lead agency (e.g., stationary source permit projects, rules, plans, etc.) of 10,000 Metric Tons (MT) CO₂e/yr.

In September 2010, the SCAQMD CEQA Significance Thresholds GHG Working Group released revisions which recommended a threshold of 3,000 MT CO₂e for all land use projects. This 3,000 MT/year recommendation has been used as a guideline for this analysis. In the absence of an adopted numerical threshold of significance, project related GHG emissions in excess of the guideline level are presumed to trigger a requirement for enhanced GHG reduction at the project level.

Construction Activity GHG Emissions. To model worst case conditions, all construction was assumed to occur within the same calendar year. During project construction, the CalEEMod2016.3.2 computer model predicts that the construction activities will generate the annual CO₂e emissions identified in Table 5.10-10.

TABLE 5.10-10. 2023 Construction Emissions (Metric Tons)	
	CO₂e
Housing and Gas Pumps	426.6
Roadways and Parking	53.4
New Water Tank	4.0
New Propane Tank	4.0
Septic System	4.0
Total 2022	492.0

Air quality agencies typically recommend that construction activity GHG emissions be amortized over the useful life of a project. Assuming a 30-year life for the proposed improvements, the annual average GHG emissions would be less than 16.4 MT/CO₂e per year.

Operational Greenhouse Gas Emissions. The input assumptions for operational GHG emissions calculations, and the GHG conversion from consumption to annual regional CO₂e emissions are summarized in the CalEEMod2013.2.2 output files. The total operational and annualized construction emissions for the proposed project are identified in Table 5.10-11.

TABLE 5.10-11. Operational Emissions associated with Proposed Uses	
Consumption Source	Emissions
Area Sources**	72.6
Energy Utilization	212.8
Mobile Source	651.2
Solid Waste Generation	23.1
Water Consumption	24.9
Construction	16.4
Total	1,001.0
Guideline Threshold	3,000
Exceeds Threshold?	No

** Only Phase II EPA-certified wood burning appliances

Project GHG emissions would be substantially below the proposed significance threshold of 3,000 MT adopted for use for this project. Such emissions would have a less-than-significant local, national or global GHG emissions impact.

In summary, project-related greenhouse emissions would be well below the level of significance, and would not conflict with an adopted plan or regulation. Impacts are ***less than significant***, and no mitigation is required.

GHG Emission Reduction Plans and Policies.⁹ The Mono County *Resource Efficiency Plan* notes that transportation is the single largest source of community-level GHG emissions, accounting for 27% of the community-level total in 2010. Additional significant sources include nonresidential energy use (22% of total), residential energy use (19%), and agricultural activities (16%). The remaining community emissions were attributed to landfills, off-road equipment, water and wastewater, and solid waste disposal activities.

The proposed Workforce Housing Project will provide an opportunity for employees of onsite land uses to live in affordable housing units at their place of employment. This is expected to reduce the GHG emissions in comparison with emission levels if the employees do not have onsite housing options. The extensive use of solar panels is expected to reduce imported energy consumption and thereby reduce nonresidential and residential energy use at this site. Development of a subsurface irrigation system in conjunction with the planned wastewater treatment plant will reduce demands on the potable supply and simultaneously provide a reliable source of irrigation water through the life of the project. A wide range of proposed project elements are consistent with the adopted Resource Efficiency Plan, reduced home-to-work commuting distances, which emphasizes use of renewable energy sources, water conservation, sustainable wastewater treatment, and facilities to encourage ridesharing and transit use. Project impacts on GHG emissions reduction plans and policies would be ***less than significant***, and no mitigation is required.

MITIGATION MEASURES – GREENHOUSE GAS EMISSIONS

GHG 5.10(e,f) (Greenhouse Gases): There are no applicable standards at the present time, and no mitigation measures are required.

5.10.7 SIGNIFICANCE AFTER MITIGATION

All potential project impacts associated with air quality and greenhouse gases would be less than significant.

⁹ Mono County Resource Efficiency Plan, 2014: http://monoclimateaction.org/wp-content/uploads/2017/04/Mono-REP-38-MW_Final.pdf.

TIOGA WORKFORCE HOUSING DRAFT SUBSEQUENT EIR



SECTION 5.11
NOISE

5.11.1 INTRODUCTION AND SUMMARY

This section summarizes findings of a detailed noise assessment prepared for the Tioga Workforce Housing Project by Giroux and Associates. The full noise analysis is presented in Appendix N. The assessment evaluates the project in terms of the sources, distances, types and volume of noise that would be generated if the project is approved, and the area that would be impacted by the new noise sources. The assessment also considers noise associated with outdoor events and concerts held at the Tioga Mart on Thursday evenings from late May through early September each year. The music events were not analyzed or considered in the 1993 Final EIR. However, one of the NOP comment letters requested that the current EIR provide an updated evaluation of noise, traffic and light pollution associated with the events and concerts. Key findings of the §5.2 impact analysis and recommended mitigating policies are summarized in the table below.

SUMMARY OF GENERAL PLAN IMPACTS & POLICY MITIGATIONS FOR NOISE	
IMPACT NOISE 5.11(a):	EXPOSURE TO EXCESSIVE NOISE LEVELS
Mitigation:	Less than Significant Impact, No Mitigation Required
Residual Significance:	Less than Significant
IMPACT NOISE 5.11(b):	EXPOSURE TO EXCESSIVE AIRPORT NOISE
Mitigation:	Less than Significant Impact, No Mitigation Required
Residual Significance:	Less than Significant
IMPACT NOISE 5.11(c):	EXPOSURE TO GROUNDBORNE VIBRATION OR NOISE
Mitigation:	Less than Significant Impact, No Mitigation Required
Residual Significance:	Less than Significant

5.11.2 KEY TERMS USED IN THIS SECTION

Ambient Noise: The background noise level at a given location. The ambient noise level constitutes the normal or existing level of environmental noise at a given location and is a composite of sounds from many sources, near and far. Identifiable but isolated noise sources (such as airplanes or heavy equipment) are not taken into account.

A-Weighted, dBA: The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. In general, a sound level must change by at least 3 dB to be perceptible to the human ear, and a sound must be about 10 dB greater than the reference sound to be judged as twice as loud.

Community Noise Level Equivalent (CNEL): The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7:00 pm to 10:00 pm and after addition of 10 decibels to sound levels measured in the night between 10:00 pm and 7:00 am.

Day-Night Average Sound Level (Ldn): Average sound exposure during a 24-hour day, calculated from hourly Leq values; nighttime Leq values are decreased by 10 dB to reflect the greater disturbance potential of nighttime noises.

Decibel, dB: A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure.

Equivalent Sound Level (Leq): The level of a steady-state sound that, during a stated time and at a stated location, has the same sound energy as the time-varying sound (roughly equal to the average sound level). Leq is typically measured over 1-, 8-, and 24-hour sample periods. The one-hour Leq measurement is called the hourly Leq or Leq(h).

L10 and Ldn: L10 is the A-weighted sound level that is exceeded 10% of the time. Similarly, L50, L90, etc. Ldn is the day-night average over a 24-hour period. To account for lower nighttime background noise, the average for noise between the hours of 10pm and 7am is artificially increased by 10 dB.

Noise Contours: Lines drawn about a noise source indicating equal levels of noise exposure (typically 45, 55, or 65 Ldn). Noise contours are used to establish land use planning criteria for noise.

Noise-Sensitive Land Uses and Receptors: Noise-sensitive land uses in Mono County include residential areas, schools, hospitals, and certain open-space areas that are valued for recreational use or as wildlife habitat or wilderness. Certain cultural and recreational destinations, such as Bodie State Historic Park and Mono Lake, are also considered noise-sensitive land uses. Due to land ownership patterns in Mono County, most developed sensitive land uses.

5.11.3 OVERVIEW OF EXISTING CONDITIONS

5.11.3.1 Existing Noise Conditions in Mono Basin

Industrial uses are major non-transportation related noise sources in Mono County, including batch plants, quarries, geothermal plants, construction, and similar uses. These facilities are generally located in industrial districts or on public land outside community areas. Commonly reported noise complaints include loud music, noisy private parties, and late-night or early-morning construction activity. Complaints are few in number and intermittent in nature, indicating that noise is not a serious problem in most Mono County locations. The Mono County Environmental Assessment notes that noise-sensitive receptors, including local schools and hospitals, have not experienced excessive exposure to noise. However, mining and geothermal operations are considered to be potential sources of concern for future noise exposure levels.

Highways are a major source of noise throughout Mono County. In many Mono County communities, including Lee Vining, local highways serve both as a primary artery and as 'main street'; the highways often bisect communities. In general, Mono County highways have low traffic volumes (less than 20,000 vehicles per day). Most of the land uses adjacent to the major thoroughfares in the county are non-residential uses. Table 5.11-1 shows annual average daily and peak-hour traffic levels (1998 and 2008) for highways in the Mono Basin; Table 5.11-2 shows noise levels associated with various types of vehicles and equipment.

TABLE 5.11-1: ANNUAL AVERAGE DAILY TRAFFIC AND PEAK HOUR TRAFFIC			
ROUTE	1998 ADT	2008 ADT	CHANGE 1998-2008
AVERAGE ANNUAL DAILY TRAFFIC			
SR 167 AT MONO CITY	210	NA	NA/NA
US 395 AT LEE VINING	3,500	4,050	550 (+16%)
SR 158 AT JUNE LAKE	1,450	1,600	150 (+10%)
PEAK-HOUR TRAFFIC			
SR 167 AT MONO CITY	40	20	-20 (-50%)
US 395 AT LEE VINING	640	685	45 (+7%)
SR 158 AT JUNE LAKE	260	260	0/0

TABLE 5.11-2: AVERAGE VEHICLE NOISE LEVELS	
MOTOR VEHICLES	DECIBELS
STANDARD SEDAN	64-76
COMPACT CAR	70-80
SPORTS CAR	70-87
PICKUP TRUCK	70-85
2-3 AXLE TRUCK	80-89
BUS	70-87
CHAINSAW	72-82
MOTORCYCLE (>350 CC)	74-95
INBOARD POWER BOAT	75-105
SNOWMOBILE	80-105
OFF-HIGHWAY VEHICLES	80-105

Traffic counts provided in the Mono County *Regional Transportation Plan* suggest that average daily and peak hour traffic volumes in many areas of the county declined between 2006-2012. However, traffic volumes on highways in the vicinity of the proposed Tioga Workforce Housing project showed an increase during that period, as shown in Table 5.11-3 below.

TABLE 5.11-3: Average Daily Traffic (ADT) Volumes on Nearby Highways				
Route	Location	Peak Hour 2006/2012	Peak Month 2006/2012	Annual 2006/2012
395	Junction 203 West	1200/1200	11900/11100	9200/8000
	June Lake Junction	660/790	6300/7400	4000/4200
	Tioga Pass Junction	710/630	6700/6400	4000/4500
	Bridgeport	670/630	6000/5700	3800/3400
	Sonora Junction	790/500	4550/4300	3100/2900
158	June Lake Junction 395	290/280	2600/2850	1700/1470
	Grant Lake Junction 395	100/110	800/870	400/400
120	Yosemite East Gate	250/330	3200/3310	2100/2560
	Tioga Pass Junction 395	350/430	3300/4350	1300/1330
	Mono Mills Junction 395	100/130	830/1150	380/490

Airport and Helipad Noise. The Master Environmental Assessment provides information about noise levels associated with various types of aircraft used at Lee Vining Airport, as shown below in Table 5.11-4. In addition to three airports, the MEA notes that helipads are located throughout Mono County including facilities at Mammoth Hospital in Mammoth Lakes, at the medical clinic in Bridgeport, at the Pickel Meadow Marine Corps Base on SR 108, and at multiple helipad facilities used by USFS, BLM and Cal Fire for firefighting. Table 5.11-5 summarizes average noise levels associated with various types of aircraft, including helicopters.¹ None of the helicopter facilities operated by Mono County are used for commercial sightseeing or electronic news gathering.

TABLE 5.11-4: LEE VINING AIRPORT AIRCRAFT AND OPERATIONS FORECAST 2000-2020					
	2000	2005	2010	2015	2020
BASED AIRCRAFT	1	3	4	4	4
ANNUAL AIRCRAFT OPERATIONS BY TYPE OF OPERATION:					
LOCAL	500	500	667	667	667

¹ FAA, *Nonmilitary Helicopter Urban Noise Study*, 2004. http://www.faa.gov/regulations_policies/policy_guidance/envir_policy/media/04nov-30-rtc.pdf.

ITINERANT	1500	1500	2000	2000	2000
TOTAL	2000	2000	2667	2667	2667
BY TYPE OF AIRCRAFT:					
SINGLE-ENGINE PROPELLER	2000	2000	2667	2667	2667
BY TYPE OF USER:					
GENERAL AVIATION	2000	2000	2667	2667	2667
AIRCRAFT OPERATIONS DISTRIBUTION					
PEAK MONTH	300	300	400	400	400
PEAK WEEK	80	80	100	100	100
AVERAGE DAY OF PEAK MONTH	10	10	13	13	13

TABLE 5.11-5: AVERAGE AIRCRAFT NOISE LEVELS	
AIRCRAFT	DECIBELS
SINGLE-ENGINE PROP	72-85
MULTI-ENGINE PROP	75-86
COMMERCIAL PROP	79-87
EXECUTIVE JET	84-95
TURBINE-LIGHT UTILITY HELICOPTER	69
JET TAKE-OFF (AT 75')	150

Industrial and Recreational Land Uses. Industrial sites in Mono County include the U.S. Pumice facility located directly across US 395 from the Tioga project site. US Pumice is an international supplier of abrasive materials mined from the many natural pumice formations south of Mono Lake. Potential intrusive noise impacts are largely mitigated because these facilities are generally situated in an industrial district or on public land outside developed areas; US Pumice is located about 500 feet from the nearest residential uses in Lee Vining, and about 2,000 feet from residential dwellings (existing and proposed) on the Tioga site. All mining operations are subject to permits that impose conditions of operation, including mitigation of potential adverse noise.

Recreational activities are another source of noise in Mono County. This category includes noise from recreational vehicles and motorcycles, snowmobiles and motorboats, outdoor concerts and events (such as are held at the Tioga Mart) that adversely impact the noise environment. Noisy recreational activities are found in various locations throughout the county, including the project site. No railroads traverse Mono County.

Community Noise Survey – Baseline 1980-81 Study and 1996 Update. During the fall of 1980 and the winter and spring of 1981, staff conducted noise monitoring at about 30 noise-sensitive sites around the county to assess land uses and major thoroughfares. Results indicated that the 60 dB contours in Mono County are generally within 300' of traveled highways. The data (comprehensively updated in 2013 for the *RTP/General Plan Update*) included noise contours as of 2013, as well as projected contours for the year 2033, as shown in Table 5.11-6 for Lee Vining.

TABLE 5.11-6: Onsite Noise Levels and Traffic Counts, 2013 & 2033		
LEE VINING		
Max Meter dB 72 @ 30'	Distance from Edge of Pavement	
1 Day Leq Contour	Current (2013 AADT 3730)	Projected (2033 AADT 4120)
60 dB	14'	14'
55 dB	24'	25'
50 dB	42'	44'
45 dB	74'	78'

State and Federal Highways. 1995 Ldn contours for state and local highways (provided to the County by Caltrans) show that traffic-related noise impacts along state and federal highways varied little from the baseline data collected in 1980-81. Traffic volumes along these highways were, in general, lower in 1995 than in 1990, and have since risen to 1990 levels indicating that noise impacts have not changed significantly and adequately represent current conditions along state and federal highways.

Noise-Sensitive Areas. Noise-sensitive receptors in Lee Vining include schools, homes and certain open-space areas. Most homes and schools are located along secondary roadways or large enough to provide adequate setbacks from the traveled way. Certain open-space areas are also considered noise sensitive due to their value as wildlife habitat or wilderness; these include several sites around Mono Lake.

5.11.3.2 EXISTING NOISE LEVELS IN THE PROJECT VICINITY

To establish an ambient noise level on the project site, short term area noise measurements were taken at 4 locations on the project site during October 2016 from 11:30 a.m. – 12:30 p.m. Measurement locations are shown in Exhibit 5.11-1 and results are presented in Table 5.11-7 below.

EXHIBIT 5.11-1. Noise Monitoring Locations

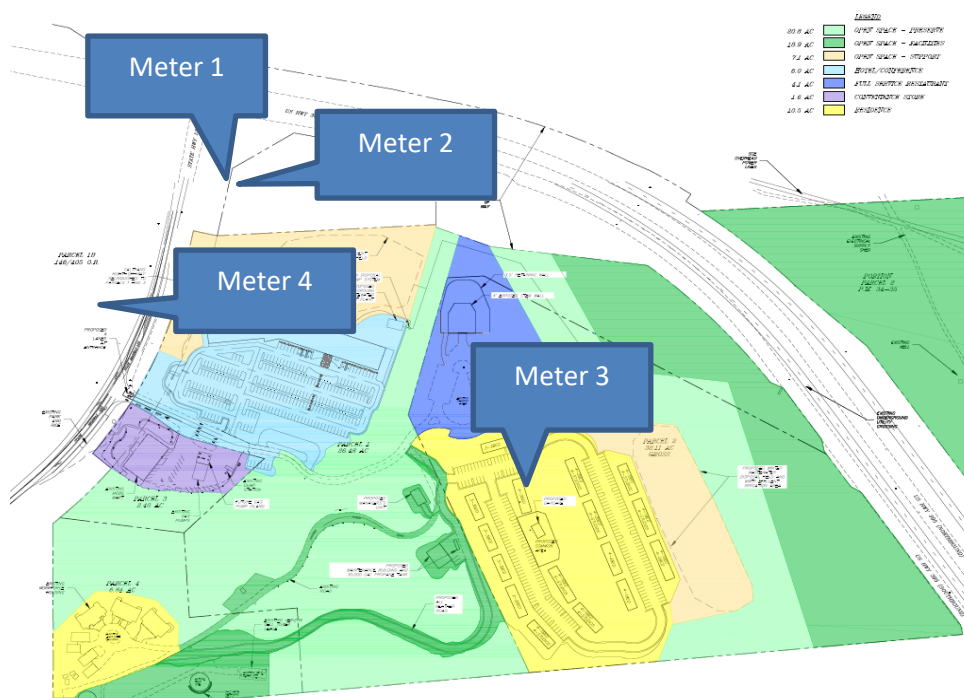


TABLE 5.11-7. Project Site Ambient Noise Measurements (dBA), October 2018

	Leq	Lmax	Lmin	L10	L33	L50	L90
Meter 1	57	84	40	54	48	46	42
Meter 2	47	57	41	49	47	46	43
Meter 3	44	48	39	46	44	42	42
Meter 4	57	68	48	62	55	53	50

Monitoring experience shows that 24-hour weighted CNELs can be reasonably well estimated from mid-day noise readings. CNELs are approximately equal to afternoon hour Leq plus 2-3 dB (Caltrans Technical Noise Supplement, 2009). The observed Leqs of 44-57 dBA would translate into CNELs of 46-60 dBA.

5.11.4 REGULATORY SETTING²

5.11.4.1 Federal and International Regulations

There are no federal plans, policies, regulations, or laws that directly pertain to the County's consideration or adoption of the RTP/General Plan Update, including the Noise Element. However, various federal agencies have issued programs and guidelines that are helpful in measuring noise and setting noise-exposure standards. The USEPA Federal Noise Control Act of 1972 clearly identified noise as a threat to human health and welfare; EPA recommended that noise be addressed at more local levels of government and transferred noise regulation to state and local governments. The Federal Transit Administration (FTA) has developed significance criteria to evaluate noise impacts from surface transportation, as presented in FTA's 2006 *Transit Noise Impact and Vibration Assessment*. Traffic noise is governed by CFR 23 Part 772. FHWA established noise assessment procedures and abatement criteria in *Highway Traffic Noise: Analysis and Abatement Guidance* (2011). Title 14 CFR, Part 36 establishes maximum acceptable noise levels for aircraft operating in the U.S. based on model year, aircraft weight, and the number of engines. The FAA Part 150 program encourages airports to prepare noise-exposure maps depicting land uses that are incompatible with high noise levels, and the Federal Railroad Noise Emission Compliance Regulation (49 CFR Part 210) prescribes minimum compliance regulations for enforcement of railroad noise emission standards adopted by USEPA. The Universal Building Code contains noise insulation standards for hotels, motels, dormitories, apartment houses and other residential dwellings. The code states that interior noise levels shall not exceed 45 dBA.

5.11.4.2 State Regulations

California Airport Noise Standards. PUC §21670 et seq. promotes compatibility between public use and military airports and the land uses that surround them. California airport noise standards, as well as Federal Aviation Regulations, establish a CNEL of 65 dBA as the maximum acceptable noise exposure for residential land uses. This criterion, however, is set primarily with regard to air carrier airports in urban locations. For general aviation airports located in comparatively quiet rural settings such as Mono County, a 60- or even 55-CNEL standard is suggested.

California Code of Regulations Title 24. CCR Title 24 sets standards for interior noise levels in all new single-family and multifamily residential units. The standards require acoustical studies prior to construction wherever the existing Ldn exceeds 60 dBA, with mitigation to limit maximum Ldn levels to 45 dBA in any habitable room, including residential insulation standards that are implemented during the building process.

California General Plan Guidelines. The Office of Planning and Research publishes General Plan Guidelines that include guidance for determining acceptable and unacceptable community noise exposure limits for various land use categories. Residential uses and schools are generally considered acceptable where exterior noise levels do not exceed 60 dBA Ldn, and unacceptable in areas exceeding 70 dBA; higher limits apply to commercial uses. Conditionally acceptable ranges are also given, depending on noise insulation and reduction features.

California Harbors and Navigation Code. §650-674 of this Code regulates vessels and associated equipment used on waters subject to state jurisdiction. The Code sets a maximum of 82 dBA (at 50 feet) for all motorized recreational engines manufactured after 1978.

Motor Vehicle Code. §38365A of the State Vehicle Code requires that off-road vehicles must be equipped with a muffler to reduce noise to an acceptable level; § 38370 defines acceptable noise levels according to the age of the

² The reader is also referred to the interrelated regulations outlined in EIR §4.3, Air Quality and Greenhouse Gas Emissions.

vehicle (i.e., pre-1973, 92 decibels; 1973-74, 88 decibels; and post-1974, 86 decibels). In Mono County, noise-related provisions of the Motor Vehicle Code are enforced by the Sheriff's Department.

5.11.4.3 Local Regulations

Mono County General Plan. The Circulation Element of the General Plan includes policies to reduce traffic noise levels (the most significant source of environmental noise in Mono County) by minimizing congestion and facilitating smooth traffic flow. The Land Use Element contains policies to avoid the juxtaposition of incompatible land uses unless potentially significant impacts (including noise) are adequately mitigated. The Noise Element contains policies to avoid the juxtaposition of incompatible land uses unless potentially significant impacts (such as noise impacts) are adequately mitigated, to enforce existing noise ordinances and policies, and to assess and mitigate the impacts of proposed noise-generating land uses.

Mono County Noise Ordinance. The Mono County Code defines limits for excessive noise and sets noise level limits for land uses. Recently updated, the Ordinance includes procedures for measuring noise, noise level limits, prohibitions, exemptions, enforcement measures and a process for variances and appeals. The County implements additional noise regulations depending on noise source and land use. Acceptable noise exposure ranges are specified for various land uses based on maximum allowable noise exposures. The building official serves as the Noise Control Officer for Mono County and has enforcement powers; the Planning Division regulates noise through use permits, which include conditions of operation and limits on noise emissions. Mono County Code §10.16.060 sets maximum allowable exterior noise levels, as shown in Table 5.11-8 below. Note that noise levels shown in Table 5.11-8 do not include construction.

TABLE 5.11-8. Maximum Allowable Exterior Noise Levels per Mono County Code		
Land Use	Allowable Time	Noise Level (dBA)
Residential Single Family	Daytime (7 a.m.-10 p.m.)	55
	Nighttime (10 p.m.-7 a.m.)	50
Residential Multi-Family	Daytime (7 a.m.-10 p.m.)	55
	Nighttime (10 p.m.-7 a.m.)	50
Public Uses-Schools, Libraries, Hospitals	Daytime (7 a.m.-10 p.m.)	55
	Nighttime (10 p.m.-7 a.m.)	50
Passive Recreational Areas	Daytime (7 a.m.-10 p.m.)	55
	Nighttime (10 p.m.-7 a.m.)	50
Community Parks and Athletic Fields	Daytime (7 a.m.-10 p.m.)	55
	Nighttime (10 p.m.-7 a.m.)	50

5.11.5 SIGNIFICANCE CRITERIA

Appendix G of the California CEQA Guidelines offers the following criteria for determining the significance of noise impacts. A project would have a potentially significant impact on noise if it would:

- Expose persons to or cause a permanent or temporary significant increase in ambient noise levels or result in noise levels exceeding adopted standards.
- Expose persons to or generate excessive groundborne vibration or groundborne noise levels.
- Expose people residing or working in the project area to excessive noise levels for a project located in an airport land use plan or (where such a plan has not been adopted) within two miles of a public airport or public-use airport or a private airstrip.

5.11.6 ENVIRONMENTAL IMPACTS AND MITIGATING POLICIES AND ACTIONS

IMPACT 4.14(a): Would implementation of the proposed Tioga Workforce Housing Project expose persons to or cause a permanent or temporary significant increase in ambient noise levels or result in noise levels exceeding standards set by the general plan or noise ordinance or other applicable standards?

LESS THAN SIGNIFICANT. Project implementation will result in temporary increased noise levels during construction, and in permanent noise level increases associated with long-term activities on the project site. As discussed below, neither construction noise nor long-term ambient noise level increases will exceed adopted standards.

Construction Noise. Mono County Code §10.16.060 limits construction noise to daytime hours of lesser noise sensitivity, and sets maximum short-term (i.e., less than 10-days) noise levels that cannot be exceeded at the nearest occupied home and commercial uses. Table 5.11-9 lists construction noise levels that may not be exceeded.

TABLE 5.11-9. Maximum Short-Term Noise Levels for Operation of Mobile Equipment (dBA)			
	Single-family Residential	Multi-family Residential	Semi-residential/ Commercial
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	75	80	85
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays.	60	65	70

Table 5.11-10 lists maximum noise levels for repetitive and long-term (more than 10 days) stationary equipment.

TABLE 5.11-10. Maximum Noise Levels for Operation of Stationary Equipment (dBA)			
	Single-family Residential	Multi-family Residential	Semi-residential/ Commercial
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	60	65	70
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays.	50	55	60

Noise levels of construction equipment anticipated for use in this project were analyzed, based on a 2006 Federal Highway Administration (FHWA) Roadway Construction Noise Model that includes a national database of construction equipment reference noise emissions levels. The database provides an acoustical usage factor to estimate the fraction of time each piece of construction equipment is operating at full power during a construction phase. The usage factor is a key input variable that is used to calculate the average Leq noise levels. Table 5.11-11 identifies the highest (Lmax) noise levels associated with each type of equipment identified for use, then adjusts this noise level for distance to the closest sensitive receptor and the extent of equipment usage (usage factor), which is represented as Leq.

TABLE 5.11-11. Noise Levels at 50-foot Reference Point (Noise Levels given in dBA)					
Activity/Equipment	Usage Factor³	Hours of Operation⁴	Published Noise @ 50 feet	Measured Noise @ 50 feet	Cumulative Noise Level @ 50 feet

³ Estimates the fraction of time each piece of equipment is operating at full power during a construction operation.

⁴ Represents the actual hours of peak construction equipment activity out of a typical 8 hour day.

Water Tank						
Excavate	Bobcat	40%	3.2	80	79	75
	Loader/Backhoe	37%	3.0	80	78	74
Pour Concrete Pad	Mixer	40%	3.2	80	80	76
	Pump	20%	1.6	82	81	74
	Roller	38%	3.0	85	80	76
Install Tank	Crane	16%	1.3	85	81	73
	Forklift	20%	1.6	75	75	68
	Welder	46%	3.7	73	74	71
Propane Tank						
Excavate	Bobcat	40%	3.2	80	79	75
	Loader/Backhoe	37%	3.0	80	78	74
Pour Concrete Pad	Mixer	40%	3.2	80	80	76
	Pump	20%	1.6	82	81	74
	Roller	38%	3.0	85	80	76
Install Tank	Crane	16%	1.3	85	81	73
	Forklift	20%	1.6	75	75	68
	Welder	46%	3.7	73	74	71
Workforce Housing and Fueling Pumps						
Grade	Excavator	40%	3.2	85	81	78
	Grader	40%	3.2	85	85	81
	Dozer	40%	3.2	85	82	78
	Loader/Backhoe	37%	3.0	80	78	74
Construction	Crane	16%	1.3	85	81	73
	Forklift	20%	1.6	75	75	68
	Loader/Backhoe	37%	3.0	80	78	74
	Welder	46%	3.7	73	74	71
Roadway and Parking Lot Construction						
Demolition	Concrete Saw	20%	1.6	90	90	84
	Loader/Backhoe	37%	3.0	80	78	74
	Dozer	40%	3.2	85	82	78
Grade	Grader	40%	3.2	85	85	81
	Dozer	40%	3.2	85	82	78
	Loader/Backhoe	37%	3.0	80	78	74
Pave	Mixer	40%	3.2	80	80	76
	Roller	38%	3.0	85	80	76
	Pump	20%	1.6	82	81	74
	Loader/Backhoe	37%	3.0	80	78	74
Sanitation System						
Excavate	Bobcat	40%	3.2	80	79	75
	Loader/Backhoe	37%	3.0	80	78	74
Install	Crane	16%	1.3	85	81	73
	Loader/Backhoe	37%	3.0	80	78	74
	Welder	46%	3.7	73	74	71
	Forklift	20%	1.6	75	75	68

Construction generated noise levels drop off at a rate of about 6 dBA per doubling of distance between the source and receptor. Table 5.11-12 shows the distance from each project component to the nearest residential use onsite and in Lee Vining, and the associated distance attenuation rates.

TABLE 5.11-12. Distance between Residential Areas and Project Construction (dBA)				
	On-Site Homes		Lee Vining Homes	
Element	Distance (feet)	Distance Attenuation (dBA)	Distance (miles)	Distance Attenuation (dBA)
Housing and Gas Pumps	500-900	-20 to -25	0.5	-34
Roadways and Parking	100	-6	0.4	-33
New Water Tank	170	-11	0.6	-36
New Propane Tank	800	-24	0.5	-34
Septic System	1,000	-26	0.6	-36

Table 5.11-13 shows the attenuated construction equipment noise level that would be experienced at the closest residence in Lee Vining, after adjusting for distance. The anticipated construction fleet is mobile and not stationary and will move about the construction area. The construction noise standard for mobile equipment near an affected residence between 7 a.m. and 8 p.m., Monday through Saturday, is 75 dBA. As shown in Table 5.11-3, the most impacted residences are those on-site during construction of the new access roadway. A concrete saw will not be used for the new access roadway because it is a new road and no demolition of existing asphalt is necessary. All other equipment for other construction components is less than the 75 dBA threshold. In addition, equipment for the access roadway will only be near the homes for a short period of time as it moves down the alignment traveling away from the homes. Homes in Lee Vining have enough distance separation to render all construction equipment less-than-significant. Noise thresholds will not be exceeded for any construction activity because of distance between the noise source and the receptors.

TABLE 5.11-13. Construction Equipment Noise Levels at Closest Residence (dBA)			
		ONSITE HOMES	LEE VINING HOMES
Water Tank			
Excavate	Bobcat	64	39
	Loader/Backhoe	63	38
Pour Concrete Pad	Mixer	65	40
	Pump	63	38
	Roller	65	40
Install Tank	Crane	62	37
	Forklift	57	32
	Welder	60	35
Propane Tank			
Excavate	Bobcat	59	41
	Loader/Backhoe	58	40
Pour Concrete Pad	Mixer	60	42
	Pump	58	40
	Roller	60	42
Install Tank	Crane	57	39
	Forklift	52	34
	Welder	55	37
Workforce Housing			
Grade	Excavator	58	44
	Grader	61	47
	Dozer	58	44
	Loader/Backhoe	54	40
Construction	Crane	53	39
	Forklift	48	34
	Loader/Backhoe	54	40
	Welder	51	37

Roadway and Parking Lot			
Demolition	Concrete Saw	-	51
	Loader/Backhoe	68	41
	Dozer	72	45
Grade	Grader	75	48
	Dozer	72	45
	Loader/Backhoe	68	41
Pave	Mixer	70	43
	Roller	70	43
	Pump	68	41
	Loader/Backhoe	68	41
Sanitation			
Excavate	Bobcat	49	39
	Loader/Backhoe	48	38
Install	Crane	47	37
	Loader/Backhoe	48	38
	Welder	45	35
	Forklift	42	32

Traffic Noise. The project is expected to generate 724 additional daily vehicular trips. Not all these vehicles will disperse to the same roadway. Vehicles entering and leaving the site will travel east or west on SR 120, and north or south on US 395. The roadway that will most impact the noise levels of residential uses in Lee Vining is US 395 north of SR 120.

Traffic noise was modeled using the California specific vehicle noise curves (CALVENO) in the federal roadway noise model (the FHWA Highway Traffic Noise Prediction Model, FHWA-RD-77-108), and based on traffic data and projections for existing and future (2023) conditions. Year 2023 data includes cumulative area development such as the proposed hotel and restaurant. The results are shown below in Table 5.11-14.

TABLE 5.11-14. Traffic Noise Impacts (dBA CNEL at 50-feet from Roadway Centerline)				
Roadway Segment	Existing No Project	Existing W Project	2023 No Project	2023 W Project
Highway 395 South of SR 120	64.9	65.3	65.9	66.1
Highway 395 North of SR 120	64.1	64.3	64.8	65.0
SR 120 West of Highway 395	60.2	61.8	62.9	63.8
SR 120 West of Project Access	60.2	60.9	62.0	62.4

Because traffic volumes are lower on SR 120, project-related noise impacts on this roadway are more pronounced than impacts on US 395 (which are more diluted). At the closest sensitive use in Lee Vining, the observed traffic noise increase is calculated to be +0.2 dBA CNEL at 50 feet from roadway centerline. The closest residence is more than 150 feet from the roadway centerline. Regardless, this impact is less than the +3 dBA CNEL significance threshold and will not be audible at the residence.

The largest traffic noise increase of +1.6 dBA CNEL occurs on SR 120 west of US 395. Not only is this impact less than the significance threshold, but there are no sensitive uses along this roadway segment. Therefore, the project related traffic noise increases are considered to be less than significant.

Impacts on Habitat and Wildlife. The proposed on-site housing will be located closer than other proposed uses to existing off-site wildlife habitats. Residential use is generally passive with little change to the noise environment. Every species has unique noise sensitivities that can change from day to day or season to season, and it is difficult to generalize potential noise stress impacts. The USFWS employs a general noise protection standard of 60 dB Leq in habitats of threatened or endangered avian species during nesting/breeding seasons. Noise from residential housing within the immediate vicinity of the activity itself is typically less than 60 dB. Using the USFWS standard as a guideline, bio-habitats away from the proposed enhanced recreation area are not anticipated to be significantly noise-impacted,

Analyses presented in this section indicate that the project will comply with relevant noise standards during construction and through long-term use and occupancy, and impacts will be ***less than significant***. No supplemental mitigation is required.

MITIGATION MEASURES – COMPLIANCE WITH NOISE STANDARDS

NOISE 5.11(a) (Noise Standards): The project will comply with applicable noise standards, and no supplemental mitigation measures are required.

IMPACT 5.11(b): Would implementation of the proposed project expose persons to or generate excessive groundborne vibration or groundborne noise levels?

LESS THAN SIGNIFICANT.⁵ Groundborne noise and vibration are generated by transportation sources (particularly road and rail traffic) as well as construction equipment and blasting activities. Highly fractured but relatively hard rock deposits underlay much of Mono County, and boulders are also present in many locations. In such locations, construction may require that boulders be removed (often using a hydraulic ram to break and crush the rock) and near-surface rock deposits may require blasting. The release of energy from a blast can impact off-site locations through ground vibrations, air blasts and dust.

Blasting is not expected to be required during construction of the proposed project elements. As discussed in EIR §5.1 (Geology), recent-age soil materials on the site (evident primarily as surface deposits) are comprised of colluvium and alluvium. The recent-age materials are underlain by Quarternary-age unconsolidated deposits (glacial till, colluvium and alluvium) resulting from erosion and deposition. The glacial till consists of poorly sorted and unconsolidated deposits found along the base of the Sierra Nevada. The alluvium is interbedded with fine-grained lake sediments that increase in thickness and proportion toward Mono Lake. However, if blasting is required on this site, it will be subject to requirements of the Mono County *Noise Element*, which requires that an analysis be prepared for any project that would involve blasting or vibration. The analysis would include noise control measures and a monitoring program. In combination with the County's exterior noise standards and limits on construction, the mitigating policies and actions would reduce potential vibration impacts to ***less than significant*** levels.

MITIGATION MEASURES – VIBRATIONAL NOISE

NOISE 5.1(b) (Vibrational Noise): No significant groundborne vibration or groundborne noise levels are anticipated, and no mitigation measures are required.

IMPACT 5.11(c): Would project implementation expose people living or working in the project area to excessive noise levels for a project located in an airport land use plan or (where such a plan has not been adopted) within two miles of a public airport or public-use airport or private airstrip?

LESS THAN SIGNIFICANT. The project site is located directly adjacent to the Lee Vining Airport, which is owned by LADWP and managed under a long-term lease with Mono County. The airport is designated as a "Limited Use-Recreational Access" facility, serving only general aviation uses. The airport has a pilot-activated lighting system and a navigational beacon but no aviation fuel.

⁵ Information in this section was based on a Vibration and Noise Analysis prepared for Mono County by Giroux & Associates as part of the *Rock Creek Ranch Specific Plan and Draft EIR*, July 2008.

The Lee Vining Airport Master Plan was updated in 2017.⁶ The number of aircraft and aircraft operations have increased at Lee Vining Airport since 2000 (the facility had four single-engine aircraft as of 2015), but the level of use remain lows (with approximately 7 daily flights at Lee Vining) and the Noise Element identifies Lee Vining Airport as low-volume facility. Aircraft operations at both facilities are limited to single-engine aircraft, both at present and through the five-year planning forecast period.

No sensitive noise receptors presently exist or are planned adjacent to the Lee Vining Airport. Although Lee Vining Airport is among the public airports closest to Yosemite National Park, and has potential for increased use by visitors to Yosemite, operations at Lee Vining are expected to continue at 2,667 per year through at least 2020. The Master Plan for Lee Vining Airport forecasts that increased aircraft volume will not significantly affect noise contours in the foreseeable future.

The above considerations indicate that people residing or working on the project site would not be exposed to excessive noise levels. Impacts would be *less than significant*, and no mitigation measures are required.

MITIGATION MEASURES – AIRPORT NOISE

NOISE 5.11(c) (Airport Noise): No significant airport noise impacts are anticipated, and no mitigations are required.

5.11.7 SIGNIFICANCE AFTER MITIGATION

All potential project impacts associated with noise exposure or noise generation would be less than significant.

⁶Mono County, Lee Vining Airport Master Plan, 2017: https://monocounty.ca.gov/sites/default/files/fileattachments/public_works_-_facilities/page/4027/lee_vining_alp-2017.pdf

TIOGA WORKFORCE HOUSING DRAFT SUBSEQUENT EIR



SECTION 5.12

AESTHETICS, LIGHT & GLARE, SCENIC RESOURCES

5.12.1 INTRODUCTION AND SUMMARY

This section describes aesthetic and scenic resources on and surrounding the project site, as well as the potential impacts on these resources that may occur in association with the proposed Tioga Workforce Housing project. This section incorporates and responds to NOP comments concerning a wide range of scenic and aesthetic values and impacts: the status of US 395 (and eligibility of SR 120 for) as a designated State Scenic Highway and potential future scenic byway(s); visual assessments of the workforce housing project; assessment of project impacts on night-sky visibility and measures to minimize lighting; measures to screen the water storage tank; and impacts on the character of Lee Vining. Many additional comments addressed topics related to the previously-approved hotel and full-service restaurant; modifications are no longer proposed to these prior elements and the associated issues not considered herein.

SUMMARY OF IMPACTS & MITIGATIONS FOR AESTHETICS, LIGHT & GLARE, SCENIC RESOURCES

<u>IMPACT AES 5.12(a, b):</u>	<u>SCENIC RESOURCES AND VISUAL CHARACTER</u>
Mitigation AES 5.12(a,b)	Use of landscaping, construction and design to minimize offsite views
Significance:	SIGNIFICANT and Unavoidable Adverse Impact
<u>IMPACT AES 5.12(c):</u>	<u>LIGHT AND GLARE EFFECTS</u>
Mitigation:	Mandatory compliance with Dark Sky Regulations
Significance:	SIGNIFICANT and Unavoidable Adverse Impact

5.12.2 KEY TERMS USED IN THIS SECTION

Glare. Glare is a visual sensation caused by excessive and uncontrolled brightness. It can be disabling or simply uncomfortable. The experience of glare is subjective, and sensitivity to glare can vary widely. Older people are usually more sensitive to glare due to the aging characteristics of the eye. Disabling glare is the reduction in visibility caused by intense light sources in the field of view, while discomfort glare is the sensation of annoyance or even pain induced by overly bright sources. Sources of glare include streetlights, parking lot lights, floodlights, signs, sports field lighting, decorative and landscape lights, and reflective surfaces (particularly glass and metal).

Light Pollution and Light Trespass. Light pollution is an unwanted consequence of outdoor lighting and includes such effects as sky glow (a brightening of the sky caused by natural and human-made factors), light trespass and glare. Outdoor lighting is the principal contributor to light pollution.

Visual Character. Visual character includes the full range of natural and constructed elements that comprise a setting. The perception of visual character can vary seasonally and even hourly in response to weather, light, shadow, and other factors that shape the viewshed. Components often used to describe visual character include elements of form, line, color, and texture of the landscape features; the overall appearance of the landscape is influenced by the relative dominance of each of these components.

Visual Quality. Visual quality reflects the relative degree of vividness, intactness, and unity in a viewshed. Vividness refers to the visual power or memorability of landscape components. Intactness refers to the visual integrity of the

natural and human-built landscape and its freedom from encroaching elements. Unity refers to the coherence and compositional harmony of the landscape considered as a whole. High-quality views are vivid, relatively intact, and exhibit a high degree of visual unity. Visual quality is also influenced by the geographic frame of reference: a small hill may be a significant visual element on a flat landscape but have relatively little significance in mountainous terrain.

County-Designated Scenic Routes. The Mono County Regional Transportation Plan identifies 27 roadway segments as Scenic Highways. These road segments are subject to requirements of the Scenic Combining District in the Land Development Regulations, as well as Mono County General Plan policies as set forth in the Conservation/Open Space Element, and the Visual Resource Policies.

California Scenic Road Designations. Scenic routes are transportation corridors that provide opportunities for the enjoyment of natural and human-made scenic resources, and access to or direct views of areas or scenes of exceptional beauty and/or historic or cultural interest. The aesthetic values of scenic routes are generally protected by regulations that restrict advertising or the development of adjoining properties. Designated scenic highways in California include County Scenic Routes and State Scenic Highways.

Federal Scenic Road Designations. Federally designated scenic routes are roads that possess unique characteristics and are suited to tourism. Federal scenic road designations include National Scenic Byways, BLM Back Country Byways, and National Forest Scenic Byways. National Parkways are scenic roads in the National Park System that are designed for recreational driving through scenic or historic areas and have a buffer of park land along both sides of the roadway. National Historic Trails are commemorative motor routes that follow historic pathways.

Scenic Corridor. The scenic corridor includes all areas outside a highway right of way that possess scenic value and are generally visible to persons traveling on the highway.

5.12.3 BASELINE OVERVIEW

5.12.3.1 1993 Tioga Inn Specific Plan and Final EIR Visual Assessment

The Tioga Inn project was approved in May of 1993 following certification of the Tioga Inn Specific Plan and Final EIR.¹ Contained in the Final EIR as Technical Appendix Report 2 was a detailed Visual Impact Assessment prepared by Certified/Earth Metrics. The report described the project setting including visual characteristics of the project site, view opportunities and view corridors, and scenic highways management and policies. Impacts were analyzed, including a series of eleven baseline photographs and two photosimulations depicting site views with the hotel and full-service restaurant in place. Analyses in the 1993 Final EIR comprise the baseline visual assessment for all previously approved uses on the project site.

As described in the 1993 Final EIR, the project site borders the federally designated Mono Basin National Forest Scenic Area, a nationally recognized visual resource. The project site *"lies on the outskirts of Lee Vining, a small, rustic community [with] many difference architectural styles [and] the southern gateway to the famous Bodie Ghost Town..."* The site itself *"consists of a gently sloping grade trending north to south with a ridgeline running through the center, forming two upper "plateaus"... The site's varied terrain is vegetated with a dense cover of sagebrush, whitethorn and other low-lying shrubs, as well as a sparse covering of Jeffrey and Pinion pines. The site's barren, chaparral landscape is characteristic of the Mono Basin environment."*

The FEIR describes View Opportunities from the project site as *"scenic vistas to Mono Lake, Paoha Island, and Mono Basin to the north...; Williams Butte and the Ansel Adams Wilderness to the south..., and Crater Mountain to the east. View opportunities are more dramatic from the site's upper elevations due to increased elevation of the viewer's vantage point."*

The FEIR describes two primary View Corridors from the site: *"views from SR 120 looking north to Mono Lake and Mono Basin, and the views from the intersection of SE 120 and US 395 looking south up Tioga Pass. The SR 120 corridor is*

¹ Mono County, *Tioga Inn Specific Plan and Final EIR*, May 24, 1993, op cit.

significant in that it marks an important first view to Mono Lake for motorists traveling Tioga Pass. There is currently a scenic turnout with an interpretive information kiosk on SR 120 adjacent to the project site (see Plate E).² The US 395–Tioga Pass corridor is significant in that it marks the intersection of the two highways which experience a high volume of vehicle traffic, and offers aesthetically pleasing views to the dramatic peaks of the eastern Sierra.... Other view corridors which would be potentially impacted by the proposed project are views from the community of Lee Vining, and views from across Mono Basin (Black Point, Mono County Park, lower Lee Vining Canyon).... Due to the relative distance of the project site to any development, the project site would not be readily perceptible from this vantage point.”

The 1993 FEIR analyzed visual impacts through a significance threshold based on a “*substantial, demonstrative negative visual or aesthetic impact*” including use of reflective materials, excessive height and/or bulk, designs that are not in harmony with the community atmosphere, and features that are incongruous to the area or significantly detract from the natural environment. With respect to these criteria, the FEIR concluded that (1) the proposed building materials *would* cause excessive amounts of light and glare, (2) the structures *would not* represent excessive height and/or bulk, (3) the proposed alpine style *would* blend with the environment, and (4) the architectural design *would not* be incongruous with surrounding natural terrain. The analysis noted that signage and lighting plans were not sufficiently detailed to analyze, but that either or both would cause significant impacts if improperly designed.

Additional impacts identified in the 1993 FEIR included “*enhanced public access to view opportunities can be considered a beneficial impact,*” “*the project would cause existing unobstructed view corridors to become partially obstructed...[and] the proposed structures in these areas [restaurant, hilltop housing, deli and hotel] would potentially be visually intrusive,*” and the elimination of a scenic turnout on SR 120 was identified as a potentially significant impact. The FEIR did not identify significant impacts with respect to the Mono Basin National Forest Scenic Area, or the National Forest Visual Management System. Based on these considerations, the FEIR identified a number of potentially significant adverse impacts, all pertaining to visual and aesthetic values:

1. **Landscaping:** The FEIR found that visual impacts of the project would be potentially significant and adverse, due to the absence of detailed project landscape plans. The FEIR noted that “*landscape vegetation and other visual buffers are of vital importance to provide an adequate transition from the manmade environment to the natural environment [and] the potential to temper manmade features on site and minimize their visual prominence.*”
2. **Signage:** The FEIR found that improper sign design would be a potentially significant and adverse project impact, due to the absence of a proposed signage plan. The FEIR noted that “*Signs which do not blend with the natural environment or cause excessive light and glare would not be compatible with...the Mono County Sign Ordinance.*”
3. **Nighttime Lighting:** The FEIR found that the type and design of onsite lighting would be a potentially significant and adverse project impact, due to the lack of information regarding the proposed onsite lighting. The FEIR noted that, “*lighting fixtures and configurations which project excessive light and glare to its surroundings would be inconsistent with...the Conservation/Open Space element, which calls for lighting to be shielded and direct.*”

The visual impact analysis recommended 5 mitigation measures as listed below:³

1. **General Plan Compliance:** Fully comply with all pertinent objectives, policies, actions of the Draft Conservation/Open Space Element of the Mono County General Plan.
2. **Reduce Glare:** Use only glare resistant glass and building materials in the project construction. Prior to construction, submit a detailed list of proposed building materials and colors to the Planning Dept. for approval.
3. **Minimize Lighting:** Use low mounting height, shielded and direct, for nighttime lighting, and minimize nighttime lighting to that required for safety and security.
4. **Landscape Plan:** Submit a landscape plan for planning department approval that details design, location, and species of vegetation. Maintain and incorporate existing trees into the plan.

² Note that the information kiosk was subsequently replaced by the YARTS bus shelter.

³ One additional mitigation measure addressed potential impacts to the USFS kiosk, stating “*If necessary, the existing Scenic Turnout and Kiosk near the proposed entrance...should be moved...to a location agreed upon by the ...Planning Department and USFS.*”

5. **Screening:** Give special consideration to the visually prominent areas during development of the landscape plan; in these areas provide mature, native, drought-resistant species planted so as to maximize visual screening. Provide landscape berms in the restaurant parking area and on the hilltop residential housing ridgeline.

The recommended mitigations were incorporated into the Tioga Inn Specific Plan as design policies and implementation measures. The resulting 1993 policies and implementation measures are summarized in Table 5.12-1 below. The policies adopted in 1993 are presented in full, along with changes that are now proposed, in EIR §4.0 (Specific Plan).

TABLE 5.12-1. 1993 Tioga Inn Specific Plan Design Implementation Measures		
Goals	Policies	Implementation Measures
Goal 3: Reduce the project's visual intrusiveness	Policy 3a: Minimize Site Disturbance	3a(1): Revegetation plan to be approved by Planning Director. 3a(2): Revegetation plan to conform to County's format with details regarding vegetation to be replaced.
	Policy 3b: Maximize use of indigenous species	3b(1): Landscape plan shall identify areas to be revegetated with native species; natives to be used to maximum possible extent.
	Policy 3c: Use introduced landscaping for screening to visually blend the project into the natural landscape.	3c(1): Use landscape guidelines provided in the Specific Plan Table. 3c(2): Submit landscape plan for approval prior to issuance of building/grading permits. 3c(3): Landscape plan shall focus placement on the visually prominent areas (restaurant parking lot and hilltop residential ridge). With landscape techniques to block view the view of passenger vehicles in the restaurant parking area and residential ridgeline.
	Policy 3d: Maintain introduced landscaping to prevent plants from dying.	3d(1): All landscaping to be maintained in a vigorous and healthy condition in perpetuity, allowing for flexibility in the event of extreme drought.
	Policy 3e: Provide landscaped relaxation, picnic, walking areas	3e(1): The picnic and walking areas shall be designed for water conservation, visual attractiveness and as a visual complement to the area.
	Policy 3f: Ensure a visually attractive development.	3f(1): All structures to be designed in conformance with Specific Plan architectural elevations. 3f(2): All exterior materials to be in harmony with the theme of a rustic alpine appearance. 3f(3): Roof materials shall be subtle colors ('earthtone' or 'green'); visible chimney materials to be of muted stone or wood meeting fire codes.
	Policy 3g: Reduce reflective glare.	3g(1): Lighting to be shielded, aimed and directed to provide illumination of target areas with minimal offsite visibility.

Even with the policy implementation measures outlined above, the 1993 Final EIR concluded that project implementation would result in a significant, unavoidable and adverse impact to visual resources: *"The proposed project will result in a partial disruption of the area's visual quality. The facility is designed to blend and complement the natural landscape as much as possible, but it will still be visible on the landscape. The visual impact is irreversible and remains subjectively significant."* The impact on visual resources was the only unavoidable significant adverse impact identified in the 1993 FEIR.

5.12.3.2 Scenic Resources of the Mono Basin

Mono Lake is a soda saline lake with strongly alkaline waters and high concentrations of carbonate salts, sodium chloride and other dissolved salts. Soda saline environments are considered to be among the most extreme of aquatic environments on earth, supporting highly productive ecosystems. Soda lakes are found in arid and semi-arid areas around the world, often associated with tectonic rifts such as occur in the East African, and in the Owens Valley which supports two soda saline lakes (Mono Lake and Owens Dry Lake).^{4,5} These natural conditions frequently result in highly unique, expansive and generally austere aesthetic conditions, such as occur in the Mono Basin. In combination with the dramatic Sierra escarpment leading into Yosemite National Park, the otherworldly beauty of Mono Lake is among the outstanding scenic vistas of the world.

⁴ USGS, Geologic Map of Long Valley Caldera: https://pubs.usgs.gov/dds/dds-81/GeologicalMaps/ScannedMap/Bailey_1989.pdf

⁵ Wikipedia: https://en.wikipedia.org/wiki/Soda_lake.

Mono County tourism statistics underscore the degree to which visitors from around the world are drawn to this starkly beautiful setting. A 2009 tourism study conducted for Mono County Dept. of Economic Development and Special Projects⁶ found that 32% of all Mono County visitors spent time in Lee Vining. Only Mammoth Lakes had a higher visitation percentage (just under 50%), and the next most visited area (June Lake) had a 26% visitation rate. The outdoor activities most often cited by visitors included hiking (47%), fishing and photography (38.7% and 37.7%), camping (24.7%), downhill skiing (16%), birdwatching (11.8%), boating (11.3%) and bicycle riding (10.6%). Mono Basin is a leading destination for most of these top ranked tourist activities.

The Tioga project site is situated at the junction of the Sierra escarpment on the west, and the expanse of Mono Lake to the east. Because of its location above the lake level (in many areas, 200' or more above the lake), the project site offers commanding views in many directions, including the Mono Basin. Motorists along SR 120 frequently stop along the Caltrans apron to take photographs.

Mono Basin National Forest Scenic Area (Mono Basin NFSA).⁷ The USFS Mono Lake District Ranger manages the Mono Basin NFSA, which was created in 1984 as part of the California Wilderness Act and encompasses roughly 77 acres of land and the entirety of Mono Lake. The Act required preparation of a Comprehensive Management Plan that was completed in 1989. The Plan provides guidance, policies and direction for the protection of geologic, ecologic, cultural, scenic, and other natural resources in the Scenic Area, while allowing recreational, scientific, and other activities consistent with that goal. Table 5.12-2 provides a brief summary of the description of resources in the Mono Basin NFSA as contained in the Comprehensive Management Plan, along with a full list of management guidelines for visual resources. The Mono Basin NFSA boundaries are shown in Exhibits 5.12-1 and 5.12-2.

**TABLE 5.12-2. Mono Basin National Forest Scenic Area Comprehensive Management Plan
Summary and Visual Resource Prescriptions**

SETTING

Air. The Scenic Area is part of the Great Basin airshed, with generally good visibility and air quality. Dispersion is excellent despite occasional inversions and ground fog. Infrequent alkali dust storms can cause total particulate loading in excess of state standards.

Geology. The Basin lies at the boundary of the Basin and Range geologic province to the East, and the Sierra Nevada geologic province to the west. The region has experienced at least 3 periods of glaciation, and a 500 million year sequence of sedimentary deposition, folding, erosion, igneous intrusion, uplift and more folding. The Sierra front began breaking apart 3-4 million years ago, and lands east of the faults dropped in elevation relative to lands to the west. Recent volcanic activity has contributed large volumes of fresh rock material to the basin. Significant geologic features include (a) tufa (deposits formed when spring water containing dissolved calcium mixes with the carbonates of the lake water); (b) sand tufa (formed when carbonate-rich water interacts with calcium-rich groundwater in the sands beneath the Lake: calcite is deposited between the sand grains and the sand grains are cemented together forming masses, tubes, and columns); (c) Black Point (a circular mesa-like hill comprised of fine-grained olivine basalt fragments on the northwest lake shore, formed by eruptions on the lake floor.); (d) Aeolian Buttes (a series of low rolling hills, formed of Bishop tuff, reported to be the oldest volcanic formation in the Basin); (e) Paoha and Negit Islands (Paoha, larger of the two, is of fairly recent origin while Negit is the product of at least 6 eruptions); (f) Sand Dunes (9-10 square miles in the northeast corner of the Scenic Area that is covered with sand dunes of varying ages); (g) Panum Crater and Mono Craters (Mono Craters are a series of overlapping rhyolitic and dacitic flows and domes that erupted along a linear fracture zone; Panum Crater, at the north end of the Mono Craters, is a well preserved rhyolitic eruption); (h) Minerals (the scenic area has a variety of mineral resources and many lode claims, placer claims and millsite claims of which U.S. Pumice Company is largest); (i) Soils (soils in the southwestern, western and northern reaches are generally derived from granite, while those in the southern and eastern portions are derived from ash and cinder deposits. Soils are generally fragile and susceptible to erosion, particularly wind erosion).

Visual Resources. The SFCA consists of a broad shallow basin with Mono Lake in the middle, the Sierra escarpment to the west, and a chain of volcanic features aligned on a north-south axis through the basin. Sagebrush, bitterbrush and greasewood are the prominent vegetation; Jeffrey pine occurs in the southern portion while mixed conifer species are found on the escarpment. The

⁶ Mono Co. Dept. of Economic Development & Special Projects, *Economic & Fiscal Impacts & Visitor Profile of Mono County Tourism in 2008*: https://www.monocounty.ca.gov/sites/default/files/fileattachments/economic_development_and_specialprojects/page/767/monocoeconomicimpactvisitorprofilestudy.pdf

⁷ USFS, *Mono Basin NFSA Comprehensive Management Plan*, 1989: <https://www.monobasinresearch.org/images/legal/scenicareacmp.pdf>.

landscape is typical of the Great Basin, but greatly enhanced by Mono Lake. Though man-made objects have impacted visual quality, large areas remain untouched.

Water. It is estimated that runoff into Mono Lake averages about 187,000 AFY of gauged and ungauged flows, with significant annual variations that result in changes to riparian vegetation, fishery habitat and recreation. All surface stream water is of excellent quality until it reaches the lake, which is over twice as saline as the ocean; the few forms of life that can exist in Mono Lake provide a very important food base for birdlife. Numerous springs of varying temperatures and water quality are found around the lake.

Biology. The Basin is home to an estimated 266 vertebrate species including several federally-listed endangered species. Brine flies and brine shrimp are a primary food source for several species of birds, and the lake biota consists of bacteria, 18 species of algae, the alkali (brine) fly and the brine shrimp and other species of flies. Species of interest in the sagebrush habitats include mule deer, vesper sparrow, pronghorn antelope, sage grouse and numerous small mammals. Sage grouse have been seen in the Basin, and streamside vegetation supports a great diversity of wildlife. Noteworthy butterfly species include Apache silverspot, and the plant *Viola nephrophylla*. Marsh vegetation is found primarily on relicted lands. There are no native fish in Mono Basin (all have been introduced) and no federally listed threatened or endangered plants (when the Plan was written). Vegetation is sub-divided into groups represented by dominant plant type and 3 major geographic zones: Warren Bench (on the plateau west of US 395), Mono Basin (lands east of US 395 to the lake shoreline), and relicted lands (the exposed lake bed below 6417 feet). About 16% of the Scenic Area is bare or poorly vegetated. Areas of sparse or no vegetation include lower Lee Vining Ck., lower Mill Ck., portions of Mono Craters and Black Point, relicted lands from Black Point east to Warm Springs and Warm Springs to Simon's Springs & relicted lands around the islands.

Economic and Social Environment. At the time the Plan was written, 41 cultural sites had been recorded in the NFSA (35 prehistoric and 6 historic). Almost 80% of Mono County is in public ownership, with over 1.1 million acres in the National Forest System. The Lee Vining economy is tied closely to the seasons when Tioga Pass is open (providing east-side access to Yosemite). Other area employers include U.S. Pumice, a brine shrimp processing plant, a number of local businesses provide hospitality services. The Basin draws visitors from around the world. South Tufa is the most heavily visited site.

Lands. A wide range of area uses (utility corridors, transportation systems, water development and transport) operate under special use permits and easements, and temporary permits allow additional uses including filming, education, research and recreation. Area roads (about 313 miles in total) are maintained by Cal Trans, Mono County and USFS.

Other Agencies. Lands in the Scenic Area include about 6,880 acres owned by the State of California (which also owns the Mono Lake surface and lands underneath), and 9,404 acres owned by the City of Los Angeles. Relicited lands are jointly managed through an MOU between USFS and the State Dept. of Parks and Recreation. Mono County operates County Park under a lease agreement with LADWP. Caltrans maintains State and Federal highways in the Scenic Area, and the County maintains about 26 miles of local roads. Hunting, trapping and fishing is regulated by California Dept. of Fish and Wildlife; U.S. Fish and Wildlife Service shares responsibility for migratory wildlife. BLM assists in managing the grazing and mining programs.

Private Land. There are 46 parcels of private land in the Scenic Area totaling about 3,575 acres & owned by 28 landowners. Parcels range in size from 1/2 acre single family lots to grazing land up to 320 acres. Uses and developments that existed on June 1, 1984, are protected; future development of private land is governed by Private Property Development Guidelines formulated in 1987.

Range. The NFSA contains 8 range allotments that extend beyond Scenic Area boundaries onto adjacent lands. Allotments on National Forest lands are managed by USFS. Allotments on BLM public lands are managed cooperatively under a 1985 MOU between the Forest Service and BLM. There are also a number of private land parcels in the Scenic Area where grazing is authorized by the landowner. Permitted grazing use in the Scenic Area is 3259 Animal Unit Months; 54% is on federal land and 46% is on private land.

Recreation. The Scenic Area provides developed (interpretive facilities and County Park) and dispersed recreational opportunities. As of 1986, developed site use was reported as 4,235 Recreation Visitor Days. Dispersed activities include sightseeing, OHV use, aquatic sports, photography, birding, snowmobiling, cross country skiing and hiking. Much of the dispersed use is by local residents although a growing number of visitors are participating. Total dispersed recreation use was reported as 46,378 Recreation Visitor Days in 1986. There are no overnight camping facilities in the Scenic Area.

Research. Research in Mono Basin has focused on water chemistry, algae, brine flies and shrimp, birds and other wildlife, geology, cultural resources, the geo-hydrology of the Basin, and stream and fish habitat.

Social. Three communities adjoin the scenic area: Lee Vining, Mono City, and June Lake; the communities had a population of 1,349 in 1985. Four major social groups using the Scenic Area include local residents, recreational visitors, special-use permittees, and Native Americans. Management of the Scenic Area will affect these groups in different ways.

MANAGEMENT DIRECTION

The overall goal of Scenic Area management is to protect its geologic, ecologic, cultural, scenic, and other natural resources, while allowing recreational, scientific, and other activities consistent with this goal. The Plan organizes management direction in 6 levels that include Scenic Area Goals that describe desired future Scenic Area conditions (note that the goals are not quantified and do not have specific times), Legislative Direction (based on direction contained in the California Wilderness Act), Forest Standards and Guidelines (based on the Land and Resource Management Plan for Inyo National Forest), Scenic Area Standards & Guidelines (these apply only to resources and activities in the Scenic Area), Management Prescriptions that provide direction for specific Scenic Area locations, and Action Items (specific, active direction above and beyond other direction).

MANAGEMENT PRESCRIPTIONS

Developed Recreation Zone. The purpose is to maintain existing developments and provide new services and facilities to support visitor needs. The emphasis is on allowing developed facilities that are compatible with the Scenic Area visual quality, recreation and interpretive objectives. Information is provided primarily by signs, displays, or printed material. There are few physical challenges.

General Use Zone. The purpose is to manage for inherent values (range, wildlife, recreation and visual). There are a variety of activities which can occur with a minimum of conflict. Improvements that do not significantly affect scenic or other natural values are allowed. Improvements may include projects to benefit wildlife, grazing, recreation and interpretation. Lands in this prescription have mostly 2WD access; some 4WD trails are present. Landscapes are slightly modified, and there is some degree of physical challenge and risk. Trails may be provided but are not a feature.

Limited Development Zone. The purpose is to provide for relatively undisturbed areas with limited human influence; wildlife, visual, and other natural values generally take precedence. Lands in this prescription usually have 4WD access and maintain natural appearing landscapes. There are few areas where the visitor will encounter many other people. There is a moderate level of physical challenge and risk. Trails may be provided to reach destination points and to provide fishing access.

No Development Zone. The purpose is to provide areas free of surface disturbance and to maintain natural cultural, geologic, ecological, and visual conditions. The emphasis is on protecting natural features, favoring avoidance or restriction of access. Resource protection has a higher priority than other uses. Use is primarily by individuals; isolation is common encountered. There could be a high level of physical challenge and risk, since access is mostly by non-motorized means.

MANAGEMENT DIRECTIONS

Each management direction is supported by goals, standards and guidelines, Management Prescriptions, and Action Items. Summarized below are the goals, standards & guidelines, Management Prescriptions and action items for Visual Resources.

Visual Resources.

Goal: Manage the Scenic Area to maintain and enhance the visual resource.

Forest Standards and Guidelines

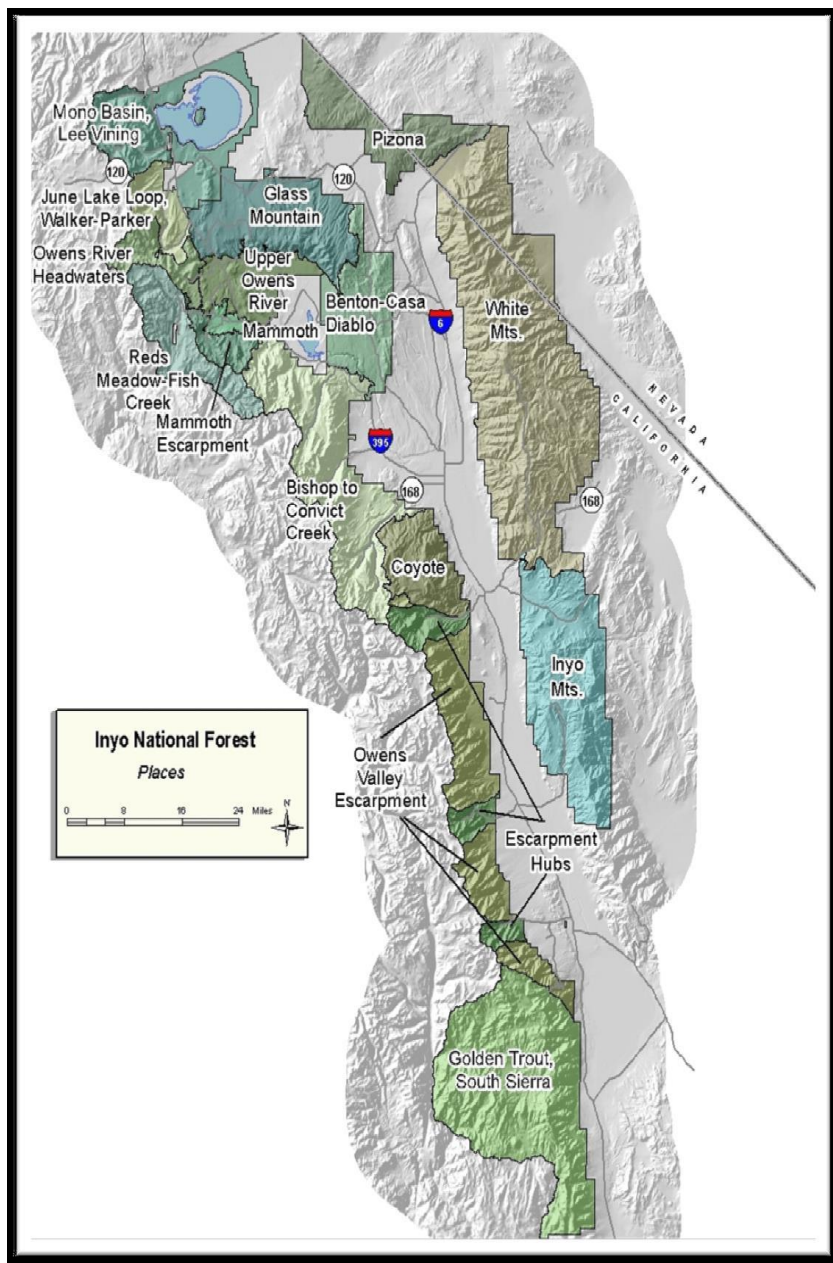
- (1) Obtain the Forest Supervisor's approval through the environmental analysis process for any deviations from assigned Visual Quality Objectives (VQO's) assigned in the prescription.
- (2) Maintain or enhance the size and diversity of all riparian zones, aspen stands, meadows, and alpine tundra vegetation zones, where such zones are visible from sensitivity level 1 & 2 roads & trails, or where they receive significant recreation use.
- (3) Rehabilitate and/or enhance the visual resource when implementing projects where appropriate:
 - (a) Rehabilitate the visual resource where the existing visual condition fails to meet the assigned VQO.
 - (b) Enhance the resource where the existing condition appears monotonous, and where there is an opportunity to create variety in the landscape through planting, vegetation, or other accepted means.
 - (c) Base priorities for rehabilitation and enhancement projects upon the VQO assigned to the project area, corridor viewshed plans, and on the following considerations:
 - (i) Relative importance of the area and amount of deviation from adopted visual quality objective.
 - (ii) Time it would take natural processes to reduce visual impacts to meet the adopted visual quality objective.
 - (iii) Length of time it would take rehabilitation measures to meet the adopted VQO.
 - (iv) The coordination with the resources necessary to rehabilitate the project area.
- (4) Maintain foregrounds and middle grounds of the scenic corridors of the following travel routes to retention and/or partial retention VQO as inventoried but not less than partial retention:
 - (a) Highways officially designated by the State as California State and County Scenic Highways.
 - (b) California State Scenic Highway System Routes as per September 1970 Master Plan. (Highways within the Scenic Area affected by the above include State Highway 120 (West of 395), and U.S. 395.)
 - (c) Meet the retention VQO in the foreground of sensitivity level 1 roads, trails, recreation sites & concentrated recreation areas.

Mono County Scenic Combining District. The Mono County General Plan regulates visual resources along scenic highways through policies in the Scenic Combining District Land Development Regulations (Land Use Element Chapter 8). The Scenic Combining District is applied as an overlay to the underlying zoning/General Plan designation. Combining District standards require screening of visually offensive land uses, minimal earthwork and vegetation removal, revegetation of disturbed areas with native compatible plant materials, use of existing roads where possible, limited signage, use of colors and materials that harmonize with the natural setting, underground placement of new utilities, and exterior lighting that is shielded and indirect and focused on security and safety. Goals of the District are to minimize visual intrusiveness and ensure that lands along the scenic corridors are developed in a manner consistent with scenic highway requirements. All development within 1,000' of a scenic highway (not including land inside developed communities) is subject to provisions of the Scenic Combining District; the Tioga project site is located in the Scenic Combining District and subject to the requirements therein.

Dark Sky Regulations. The Mono County Outdoor Lighting Ordinance (also known as the 'Dark Sky Regulations') was adopted to protect night sky views, enhance travel safety, conserve energy and limit light trespass and glare by

restricting unnecessary upward projection of light. The regulations prohibit nonconforming light of all types, including signage, fixtures, outdoor sports, recreation and entertainment. The County pairs the Dark Sky regulations with information and guidelines, including educational materials distributed to provide applicants with design recommendations and suggestions for minimizing intrusive light sources (General Plan Land Use Element Ch. 23).

Scenic Highways. Many of Mono County's scenic resources are visible from the highways, and many visitors to Mono County experience these scenic resources primarily from the highways.⁸ Designation as a *State Scenic Highway* protects and enhances the natural scenic beauty of a highway and adjacent corridor through special conservation treatment.

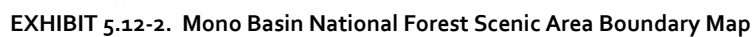


There are two officially designated State Scenic Highways (comprising almost 400 miles) in Mono County: US 395 from the Inyo County line north to Walker (not including highway segments that pass through communities), and SR 89 near Topaz, as it climbs from US 395 into the Sierra to the Alpine County line. Other eligible sections include SR 120 through Lee Vining Canyon to Tioga Pass, SR 158 (the June Lake Loop), SR 203 through the Town of Mammoth Lakes to the Madera County line, and SR 108 over Sonora Pass.⁹ Many of the County's highly scenic roads have no formal scenic designation. To preserve these resources, the County has designated a network of *County Scenic Highways*. These routes are subject to requirements of the Scenic Combining District and General Plan policies related to visual resources, both of which restrict the type and appearance of allowed development. SR 120 through Lee Vining Canyon is a County scenic highway.

National Forest Visual Resources. A majority of Mono County's visual resources are located on lands managed by USFS, including Inyo National Forest (southwest of Conway Summit) and Humboldt-Toiyabe National Forest (northwest of Conway Summit). Since 1996, USFS has used the Scenery Management System (SMS) to evaluate and mitigate scenic resource impacts. The *Draft USFS Forest Plan* identifies 16 places as having unique scenic resources (including the project site, shown in Exhibit 5.12-1 to the left).

⁸ Mono County RTP, 2015: https://monocounty.ca.gov/sites/default/files/fileattachments/local_transportation_commission_ltc/page/4857/2013_rtp_12.9.2013.pdf

⁹ Caltrans, Officially-Designated Scenic Highway Routes: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/



As identified in the *Plan*, existing elements that do alter scenic integrity include power lines, communication sites, substations, propane tank storage, geothermal development, recreational facilities, hydropower facilities, human-made lakes, resorts, and ephemeral conditions such as dust and smoke. Trends that have potential to affect long-term scenic integrity include power line development and replacement, geothermal and alternative energy development, and episodic smoke and dust events.

5.12.3.3 Mono County Scenic Byway Project.¹⁰

In 2012, Mono County received a grant from the National Scenic Byways Program for preparation of a *Highway 395 Corridor Management Plan* to identify and expand opportunities to preserve, enhance and promote the scenic and recreational values along US 395 through the entire length of Mono County (about 120 miles). The National Scenic Byways Program was subsequently discontinued, and replaced by the 'Moving Ahead for Progress in the 21st Century Act' ('MAP-21'). However, the County had previously set aside funding to support completion of the National Scenic Byway Program designation. While funding for future Scenic Byway projects may not be available at this time in MAP-21, the National Scenic Byways designation itself has significant ongoing value for tourism, influencing travelers' route selection decisions and thereby increasing visitation to Mono County. The county's *Economic Development Element* cites results of a survey of US 395 travelers who visited Mono County, where 43% indicated they were much more likely to use a national scenic byway. An additional 52% indicated that they were 'somewhat more likely' to use a national scenic byway; only 6% of respondents were less likely. The *Corridor Management Plan* has been integrated into the Regional Transportation Plan, which includes the following recommendations: (a) US 395 - safe winter access countywide; increased passing opportunities; adding adequate shoulders to US 395 to enable safe bike use; and the development of sufficient revenue sources to meet these needs. (b) SR 120: continued adequate maintenance, including timely road openings following winter closures.¹¹

5.12.3.4 Mono County Ridgeline Design Guidelines

The Mono County Design Guidelines provide recommended standards for developments proposed on natural ridgelines. The guidelines call for views to be preserved to the extent possible, structures to be situated away from visually prominent areas, provision for a vertical separation between the top of ridgeline and the top of any structure, terracing of structural forms, design of manufactured slopes to include varied contours, and native vegetation to reduce erosion.¹²

5.12.3.5 Aesthetic Conditions on the Project Site

Project site visibility is strongly influenced by the differential elevations of surrounding lands. The Tioga workforce housing village is proposed to be developed south of the flag pole area on a gently sloping pad with an average elevation of 6,900'. Grading will transfer approximately 60,800 cy of cut material from the housing pad to the future hotel site (where it will be compacted and deposited as engineered fill), and will lower the west side of the housing pad elevation by about 8 feet. Floor elevations of the easternmost workforce units will be roughly the same as existing topography, though modified for building pads and roads and parking.

The highest elevations on the workforce housing pad at present is 6,955 feet, on the southwest corner. South, west and southeast of the housing site is a 7,000' ridgeline elevation that blocks views of the housing area from most locations along US 395 except for a roughly ¼-mile segment of US 395 between Picnic Grounds Road to the point where the divided portion of US 395 ends (just short of the SR 120 turnoff). The ridgeline can be seen in Exhibit 5.12-3, which provides a photograph of existing conditions from US 395 just north of Picnic Grounds Drive (a location from which the housing would be visible).

¹⁰ Mono County, Administrative Draft Character Inventory & Design Guidelines, US 395 Scenic Byway Corridor Communities Design Idea Book, September 2014, Opticos Design: <https://gis.mono.ca.gov/site/projects/395ScenicByway>.

¹¹ Mono County RTP, 2005, https://monocounty.ca.gov/sites/default/files/fileattachments/planning_division/page/9617/rtp-w-appdx_2015_final.pdf.

¹² Mono County, *Design Guidelines*, undated.



EXHIBIT 5.12-3. Existing Site View from US 395 at Picnic Grounds Rd.

Flagpole

The 7,000 foot contour line also flares to the west, passing below the existing hilltop housing units (which are at an elevation of about 7,040') and crossing over SR 120 at a location about 1,000 feet from the US 395/SR 120 intersection. The housing area is not visible from any point along SR 120. This ridgeline blocks views of the housing area from all points along SR 120, down to and including the intersection. The hillside continues to rise behind the 7,000' ridgeline, reaching about 7,080' at the southwestern property line and continuing to rise into the Yosemite foothills.

Exhibit 5.12-4 shows the existing site view as seen from the Epic Cafe parking area that overlooks US 395. Many existing site features are visible from this vantage point, including the green rooftop of the deli, and the Vista Point access road up to the flag pole (note that the flag pole is also visible from this vantage point, though not shown in Exhibit 5.12-4).

Exhibit 5.12-5 is a photograph of the existing site as seen from the South Tufa Beach parking lot. As shown, the Tioga site is a minor element when seen from this location, due both to distance (the site is about 5 miles from South Tufa Beach) and the dominant Sierra Nevada backdrop.



EXHIBIT 5.12-4. Existing Site View from Epic Cafe Parking Lot Vista Pt Dr. to flagpole, and Deli



Exhibit 5.12-5. Existing Site View from South Tufa Beach. Flagpole

The Tioga Mart site (but not the proposed workforce housing area) is visible from the Mono Lake Scenic Visitor Center, a key facility supporting Mono Basin tourism. The roughly 1.25-mile separation distance and difference in elevation (the Visitor Center is about 400' lower in elevation than the Tioga site) diminish the prominence of daytime views, particularly against the Yosemite foothills. At night, however, the Tioga site is readily visible from the Community Center due to the lighting provided in each of the Mobile Gas Station islands. The site (but not the housing area) is also visible from Mono Lake Park and the educational boardwalk, although the separation distance (4+ miles to Mono Lake Park) substantially minimizes the view.

The project site – including the proposed workforce housing area -- is directly visible from the southern half of the Lee Vining Airport runway, and from surrounding properties across US 395 to the east including the U.S. Pumice Company and Lee Vining Airport. Use of these lands is primarily industrial, and visitation numbers are low. The proposed housing area is also visible from the southern and eastern portions of Mono Lake, but the view is diminished by distance (over 1 mile from Mono Lake at the closest point).

5.12.4 REGULATORY SETTING

5.12.4.1 Federal Regulations

Bureau of Land Management.¹³ BLM administers the National Back Country Byways program, established in 1989 as a component of the National Scenic Byways Program. Since many BLM-designated byways cross other federal, state, county and private lands, designation and management can vary based on the agency responsible for byway management. BLM currently manages 54 designated National Back Country Byways totaling just under 3,000 miles in 11 western states. In addition, approximately 60 National Scenic Byways or State-designated scenic byways (nearly 2,500 miles) traverse BLM lands in 7 states. BLM has jurisdiction over a large land area east of Mono Lake, but does not manage any lands on or adjacent to the project site (the closest BLM jurisdiction is about 5 miles to the east).¹⁴

United States Forest Service (USFS).¹⁵ The National Forest Scenic Byway system, created in 1987, consists of 138 National Forest Byways, each administrated by the designated USDA Forest Service Chief. The goal of the National Forest Scenic Byway system is to enhance rural community tourism by providing access to scenic and historic viewpoints. Although the byway system is a federal program, many of the byways are administered and maintained under state, county or local jurisdiction. These byways are designated jointly with FHWA, USFS and State Departments of Transportation. They are also eligible for special project assistance and funding through both DOT Federal Lands and other Scenic Byways programs. Five Mono County routes are designated as scenic byways; SR 120 West into Yosemite Valley; SR 120 East to Benton; SR 158 June Lake Loop; SR 203 to Minaret Vista, and Rock Creek Road.

USFS also manages the Mono Basin National Forest Scenic Area. As discussed in the Baseline Setting, the Scenic Area was created in 1984 with signing of the California Wilderness Act (§304). The Act required preparation of a Comprehensive Management Plan, completed in 1989, that provides guidance, policies and direction for the protection of geologic, ecologic, cultural, scenic, and other natural resources in the Scenic Area, while allowing recreational, scientific, and other activities consistent with that goal.¹⁶ The Tioga site is located about 1000 feet outside of the Mono Basin National Forest Scenic Area boundary,

5.12.4.2 State Regulations.

Caltrans Scenic Highway Program. California's Scenic Highway Program is administered by Caltrans to preserve and protect scenic highway corridors from changes that would diminish views of the natural landscape. A scenic corridor is typically identified using a motorist's line of vision within a reasonable boundary. The State Scenic Highway program

¹³ BLM Website: http://www.blm.gov/wo/st/en/prog/Recreation/recreation_national/byways.html, accessed 3-24-15.

¹⁴ BLM California Maps: <https://www.blm.gov/maps/frequently-requested/california>

¹⁵ USFS Website: <http://www.fs.fed.us/recreation/programs/tourism/TourUS.pdf>, accessed 3-24-15.

¹⁶ USFS, *Mono Basin National Forest Scenic Area Comprehensive Management Plan*, 1989: <http://www.monobasinresearch.org/images/legal/scenicareacmp.pdf>.

was developed in 1963 to “protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment.” Caltrans designates State Scenic Highways throughout California. The designation of a scenic highway depends on a variety of factors, including “how much of the landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler’s enjoyment of the view.” The scenic highway designation applies to a specific scenic corridor of the highway. The designation provides benefits to scenic resources along the highway, some of which include protection from incompatible uses, mitigation of activities within the corridor that detract from the highway’s scenic quality, and preservation of hillsides. As previously mentioned, there are two officially designated State Scenic Highways in Mono County: U.S. 395, from the Inyo County line north to Walker (not including highway segments that pass through communities), and SR 89 near Topaz, as it climbs from U.S. 395 into the Sierra to the Alpine County line. Sections are statutorily eligible for this designation include SR 120 to Tioga Pass, SR 158 (the June Lake Loop), SR 203 through the town of Mammoth Lakes to the Madera County line, and SR 108 over Sonora Pass.

5.12.4.3 Regional and Local Regulations

Mono County General Plan. Chapter 8 of the Mono County General Plan Land Use Element sets forth regulations for the Scenic Combining District & State Scenic Highways. As discussed more fully under Impact 4.10(a) below, this district regulates development in scenic areas outside communities with the goal of minimizing visual impacts; use of the S-C district is also encouraged in other scenic areas, and all development within 1,000’ of a scenic highway (not including land inside communities) is subject to provisions of the Scenic Combining District. Note that the term ‘Scenic Highway’ is a state designation, whereas the S-C District is a County regulation. The Mono County Conservation/Open Space Element contains provisions requiring that visual impacts be mitigated to less than significant levels unless a Statement of Overriding Considerations is adopted by the Mono County Board of Supervisors, and most of the Mono County Area Plans include regulations to protect and enhance visual and aesthetic resources. The General Plan includes a section that sets forth height restrictions and reclamation requirements for cell towers, including impact mitigation strategies and identification of preferred treatments (including mono-pines, rocks, water tanks, windmills, barns and clock towers). The County has also adopted signage regulations specifically intended to minimize impacts to the visual and aesthetic resources of Mono County.

5.12.5 SIGNIFICANCE CRITERIA

Consistent with Appendix G of the CEQA Guidelines, the proposed RTP/General Plan update project will be considered to have a significant impact on scenic and aesthetic resources if it will:

- a) Have a substantial adverse effect on a scenic vista or scenic resources including trees, rock outcroppings, and historic buildings within a state scenic highway?
- b) Substantially degrade the existing visual character or quality of public views of the site and surroundings?
- c) Create a new source of substantial light or glare that would adversely affect day or nighttime views?

5.12.6 ENVIRONMENTAL IMPACTS AND MITIGATING POLICIES AND ACTIONS

IMPACT 5.12(a,b): Would project implementation have a substantial adverse effect on a scenic vista or scenic resources including trees, rock outcroppings and historic buildings in a state scenic highway? Would project implementation substantially degrade the existing visual character or quality of public views of the site and its surroundings?

SIGNIFICANT AND UNAVOIDABLE ADVERSE IMPACT. The Tioga Workforce Housing project site is located in or adjacent to four formally designated scenic resources as detailed in the baseline and summarized below:

- (a) US 395 is a designated State Scenic Highway
- (b) SR 120 is a designated County Scenic Highway (and eligible for designation as a State Scenic Highway)
- (c) The site is located less than ½-mile from the Mono Basin National Forest Scenic Area (southwestern boundary)

(d) The site is located in the Mono County Scenic Combining District

Overall, the project area is characterized by high visual quality and high visual sensitivity. To assess potential visual impacts of the proposed Tioga Workforce Housing Project, the three existing site photographs presented in the baseline discussion (5.12-3 from US 395, 5.12-4 from Epic Cafe in Lee Vining, and 5.12-5 from South Tufa Beach) were used to develop photosimulations of the project appearance at build-out. The photosimulations were created by superimposing proposed project elements over the baseline photographs. The superimposed project elements are dimensionally correct and incorporate color schemes, roof heights and orientations that conform to standards contained in the Specific Plan. The simulations do not depict elements that were previously approved and have not changed, except as 'ghost structures'; the reader is referred to the 1993 FEIR to view the detailed photosimulations prepared for those earlier elements. Finally, the simulations were not superimposed onto the 1993 FEIR simulations because the housing project is not visible from the vantage points used in the 1993 FEIR.

The simulations reflect several key points, noted previously and summarized briefly herein. First, the grading plan requires removal of 60,800 cy of soil from the housing pad. A small portion of the excavated material will be used to create a low screening berm along the southeast slope; the remaining cut material will be used to create a foundation pad for the hotel. The grading excavation and berm construction will screen a portion of the first floor of the housing structures from offsite locations, but views of the second stories will be direct. Following construction, the southern and eastern slopes below the housing area will be revegetated with bitterbrush, a native shrub (please see §5.3, Biology, for additional discussion of the bitterbrush planting plan). The bitterbrush will be irrigated during summer with water from the subsurface effluent irrigation system; irrigation will stimulate growth, since bitterbrush is slow growing. At maturity, the plants (which are normally 2 to 6-feet high and up to 8 feet in width) will provide additional screening, eliminating most views of the lower floor of the workforce housing from most locations.

During construction, the visible project elements will include grading (for the housing units, to realign the access road, for the new water storage tank and propane tank, and for the new wastewater treatment plant and expanded septic system), demolition (of the existing water storage tank, and the 6 existing workforce cabins), and reconstruction of the Gas Mart to incorporate a third gas pump island with an underground storage tank and overhead canopy with lighting). Following construction and through the life of the project, visible project elements will include limited views of the upper portions of the workforce housing units, with essentially no daytime offsite views of the remaining elements. Night-time views will be more substantially altered due to ambient illumination from lighting for the housing units and for the third gas pump island. Note, however, that the current Specific Plan proposal incorporates the County's Dark Sky lighting regulations; these regulations (which were not a part of the 1993 Specific Plan) will now apply to all unbuilt site uses, including those that were approved in 1993 but have not yet been constructed. Discussion below evaluates the impact on scenic resources of these changes, based on Caltrans' criteria for designated scenic highways. Impacts pertaining to night-time views are considered in Impact 5.12(c).

Caltrans Scenic Highway Visual Impact System. Caltrans uses the Visual Impact Assessment (VIA) system to assess potential impacts to the visual environment associated with projects along designated scenic highways.¹⁷ The VIA system uses a questionnaire to evaluate visual impacts of proposed projects. The VIA questionnaire is presented, with responding information, in Table 5.12-3. VIA responses are based on a point system in which a higher number signifies a greater impact.

TABLE 5.12-3. Caltrans Visual Impact Assessment Questionnaire and Responses			
ITEM	VISUAL DIMENSION	RESPONSE	EXPLANATION AND DISCUSSION
CHANGE TO VISUAL ENVIRONMENT			
	<i>Will the project result in a noticeable change in the physical characteristics of</i>	<i>High (3 pts)</i> <i>Moderate (2 pts)</i> <i>Low (1 pt)</i>	Most currently proposed project elements will not be visible from offsite, including the third gas pump island, the new propane tank, the road realignments, the parcel and open

¹⁷ Note that Caltrans is considering an update to the VIA process based on new FHWA guidance. Existing VIA instructions remain in use at the time of this impact assessment, and are used herein.

1	<p><i>the existing environment?</i> Consider all project components and construction impacts - both permanent and temporary, including landform changes, structures, noise barriers, vegetation removal, railing, signage, and contractor activities.</p>	<p>MODERATE = 2</p>	<p>space boundary changes, and the new wastewater treatment and subsurface irrigation system. Two elements (the workforce housing and the new water storage tank) will be visible.</p> <p>The water tank will replace an existing tank of the same size. Both the old and new tanks are at about the same elevation and both would include screening elements, but the existing tank is located about 150' closer to SR 120 than the new tank is proposed to be. For this reason, the visual impact of the proposed new tank is expected to be somewhat less than the overall visual impact of the existing tank (which will be demolished).</p> <p>The Workforce Housing will also be visible from a roughly ¼-mile segment of US 395 south of the project site. A schematic rendering has been prepared to show views of the project site from that location before and after construction of the workforce housing. As shown, the overall housing profile is higher than the surrounding topography (even with grading). The visible portion is limited to the southeastern-most units, and visibility would be muted to an extent by use of the previously approved design palette, which requires earth-tone colors and natural materials (wood, stone). Additional muting of the visual impact would be provided by bitterbrush-dominant sage scrub landscaping of the southeastern-facing slope.</p> <p>The applicant proposes to install solar panels on all structures with south-facing roofs. South-facing roofs would not be visible from Lee Vining or Lee Vining Canyon, or from the north and east and west view sites on Mono Lake. The solar panels would be perpendicular to viewpoints on the south shore of Mono Lake (South Tufa Beach, Panum Crater and other sites); visibility from these locations would be very limited. Solar panel visibility (and associated light and glare) would be most noticeable from US 395 south of the project site (in the vicinity of Picnic Grounds Road), as would direct light exposure from the third gas pump island (which would be visible from Lee Vining), and the 'glow' from lights in the workforce housing village. These potentially significant light sources would be reduced to less than significant levels through mandatory compliance with requirements of the Dark Sky Ordinance and Scenic Combining District, as discussed more fully under Impact §5.12(c). Overall, the workforce housing is anticipated to cause a moderate change in the physical characteristics of the existing environment.</p>
2	<p><i>Will the project complement or contrast with visual character desired by the community?</i> Evaluate the scale and extent of project features compared to that of the surrounding community. Would the project give an urban</p>	<p><i>Low compatibility (3 pts)</i> <i>Mod. Compatibility (2 pts)</i> <i>Hi Compatibility (1pt)</i></p> <p>MODERATE = 2</p>	<p>The proposed project elements will uniformly complement existing improvements on the project site, and the proposed project features will not substantively change the rural appearance of the site or environs. However, the changes may be viewed by the public as negative since they will occur in tandem with project elements that were approved in 1993 (with a statement of overriding considerations for significant adverse and unavoidable impacts on visual resources) but have not yet been constructed. This cumulative impact is also</p>

	appearance to a rural or suburban Community? Would the change likely be viewed by the public as positive or negative?		recognized in the response to Question 5. Overall, the workforce housing is anticipated to result in a MODERATE level of contrast with the visual character desired by the community.
3	What level of local concern is there for the types of project features (e.g., workforce housing, infrastructure improvements, 3rd gas pump island) and construction impacts that are proposed? Certain project improvements can be of special interest to local citizens, causing a heightened level of public concern, & requiring a more focused analysis.	<i>Hi Concern (3 pts)</i> <i>Moderate (2 pts)</i> <i>Low (1 pt)</i> <i>Negligible (0)</i> LOW = 1	In comments on the Notice of EIR preparation, the community generally expressed support for the type of features now proposed, particularly for the workforce housing and conservation features (subsurface irrigation, solar).
4	Will the project require redesign or realignment to minimize adverse change or will mitigation, such as landscape or architectural treatment, likely be necessary? Consider the type of changes caused by the project: can undesirable views be screened or will desirable views be permanently obscured so redesign should be considered?	<i>Need Redesign (3)</i> <i>Extensive Mitigation (2)</i> <i>Mitigation Likely (1)</i> <i>No changes (0)</i> NO CHANGES = 0	Project landscaping and design have been developed along with the EIR impact assessments in order to incorporate features that avoid or minimize adverse effects. The proposed subsurface irrigation system was developed to provide a nonpotable source of irrigation supply for landscaping and habitat plantings. The use of solar panels on south-facing roofing slopes as well as the new propane tank were proposed to offset new energy demands from the workforce housing component. The grading plan for the workforce housing incorporates excavation to lower the pad elevation (and thus housing visibility) from surrounding viewpoints. The proposed landscape plan has been updated to mitigate project impacts associated with the loss of open space acreage, to require use of native or native-compatible species, and to optimize the bitterbrush habitat to offset prior (unrelated) sage scrub habitat losses from fire. The updated landscaping features are the only changes proposed to the Specific Plan section governing 'Design.' If additional feasible design changes or mitigations are identified to enhance benefits or minimize impacts, they will be incorporated into this project.
5.	Will this project, seen collectively with other projects, result in cumulative impacts in overall visual quality or character? Identify any area projects (Caltrans & local) that have been constructed in recent years and those planned for future construction. The window of time and the extent of area applicable to possible	<i>Cumulative Impacts likely in 0-5 years (3)</i> <i>Cum imp likely 6-10 yrs (2)</i> <i>Cum Imp unlikely (1)</i> CUMULATIVE IMPACTS LIKELY WITHIN 0-5 YEARS = 3	The Tioga Inn Specific Plan was originally approved in 1993; the Specific Plan was subsequently amended in 1995 and 1997, and a Director Review was approved in 2012 for the onsite Deli. All existing uses on the property (the gas station, the convenience store and deli, the hilltop residential housing and water storage tank) were part of these earlier approvals. Also included in the 1993 approvals were a 120-room hotel and a full-service restaurant on the promontory overlooking Mono Lake. The hotel and restaurant have not yet been developed. The new 150-bedroom workforce housing proposal will provide affordable living space for future employees of the hotel and full-service restaurant, elements were approved in

	cumulative impacts should be based on a reasonable anticipation of the viewing public's perception.		1993 (with a Statement of Overriding Considerations for significant adverse and unavoidable impacts on visual resources) but have not yet been constructed. If approved, the Hotel, Full-Service restaurant and workforce housing will likely all be constructed within the next 5 years. Cumulative impacts on visual resources will be significant and are considered LIKELY to occur within the next 5 years.
VIEWER SENSITIVITY			
6.	<i>What is the potential that the project proposal will be controversial within the community, or opposed by any organized group?</i> This can be researched by talking with Caltrans, local agency management and staff familiar with the community's sentiments as evidenced by past projects and current information.	<i>Hi Potential (3)</i> <i>Moderate Potential (2)</i> <i>Low Potential (1)</i> <i>No Potential (0)</i> MODERATE = 2	NOP comments received from the community indicate general support for the concept of workforce housing, but significant concerns about the proposed number of workforce housing units and the potential burden those future residents may place on utilities and public and private service providers in the small community of Lee Vining. Although the project incorporates numerous elements suggested in the NOP comment letters, the concerns regarding local impacts may remain and the potential for controversy within the community is considered to be moderate.
7.	<i>How sensitive are potential viewer-groups likely to be regarding visible changes proposed by the project?</i> Consider the number of viewers in each group, probable viewer expectations, activities, viewing duration and orientation. This information may be scoped by applying professional judgment and using information from Caltrans, local agencies & community representatives familiar with community sentiments and concerns.	<i>Hi Sensitivity (3)</i> <i>Mod. Sensitivity (2)</i> <i>Low Sensitivity (1)</i> HI SENSITIVITY = 3	<p>The project site is located in the heart of a region with varied scenic resources of the highest quality. Important viewer groups include local residents and tourists/visitors. Local residents are a small but important viewer group with year-round exposure to onsite uses. The local economy is primarily driven by tourism which is the other primary viewer group. Most tourists come from within California,¹⁸ and roughly 98% of all VISA expenditures occur in the 5-month period from late May through late October. A total of about 281,400 VISA cardholder tourists were recorded to have visited Mono County during 2016, compared with a total county population of about 14,000 residents, 400 of which live in the Mono Basin.</p> <p>Residents of Lee Vining are likely to be highly sensitive to visible changes associated with the project, and tourists are likely to have a low level of sensitivity to the visible changes of proposed elements. In whole, the sensitivity of viewer groups is considered to be moderate.</p>
8.	<i>To what degree does the project's aesthetic approach appear to be consistent with applicable</i>	<i>Low Consistency (3)</i> <i>Mod. Consistency (2)</i> <i>Hi Consistency (1)</i>	The Tioga Specific Plan (as adopted, and with proposed changes) represents the primary framework governing regulations, policies and standards for the Tioga project. All Specific Plan policies and implementation measures

¹⁸ Information provided by Mono County Dept. of Economic Development (*VISA Tourism Spending Data, Mono Co. 2016; Domestic, International and total*) indicates that domestic tourism accounted for about 90% of all 2016 VISA spending in Mono County, and also that domestic spending is growing at a faster rate than international spending (17.7% v. 5.5% year-to-year growth). Visitors from the larger Los Angeles area represent the largest group by VISA expenditures (about one-third of the total); California residents account for about two-thirds of total.

	<i>laws, ordinances, regulations, policies or standards?</i> These documents are critical in understanding the importance communities place on aesthetic issues; the information can be obtained through the local planning department and/or online at the California Land Use Planning Network	HI CONSISTENCY = 1 PT	pertaining directly to visual quality are contained under Goal 3 (reduce the project's visual intrusiveness). These include policies to minimize site disturbance, maximize use of indigenous species, use of introduced landscaping that will best screen project elements, ensure ongoing care and maintenance of introduced landscaping, provide landscaped areas for picnicking and walking and relaxation, ensure a visually attractive development, and strive to reduce glare. The Goal 3 implementation measures and policies remain as originally proposed except that landscaping plans are proposed to be updated to strengthen native habitat value, and the implementation measure for reducing glare is proposed to be replaced by compliance with Scenic Combining Element and Dark Sky Ordinance requirements. For these reasons, the project is considered to have a high degree of consistency with applicable aesthetic standards.
9.	<i>Are permits going to be required by outside regulatory agencies (i.e., Federal, State, or local)?</i> Permit requirements can have an unintended consequence on the visual environment. Anticipated permits, as well as specific permit requirements - which are defined by the permitted, may be determined by talking with the project Environmental Planner & Project Engineer.	Yes (3 pts) Maybe (2 pts) No (1 pt) YES = 3 PTS.	Permits will be required from numerous agencies including LRWQCB, Caltrans, CDFW, CalFire, Mono County Environmental Health Dept., and Lee Vining Fire Protection District. Permitting may result in conditions of approval that conflict with Specific Plan standards for the visual environment. The response to this question is therefore 'yes.'
10.	<i>Will the project sponsor or public benefit from a more detailed visual analysis to help reach consensus on a course of action to address potential visual impacts?</i> Consider the proposed project features, possible visual impacts, and probable mitigation recommendations.	Yes (3 pts) Maybe (2 pts) No (1 pt) MAYBE = 2 PTS	Based on the considerations above (the high degree of viewer sensitivity, the anticipated moderate level of visual impacts, a more detailed visual analysis of the project may be helpful. Schematic renderings have been prepared to assist in the assessment of visual impacts.

TOTAL SCORE: 19

SCORING CRITERIA:

6-9 POINTS: No noticeable visual changes to the environment are proposed and no further analysis is required. Print out a copy of this completed questionnaire for your project file or Preliminary Environmental Study (PES).

10-14 POINTS: Negligible visual changes to the environment are proposed. A brief Memorandum addressing visual issues providing a rationale why a technical study is not required.

15-19 POINTS: Noticeable visual changes are proposed. An abbreviated VIA is appropriate in this case. The assessment would briefly describe project features, impacts and any avoidance and minimization measures. Visual simulations would be optional. See the Direction for using and accessing the Minor VIA Annotated Outline.

20-24 POINTS: Noticeable visual changes to the environment are proposed. A fully developed VIA is appropriate. This technical study will likely receive public review. See Directions for using and accessing the Moderate VIA Annotated Outline.

25-30 POINTS: Noticeable visual changes to the environment are proposed. A fully developed VIA is appropriate that includes photo simulations. It is appropriate to alert the Project Development Team to the potential for highly adverse impacts and to consider project alternatives to avoid those impacts. See Directions for the Advanced/Complex VIA Annotated Outline.

The considerations outlined above in Table 5.12-3, in combination with additional information in the Minor Level Visual Impact Assessment (see Appendix O), indicate that visual impacts of the proposed Tioga Workforce Housing project will be noticeable and the average response of all viewer groups will be moderate.

Mono County Scenic Combining District Regulations. Mono County regulates development activity in scenic areas outside of established communities through the Scenic Combining District (Chapter 23 of the Mono County General Plan Land Use Element). The regulations are specifically designed to minimize potential visual impacts. Table 5.12-4 compares the proposed project elements with requirements of the Scenic Combining District.

TABLE 5.12-4. Tioga Project Compliance with Scenic Combining District Regulations	
REGULATIONS	COMPARISON WITH PROPOSED PROJECT
o8.030 Standards-General. Development shall be restricted by the following general standards.	
<ul style="list-style-type: none"> Visually offensive land uses shall be adequately screened through the use of extensive site landscaping, fencing, and/or contour grading; 	The Tioga Workforce Housing project incorporates contour grading, berms and landscaping to minimize the visibility of the proposed housing units.
<ul style="list-style-type: none"> Earthwork, grading and vegetative removals shall be minimized; 	Earthwork will be minimized, and all grading will be balanced on the project site. No soils will be imported to or from offsite locations for any of the unbuilt land uses.
<ul style="list-style-type: none"> Site disturbances shall be revegetated with plants and landscaping that are in harmony with the surrounding environment; a landscape plan shall be submitted; 	The landscaping and revegetation plan uses only native and native-compatible plant materials that complement existing onsite plantings. Bitterbrush will be a key landscaping element with the goal of replenishing high quality deer forage lost to fire.
<ul style="list-style-type: none"> Existing access roads shall be used when possible; construction of new roads shall be avoided except where essential for health and safety; 	Realignment of the road up to the hilltop housing units will reduce the maximum road gradients and thereby reduce safety hazards associated with winter ice.
<ul style="list-style-type: none"> The number, type, size, height and design of onsite signs shall be strictly regulated according to the County sign regulations; 	All signs will conform to the Specific Plan regulations, which are based on county sign regulations.
<ul style="list-style-type: none"> The design, color and materials for buildings, fences and accessory structures shall be compatible with the natural setting 	Onsite buildings, fences and accessory structures will continue to utilize design, color and materials that were specified in the 1993 Tioga Inn Specific Plan. No changes are proposed.
<ul style="list-style-type: none"> All new utilities shall be installed underground per Chapter 11, Development Standards – Utilities; 	Underground utilities will include the package treatment plant, subsurface irrigation system and septic leach field.
<ul style="list-style-type: none"> Exterior lighting shall be shielded and indirect and shall be minimized to that necessary for security and safety. 	All exterior lighting shall be shielded, indirect, and limited to that required for security and safety, consistent with the Dark Sky Ordinance requirements.
o8.040 Standards-State Scenic Highway 395. New development outside communities visible from Scenic Hwy 395 shall be additionally restricted by the following standards:	
<ul style="list-style-type: none"> Natural topography of a site shall be maintained to the fullest extent possible. Earthwork, grading and vegetative removals shall be minimized. Existing access roads shall be utilized whenever possible. Existing trees and native ground cover should be protected. All site disturbances shall be revegetated and maintained with plants that blend with the 	As noted, the project uses contour grading, landscaping and berms to minimize visibility of structures. Earthwork will be balanced on site to avoid soil import or export. Existing plant materials will be protected during construction, and native and native-compatible plant materials will be used for all new landscaping. Most of the realigned access road will follow an old road cut, and grading will be limited to that needed to

surrounding natural environment, preferably local native plants	reduce winter ice hazards for residents of the hilltop housing units.
<ul style="list-style-type: none"> New structures shall be situated where, to the extent feasible, they will be least visible from the state scenic highway. Structures shall be clustered when possible, leaving remaining areas in a natural state, or landscaped to be compatible with the scenic quality of the area; 	All new project elements have been sited to minimize visibility from US 395 and other offsite locations. Workforce housing units are clustered and surrounding areas to the south and east will remain in a largely natural state, with added (and irrigated) bitterbrush plantings to restore habitat and scenic values.
<ul style="list-style-type: none"> To the extent feasible new subdivisions shall not create parcels with ridgeline building pad locations; 	None of the proposed uses are sited on ridgeline locations.
<ul style="list-style-type: none"> Roofs visible from State Scenic Highway 395 shall be a dull finish and in dark muted colors; 	Workforce housing rooftops will be visible from US 395. The Specific Plan requires that roof materials be of dark muted colors, and that visible chimney elements be limited to stone or wood. Tones shall be muted or earth-tone in theme.
<ul style="list-style-type: none"> Vertical surfaces of structures should not contrast and shall blend with the natural surroundings. Dark or neutral colors found in immediate surroundings are strongly encouraged for vertical surfaces and structures. 	All exterior materials are required to harmonize with the theme of a rustic alpine appearance. Structures must use the color palette, design themes and architectural elevations set forth in the Specific Plan.
<ul style="list-style-type: none"> Light sources in exterior lighting fixtures shall be shielded, down-directed and not visible from Scenic Highway 395; 	All light sources will comply with the County's Dark Sky Ordinance requirements, including fixtures that are shielded, down directed and not visible from US 395.
<ul style="list-style-type: none"> Fencing and screening shall not contrast in color, shape and materials with the natural surroundings. The use of landscaping to screen utility areas and trash containers is strongly recommended; and 	Fences and screening will conform to the Specific Plan standards for design, color and materials. Landscaping will be used to minimize offsite views of the proposed housing.
<ul style="list-style-type: none"> Sign colors and shape shall be compatible with the natural surroundings. They shall be small in scale. No sign shall be placed or constructed such that it silhouettes against the sky above the ridgeline or blocks a scenic view. The number, type, size, height and design of on-site signs shall strictly comply with County sign regulations. 	No additional highway signage is proposed with the current project. Onsite signage will be small in scale and limited to directional signs that comply with the Specific Plan and are consistent with the intent of the Scenic Combining District.
o8.050 Uses permitted. All uses permitted in the basic land use designation with which the scenic combining district is combined shall be permitted.	
o8.060 Uses permitted subject to Use Permit. All uses permitted in the basic land use designation with which the scenic combining district is combined shall be permitted, subject to securing a use permit	
o8.070 Permit issuance. The general standards listed in Section 8.03 shall be applied by the Planning Division during review of an application. No permit shall be issued until the project complies with the standards for this district	

The considerations outlined above in Table 5.12-4 indicate that the proposed project will comply with requirements of the Scenic Combining District be generally Tioga Workforce Housing project will be noticeable and the average response of all viewer groups will be moderate.

Photosimulations. Exhibit 5.12-4 shows the existing site view as seen from the Epic Cafe parking spaces that overlook US 395. Many existing site features are visible from this vantage point, including the green rooftop of the deli, the Vista Point access road up to the flag pole (note that the flag pole is also visible from this vantage point, though not shown in Exhibit 5.12-4). The proposed workforce housing would not be visible from this vantage point, because the units are located behind, and at an elevation lower than, the intervening ridgeline.

Exhibit 5.12-5 is a photograph of the existing site as seen from the South Tufa Beach parking lot. As shown, the housing area is directly visible from this location, and also from Panum Crater. However, the site is a very minor element when

seen from these locations, due to distance (the site is about 4 miles from Panum Crater, and 5 miles from South Tufa Beach) and the dominant Sierra Nevada backdrop.

Three photo simulations were prepared to depict views of the Tioga site before and after development of the proposed Workforce Housing. The photos showing existing conditions were presented previously for views from US 395 (see Exhibit 5.12-3), existing views from Epic Cafe in Lee Vining (Exhibit 5.12-4), and existing views from South Tufa Beach (Exhibit 5.12-5).

Exhibit 5.12-6 presents a photosimulation showing the view from US 395 at Picnic Grounds Drive if the project is approved and developed as proposed. The housing units are clearly visible from this perspective. Based on Caltrans' visual impact assessment guidelines (Table 5.12-3), the impact of the visual change from this location can be described as follows: views from this perspective would represent a noticeable change. Although landscaping would be provided to minimize visual impacts, the change would contrast with (rather than complement) the visual character desired by the viewing community. Local viewer groups would be very sensitive to the visible changes, and the proposed residential use would be of significant interest and controversial within the local community. In combination with other approved but as-yet undeveloped site elements (particularly the promontory restaurant, which would also be visible from this perspective) the changed view would be cumulatively significant. The aesthetic approach would be consistent with applicable regulations and standards and subject to a number of local and state agencies reviews and approvals. Visual photosimulations have been prepared to provide a more detailed depiction of how area views would change if this project is approved.

Exhibit 5.12-7 presents a photosimulation showing site views from the Epic Cafe which is located at the southernmost end of the Lee Vining community at an elevation of approximately 6,800 feet (near the highest point in Lee Vining). As shown, the workforce housing development would not be visible from this location due to the higher elevation ridgeline (about 6,940') that blocks views of the workforce housing from Epic Cafe and other areas in downtown Lee Vining. Although the housing would not be visible, this vantage point does provide a clear and direct view of the future hotel and promontory restaurant, and the existing deli and Vista Point Drive access road leading from the deli to the flagpole. Based on Caltrans' visual impact assessment guidelines, the impact of the visual change pertaining to the workforce housing units, as seen from this location, can be described as follows: views from this perspective would not change. There would be no effect on the visual character desired by the community, and no need for mitigating element. The housing component, as seen from this location, would not contribute to cumulative impacts.

Exhibit 5.12-8 presents a photosimulation showing site views (if the project is approved) from South Tufa Beach. The proposed housing units and previously-approved hotel and promontory restaurant are all visible from this perspective, but the impact is substantially attenuated by distance and by the dominant Sierra Nevada backdrop. Based on Caltrans' visual impact assessment guidelines, the impact of the visual change from this location can be described as follows: the changed viewscape from this perspective would be noticeable but minor. The change would contrast with (rather than complement) the visual character desired by the viewing community. Local viewer groups would be sensitive to the visible changes, and the proposed use (residential and the proposed use (residential units) would be of significant interest and controversial within the local community. In whole, the project impact on scenic and visual resources will be ***significant and adverse***.



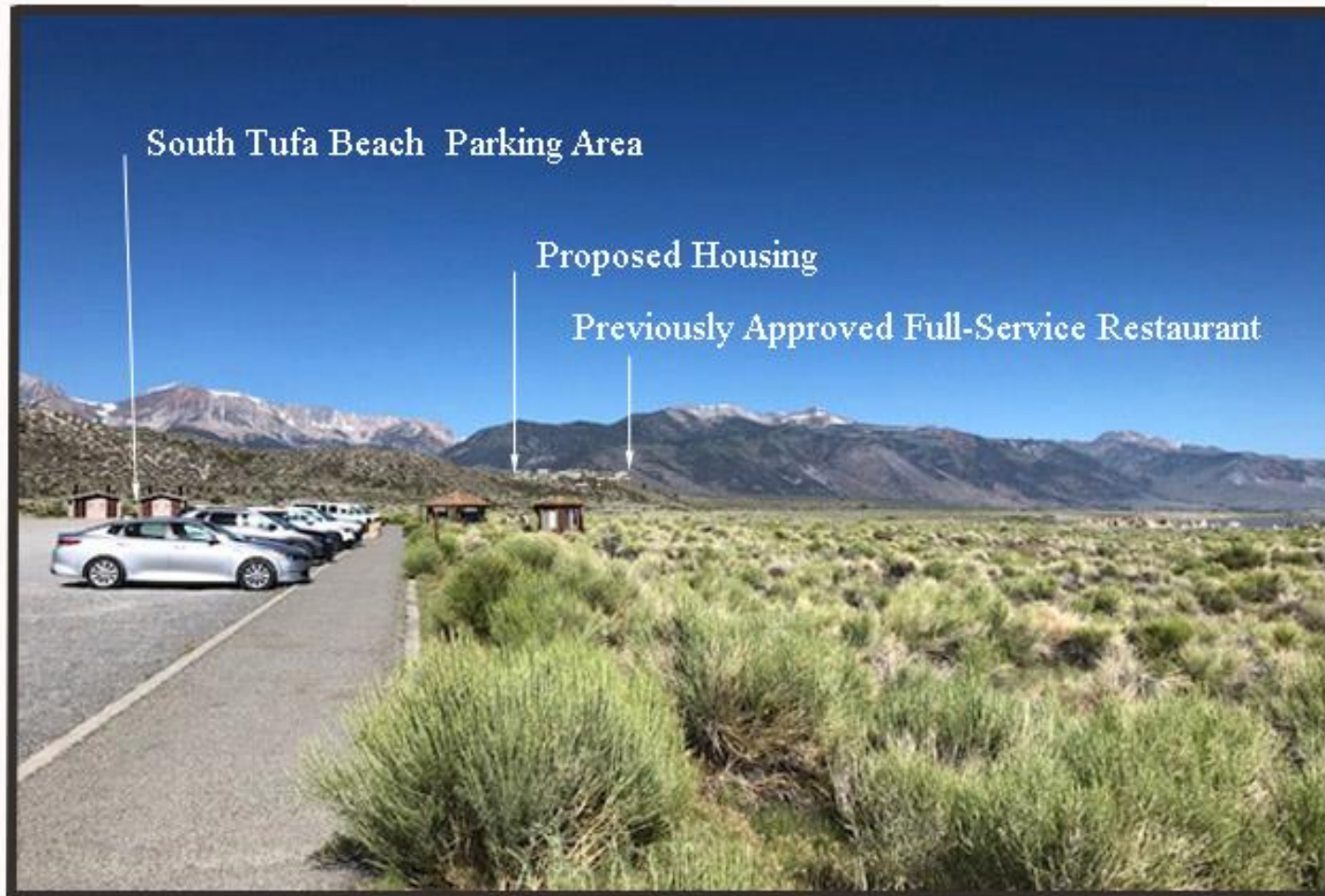
Project Photosimulation US 395

Exhibit 5.12-6



Project Photosimulation From Epic Cafe

Exhibit 5.12-7



Project Photosimulation From South Tufa Beach
Exhibit 5.12-8

MITIGATION MEASURES – SCENIC RESOURCES AND VISUAL CHARACTER

MITIGATION AES 5.12(a,b) (Screening Design Features). All landscaping, landscape irrigation, building materials and design elements used in development of the proposed project elements shall be selected and applied in a manner that screens or minimizes offsite views of project elements to the maximum feasible extent, consistent with other mitigation requirements outlined in this EIR. Even with implementation of Mitigation AES 5.12(a), project impacts on scenic and visual resources will be *significant and unavoidable*.

IMPACT 5.12(c): Would project approval create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

LESS THAN SIGNIFICANT IMPACT. Because the property is about 200 feet above lake level, portions of the site can be readily seen from locations around the lake and in the community of Lee Vining. Visible portions include the gas station, and during night-hours, lighting from the gas pump island canopies can be seen at great distances, even though the lights are down-focused, due to their higher elevation.

Two of the proposed project elements (the third gas pump island, and the workforce housing) would be additional sources of light and glare; the other proposed elements (propane tank, road realignment, expanded leach field and new subsurface treated wastewater irrigation system, and changes in the parcel and open space boundaries, and replacement water tank) would have security lighting (only) or no lighting.

The third gas pump island would be located on the north side of the two existing gas pumps and about 25' closer to Mono Lake. If implemented, this element would increase the number of lights, as well as their proximity to and visibility from surrounding areas including the Mono Lake Visitor's Center, the Community Center, and many other viewpoints.

Structures in the proposed workforce housing village would be visible from a fairly limited number of locations, but those locations include South Tufa beach (the most heavily visited of all Mono Lake facilities) as well as Panum Crater and other sites within a visual cone extending eastward of US 395 in the vicinity of Picnic Grounds road. Lighting from the workforce housing units would be visible from a much wider area as a visible 'glow' above and around the screening landforms. With up to 150 bedrooms, this added source of light and glare would have potential to adversely impact nighttime dark sky conditions in the area.

The potentially significant light and glare impacts would be reduced to less than significant levels through mandatory compliance with the Mono County Outdoor Lighting Ordinance (Land Use Element, Ch. 23, best known as the 'Dark Sky Regulations'), and the Scenic Combining District (Land Use Element Ch. 8).. Broadly, the regulations protect night sky views and limit glare by restricting unnecessary upward projection of light. Other purposes include energy conservation, safe travel, avoidance of nuisance lighting, and protection of the nighttime environment. The regulations are mandatory for new outdoor lighting, and are also applied retroactively to existing outdoor lighting whenever part of a new application. Exemptions are limited to seasonal displays, vehicle lights, temporary lights, lighting mandated by state or federal agencies, and low-wattage address lights. For all other lighting the regulations specifically prohibit glare, light trespass and light pollution, require proper maintenance, minimize allowed contrast in lighting levels, prohibit low-pressure sodium and mercury vapor lamps, limit accent lighting, and require full cut-off luminaires with the light source downcast and fully shielded. Significantly, the prohibitions also require that *"No outdoor lighting fixtures shall be installed, aimed, or directed to produce light that spills over into neighboring properties or the public right of way. Light trespass is prohibited."* (§23.070, Prohibitions). Outdoor lighting plans are required for new applications (as part of the Design Review process) and also required for all new outdoor lighting installations on commercial, industrial, public and institutional properties and any other application as deemed necessary by the Community Development Director. In support of energy conservation, the ordinance requires that lighting be turned off for all non-essential outdoor commercial and residential uses, and encourages use of timers, dimmers and photocell controllers.

The Mono County Scenic Combining District also sets forth standards for lighting including: Exterior lighting shall be shielded and indirect and shall be minimized to that necessary for security and safety (§08.030(B), General Standards),

and light sources in exterior lighting fixtures shall be shielded, down-directed and not visible from State Scenic Highway 395 (§08.040(F), State Scenic Highway Standards).

The applicant plans to install solar panels on all structures with southerly-facing roofs.¹⁹ Electricity from the solar panels would be used to offset use of electricity supplied by SCE. Pursuant to PRC §21080.35, certain solar systems are exempt from CEQA review requirements, including any solar energy project that would be located on the roof of an existing building, or on an existing parking lot. The exemption would not apply to the workforce housing project, and thus visual impacts are considered herein. The southerly-facing roofs of the housing would not be visible from Lee Vining or Lee Vining Canyon, or from the north and east and west view sites on Mono Lake. Views from points along the south shore of Mono Lake (South Tufa Beach, Panum Crater and others) would be limited since the south-facing orientation of the solar panels would be perpendicular to those viewpoints. The potential for adverse light and glare would be most pronounced from the segment of US 395 south of the site (around Picnic Grounds Road), which would have a direct view onto the south-facing roof slopes of the workforce housing units. Depending on the orientation of the sun, glare may also be a significant factor for views from this vantage point.

Mandatory compliance with requirements of the Dark Sky Ordinance and Scenic Combining District will minimize the impact of new sources of light and glare from the Tioga Workforce Housing Project. Moreover, the requirements would also apply to outdoor lighting on existing elements of the Tioga site, as well as previously approved but not-yet constructed elements including the hotel and full-service restaurant. Lighting and glare impacts from these uses would be reduced as a result of project approval. However, even with these mitigating elements, it is anticipated that the project will have a ***significant and unavoidable adverse impact*** on light and glare.

MITIGATION MEASURES – LIGHT AND GLARE

AES 5.12(c) (Light and Glare). Mandatory compliance with the County's Dark Sky Regulations per *Land Use Element* Chapter 23 will reduce light and glare impacts to the maximum feasible extent (though not to less-than-significant levels) and no further mitigation measures are recommended herein.

5.12.7 SIGNIFICANCE AFTER MITIGATION

The selection, application and use of appropriate landscaping, landscape irrigation, building materials, solar installations, lighting and design elements will reduce project impacts on scenic and visual resources and light and glare, but not to a level that is less than significant. The project impacts on scenic qualities and visual resources and light and glare are considered to be ***significant and unavoidable***.

¹⁹ Mono County Land Use Element §11.020 notes that solar thermal and solar photovoltaic systems that generate power for no less than 80% onsite consumption are eligible for ministerial permitting in keeping with the California Solar Rights Act, provided the systems comply with all California Building Code requirements.

TIOGA INN WORKFORCE HOUSING DRAFT SUBSEQUENT EIR



SECTION 6.o CUMULATIVE EFFECTS

6.1 INTRODUCTION AND SUMMARY

CEQA Guidelines §15130(a) requires an EIR to analyze whether impacts resulting from a proposed project are cumulatively considerable; in turn, CEQA §15355 defines a cumulative impact as “*two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.*” This chapter evaluates cumulative impacts that could result in association with implementation of the proposed Tioga Workforce Housing Project. Cumulative impacts comprise the range of environmental changes that could occur in response to the incremental effect of the proposed project plus other closely related past, present and/or reasonably foreseeable future projects, including individually minor but collectively significant effects that may occur over time.

6.2 METHOD OF ANALYSIS

CEQA Guidelines §15130(b) states that the discussion of cumulative effects must “*reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone.*” Two methods are identified for the assessment of cumulative effects:

- A list of past, present and probable future projects producing related or cumulative impacts (including, if necessary, projects outside the control of Mono County); or
- A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that evaluates conditions contributing to the cumulative effects (for example, a general plan, an RTP, or prior CEQA assessments).

6.3 RELATED PROJECTS

According to staff of the Mono County Community Development Department,¹ there are no current projects or reasonably foreseeable future projects in the Mono Basin at this time. However, several key elements of the 1993 Tioga Inn Specific Plan have been approved but not yet developed. These previously approved but as yet undeveloped projects are virtually certain to occur, and do have potential compound or increase the environmental impacts associated with the proposed Tioga Workforce Project. The previously approved but as yet undeveloped projects include the 120-room Tioga Inn, and the full-service promontory restaurant with seats for up to 100 guests.

6.4 CUMULATIVE IMPACTS

Potential cumulative impacts of the proposed Workforce Housing Project are described in Table 6-1. As indicated therein, potentially significant cumulative impacts include exposure to mudflows from volcanic eruption, impacts to sensitive and migratory species, safety impacts associated with turning movements from SR 120 to northbound US 395, safety impacts associated with pedestrians and cyclists traveling between the site and Lee Vining, and impacts on scenic quality and visual character.

¹ Personal communication with Wendy Sugimura and Gerry LeFrancois, 11 July 2018.

TABLE 6-1: Potential Cumulative Effects of the Tioga Workforce Housing Project

TOPICAL ISSUE	POTENTIAL EFFECTS OF HOTEL & RESTAURANT AS IDENTIFIED IN THE 1993 FINAL EIR	EFFECTS OF THE WORKFORCE HOUSING PROJECT	CUMULATIVE EFFECTS OF THE PROJECTS TOGETHER
Geology and Soils	The 1993 Final EIR determined through onsite trenching that there are no earthquake faults on the project site. Based on these results, the Final EIR concluded that impacts would be less than significant with implementation of specified mitigation measures. Impacts on erosion and sedimentation were found to be less than significant; no mineral resource impacts were identified.	Drawing on geotechnical studies completed for the 1993 FEIR, the current DSEIR concludes that seismic impacts would be less than significant with mitigation. The potential for significant erosion and sedimentation would be reduced to less than significant levels through implementation of a Low Impact Development BMP program. The current EIR analysis identified no impacts on the availability of known mineral resources.	No cumulatively significant impacts to geologic and soil resources have been identified. CONCLUSION: Less than significant cumulative impact. The project would not have cumulatively significant impacts on geology and soils.
Hydrology and Water Quality	Water well drawdown studies conducted by Kleinfelder for the 1993 Final EIR determined that use of the project well would not result in a drawdown of community water sources. The 1993 Final EIR found that the potentially significant impacts associated with the onsite drainage and septic systems would be avoided through mandatory plan review and approval by LRWQCB and Mono County Health Dept. Based on these findings, the 1993 FEIR concluded that the project would not result in significant adverse impacts to hydrology or to water quality.	Analyses conducted for the current Supplemental Draft EIR included a well stress test conducted by SGSI to assess potential impacts of project water consumption on Lee Vining Creek and area wells. Results indicate that the project would not adversely impact surrounding water resources, provided specific mitigations are implemented. Findings of the hydrology assessment and the Anti-Degradation Analysis also indicate that with mitigation, the project would not violate applicable water quality objectives, or conflict with Mono Lake standards as an Outstanding National Resource Water Body, or violate wastewater treatment standards, or cause substantial erosion, siltation, flooding or polluted runoff. Analyses found no significant risk of flooding from rainfall, dam failure, or inundation resulting from seiche or tsunami.	Both the proposed and previously approved project elements will be subject to current standards and criteria for water quality, sanitation and flood protection. Overall resource demands will be higher under the cumulative scenario, but current standards are more restrictive than in 1993, and analyses presented in this EIR indicate that these cumulative demands will not rise to a level of significance. Project approval would increase the cumulative exposure of people and structures to improbable but potentially significant mudflows from a winter volcanic eruption. This impact is not incremental, is not specific to the project or to the project site, and cannot be mitigated. CONCLUSIONS: Less than significant cumulative impacts on hydrology and water quality. Significant unavoidable exposure to mudflows from volcanic eruption
Biological Resources	The 1993 Draft EIR found that the project would adversely affect deer populations in a number of ways including habitat degradation, competition for scarcer resources, greater vulnerability to predators, changed migration routes, and increased stress and physiological impacts resulting from the changes. Mitigation measures	Impacts to shrublands on the project site will be temporary and associated with installation of the subsurface irrigation system. Direct impacts to the Masonic rockcress and few-flowered woollystar populations are very unlikely. The project area currently supports nesting birds including part of a locally dense nesting population of Brewer's sparrows. Nesting birds are protected under CDFW code and Migratory Bird	Upon full implementation of the previously approved and the proposed new Tioga Inn project elements, the fragmented shrublands communities of the property will be permanently reduced to about 75% of their current distribution, with about half of these stands situated in a clearly isolated position between the project and the highways. In addition, 20% of remaining cover will have been temporarily disturbed. Table 6.2 below summarizes direct and cumulative acreage permanent impacts to native plant

	<p>included the establishment of open space areas that would continue to be available for grazing, routing of onsite trails to avoid deer forage areas, reduction in the use of heavy equipment during migration periods, prohibition against off-road vehicle access, and provision for kennels and pet areas to limit pets from roaming freely.</p> <p>The vegetation and rare plant survey concluded that no rare or endangered plants, plants of special concern, or other significant plant communities would be impacted by the project.</p> <p>The DEIR identified one significant cumulative effect on biological resources: <i>"Increased use of habitats within and adjacent to the project area which are less suitable for migration, foraging and fawning. This could also create excessive crowding and increased competition for resources which could result in over-utilization of the adjacent habitats. This is potentially a significant cumulative environmental effect."</i></p> <p>The mitigation measure and cumulative impact were again stated in the Final EIR summary discussion of major findings, but the mitigation measures were not included in the Final EIR Summary Table E, and the cumulative effect on the deer herd was not identified in the FEIR discussion of cumulative Impacts (FEIR page 84).</p>	<p>Treaty provisions, and mitigations will reduce impacts to less than significant levels. Project mitigations will reduce impacts to the American badger population, a species of concern, to less than significant levels. Surveys conducted in 2017 found recent sign of burrowing by American badger, which is a CDFW Species of Concern.</p> <p>Mule deer were observed on-site, and will be adversely impacted by proposed project elements. The project incrementally narrows one possible route that mule deer could use to move into and out of Lee Vining Canyon during migration, and the new elements will add noise, night lighting, and free-roaming pet dogs to habitat that formerly was available for relatively unobstructed deer use. Forage and concealing cover will further diminish, contributing to a long-decline in local deer use; impacts are significant and potentially unavoidable.</p>	<p>communities on the project site.</p> <table><tr><th colspan="3">TABLE 6-2. Direct & Cumulative Acreage Impacts to Native Plant Communities on Site.</th></tr><tr><th></th><th>Big Sagebrush Scrub</th><th>Great Basin Mixed Scrub²</th></tr><tr><td>Existing Acreage</td><td>57.9</td><td>12.6</td></tr><tr><td>Impact of 1993 Approvals</td><td>4.0 acre loss</td><td>0.8 acre loss</td></tr><tr><td>Impact of Current Project</td><td>6.5 acre loss (18.0%)</td><td>No loss (6.0%)</td></tr><tr><td>Cumulative (combined) Impact</td><td>10.5 acres (18.1%)</td><td>13.4 acres (6.3%)</td></tr></table> <p>With respect to mule deer, the analysis indicates that past land use changes (particularly the widening of US 395) and habitat loss and fragmentation have substantially marginalized the value of local resources. The cumulative effects of approved but as-yet undeveloped and proposed new land uses will create significant new physical barriers to deer movement, primarily through increased daily human activity, new noise sources and night lighting, and harassment from pets.</p> <p>CONCLUSION: SIGNIFICANT cumulative impact on sensitive and migratory species.</p>	TABLE 6-2. Direct & Cumulative Acreage Impacts to Native Plant Communities on Site.				Big Sagebrush Scrub	Great Basin Mixed Scrub ²	Existing Acreage	57.9	12.6	Impact of 1993 Approvals	4.0 acre loss	0.8 acre loss	Impact of Current Project	6.5 acre loss (18.0%)	No loss (6.0%)	Cumulative (combined) Impact	10.5 acres (18.1%)	13.4 acres (6.3%)
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Cultural Resources	<p>No significant adverse cultural resource impacts were identified in the 1993 Final EIR. The FEIR included a mitigation calling for use of standard procedures for contact and site assessment in the event that resources were discovered</p>	<p>New surveys were conducted for the current SDEIR. Results indicate that (a) there are no significant archaeological sites in the project area, (b) no paleontological resources have been found or reported, and (c) there are no known human remains or tribal burial grounds on the site. This</p>	<p>No cultural resources were found on the project site during the current environmental review, and no records of previously recorded sites were found. Further, no significant adverse cultural resource impacts were identified in the 1993 Final EIR. Based on these findings, and the mitigation measures and protections provided herein, it is</p>																		

	during construction.	EIR provides a mitigation measure requiring that interested tribes be notified prior to earthwork and invited to observe earthwork at any time, that work must stop if resources are unearthed, that construction plans must include advisory statements; and that NAHC protocols will be followed if human remains are found. These provisions would reduce to less than significant levels the potential to impact undocumented burial sites.	concluded that the project would not result in cumulatively significant impacts to cultural resources. CONCLUSION: Less than significant cumulative impacts on cultural resources.
Land Use, Recreation & Open Space	The 1993 Final EIR concluded that the Tioga Inn project would not disrupt or divide an established community, or conflict with an applicable land use plan or policy or regulation, or conflict with established recreational uses in the area. No mitigation measures were recommended, and no cumulative effects were identified.	Analyses in this SEIR conclude that the project would not disrupt or physically divide an established community, or conflict with an applicable land use plan or policy or regulation, or cause deterioration due to increased use of recreational facilities, or require that new recreational facilities be constructed, or adversely impact the acreage of open space or preserve lands. No significant effects are anticipated, and no Land Use mitigation measures are proposed.	No significant adverse impacts to land use and recreation have been identified in either the 1993 Final EIR or in the current Subsequent Draft EIR. It is concluded that the project would not result in cumulatively significant adverse impacts to land use, or to recreational resources. CONCLUSION: Less than significant cumulative impact on land use, recreation and open space.
Population and Housing	The 1993 Final EIR concluded that the Tioga Inn project would have less than significant potential for growth inducement. The Final EIR anticipated that a majority of the more than 100 new employment positions would be hired from the existing Mono County labor pool, and that the 10 new dwelling units would house about 25 new residents. The FEIR noted that no individuals would be displaced from their home due to the project, since the site was undeveloped at the time of the original approvals. No mitigation measures were proposed, or cumulative impacts identified, for population, housing or employment.	The current Subsequent Draft EIR concludes that the Workforce Housing project would not have the potential to induce significant population or housing or employment growth in the Mono Basin. The estimated 300 new project residents would represent about 14% of the General Plan build-out population for Mono Basin as a whole. Build-out employment is estimated in this EIR to be 187 job positions, 1 of which is directly attributable to the current project (i.e., the workforce housing manager). The current analysis notes that the project would displace residents of 6 existing cabin units that are slated to be demolished, but the residents would be relocated into the new workforce housing units and not displaced from the site. No mitigation measures are proposed for population, housing or employment.	The 1993 FEIR approvals and the proposed project would result in onsite employment for an estimated 187 individuals, and onsite housing for an estimated 325 residents. The 37 existing Tioga employees represent roughly half of the total 74 employment positions in Lee Vining. The approved but as yet undeveloped Tioga elements would employ an additional 150 individuals, representing roughly 200% of the existing employment in Lee Vining; only 1 of the new jobs would be related to the proposed Workforce Housing project. The estimated 35 existing Tioga residents represent more than one third the current residential population of Lee Vining (100 residents as of 2016). The proposed Tioga Workforce Housing project would increase the onsite resident population by an estimated 290 people. Project-related growth would represent about 12% of the future Mono Basin 'build-out' population increases that are allowed in the <i>Mono County General Plan Land Use Element</i> . The project would be within allowed future population and housing increases, and consistent with long-term employment goals.

			CONCLUSION: Less than significant cumulative impact on population, employment, and housing.
Public Health, Public Safety	The 1993 Final EIR indicated that project facilities would result in onsite use and storage of hazardous materials, and found this impact to be less than significant due to project conformance with regulations governing the use, storage and disposal of the hazardous products. The FEIR found no project impacts on emergency response or on emergency evacuation plans.	<p>The project would result in onsite use and storage of hazardous materials include 4 new fuel pumps, 1 new underground storage tank, and a new 30,000-gallon propane tank. Regulatory compliance would reduce the additional hazards to less than significant levels.</p> <p>FAA indicates that although the project site penetrates into the Lee Vining Airport Obstruction Zone, the project will not require installation of obstruction lights to alert pilots to the ground obstruction zone.</p> <p>No significant impacts were identified with respect to emergency response and evacuation, natural hazards or wildland fire, and the site is not included on any Cortese lists.</p>	<p>The project applicant submitted required forms for FAA review during October 2018. Following completion of an aeronautical study, FAA issued a Determination of No Hazard to Air Navigation. Results of the study indicated that the previously approved restaurant is the structure of greatest concern, and that this structure would exceed FAA obstruction standards but would not be a hazard to air navigation provided FAA is notified within 5 days after the construction reaches its greatest height (or if the project is abandoned). Marking and lighting were not found to be necessary for aviation safety.</p> <p>CONCLUSION: Less than significant cumulative impacts on public health and safety.</p>
Public Services, Energy & Utilities	The 1993 FEIR stated that the Tioga Inn project would contribute incrementally to the use of nonrenewable resources, and shorten the landfill lifespan by increasing solid waste loads. The impact was found to be less than significant because the project would incorporate low-flow fixtures & irrigation elements, and other energy and water-conserving devices that would reduce consumption. No mitigation measures were proposed.	The current SEIR concludes that proposed conservation features would reduce energy consumption to less than significant levels, and that project impacts on schools and landfill capacity would be less than significant with no mitigation required. Project impacts on social services in Mono County would also be less than significant. However, impacts pertaining to safe pedestrian access between the site and Lee Vining are potentially significant and there is no assurance that the proposed mitigation would be feasible.	<p>The impacts pertaining to unsafe pedestrian and bicycle access between the project site and Lee Vining is a potentially significant cumulative impact. Both the 1993 project and the current project will generate resident and visitor populations seeking to travel by foot between the site and Lee Vining, Increased pedestrian use will compound public safety hazards already identified in the project area, and place added burdens on public safety and police resources.</p> <p>CONCLUSION: SIGNIFICANT cumulative impact on public safety.</p>
Traffic and Circulation	The 1993 Final EIR found that the project would add fewer than 1,300 vehicles per day on an annual average basis and found that the increases would be less than significant. No adverse effects were identified with respect to internal circulation or proposed parking provisions.	The current SEIR finds that the proposed Amendment #3 would comply with applicable traffic regulations, and would have less than significant impacts on congestion management plans and policies. The analysis identifies conditions at the intersection of US 395/SR 120 as significant and adverse due to unsafe turning movements, and identifies the significant adverse impact pertaining to existing and projected increases in unsafe pedestrian and bicycle access between the project site and Lee Vining (also noted in the above discussion of Public Services)	<p>Cumulative impacts on Vehicle Miles Travelled are calculated to be 3,277.4 miles annually, but there are no thresholds yet in place to determine whether the cumulative impacts are significant and adverse.</p> <p>Impacts pertaining to unsafe turning movements from SR 120 onto northbound US 395, as well as the above-cited unsafe pedestrian and bicycle access between the project site and Lee Vining, are potentially significant adverse impacts that will be compounded by the increased traffic and pedestrian activity associated with Amendment #3.</p> <p>CONCLUSION: SIGNIFICANT cumulative</p>

			impact on turning movements from SR 120 to northbound US 395, and on the safety of pedestrians and cyclists travelling between the site and Lee Vining.																																																																																				
Air Quality, Greenhouse Gases	<p>The 1993 FEIR noted that CalEPA was considering the designation of Mono Basin as nonattainment for particulates due to dust, and found that the project would contribute particulates during construction. The FEIR concluded that long-term operation would not exceed air quality thresholds, but that wood-burning stoves in the 10 residences could, in combination with other area woodstoves, impact visibility even though the woodstoves would comply with then extant regulations. The cumulative reduction in visibility was identified as a potentially significant cumulative impact of the 1993 project.</p>	<p>The current SEIR finds that proposed Amendment #3 would not have a significant adverse impact on air quality standards or criteria pollutants, and would not expose sensitive receptors to substantial pollutant concentrations. The project would not generate objectionable odors. Construction and operational greenhouse gas emissions would be well below the reference standards, and the project incorporates a significant number of the actions and measures adopted in the Resource Efficiency Plan to reduce GHG emissions.</p>	<p>Cumulative project conditions were modeled to assess operational impacts, as shown in Table 6-3. As shown, even with the cumulative projects, operational emissions in opening year 2023 will be less-than-significant.</p> <p>Table 6-3: Cumulative Daily Operational Impacts (lbs/day)</p> <table><tr><th>Source</th><th>ROG</th><th>NO_x</th><th>CO</th><th>SO₂</th><th>PM₁₀</th><th>PM_{2.5}</th></tr><tr><td>Area*</td><td>8.5</td><td>1.6</td><td>8.9</td><td>0.0</td><td>0.2</td><td>0.2</td></tr><tr><td>Energy</td><td>0.2</td><td>1.5</td><td>1.2</td><td>0.0</td><td>0.1</td><td>0.1</td></tr><tr><td>Mobile</td><td>3.8</td><td>22.8</td><td>31.5</td><td>0.1</td><td>7.1</td><td>1.9</td></tr><tr><td>Total</td><td>12.5</td><td>25.9</td><td>41.6</td><td>0.1</td><td>7.4</td><td>2.2</td></tr><tr><td>Threshold</td><td>55</td><td>55</td><td>550</td><td>150</td><td>150</td><td>55</td></tr><tr><td>Exceeds Threshold</td><td>No</td><td>No</td><td>No</td><td>No</td><td>No</td><td>No</td></tr></table> <p>It is unlikely that all projects would be under simultaneous construction. Nevertheless, construction emissions for the hotel and restaurant were calculated and added to those of the project as a worst-case condition. Results are shown in Table 6-4.</p> <p>Table 6-4: Construction Activity Emissions Maximum Daily Emissions (pounds/day)</p> <table><tr><th>Construction Emissions</th><th>ROG</th><th>NO_x</th><th>CO</th><th>SO₂</th><th>PM₁₀</th><th>PM_{2.5}</th></tr><tr><td>Proposed Project</td><td>19.0</td><td>50.0</td><td>46.4</td><td><0.1</td><td>17.2</td><td>9.8</td></tr><tr><td>Hotel & Restaurant</td><td>21.1</td><td>20.9</td><td>21.8</td><td><0.1</td><td>7.6</td><td>4.3</td></tr><tr><td>Total</td><td>40.1</td><td>70.9</td><td>68.2</td><td><0.1</td><td>24.8</td><td>14.1</td></tr><tr><td>Thresholds</td><td>75</td><td>100</td><td>550</td><td>150</td><td>150</td><td>55</td></tr></table> <p>As shown in Table 6-4, cumulative construction emissions would be less-than-significant even if all construction were to occur during the same calendar year.</p> <p>CONCLUSION: Less than significant cumulative impact on air quality.</p>	Source	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}	Area*	8.5	1.6	8.9	0.0	0.2	0.2	Energy	0.2	1.5	1.2	0.0	0.1	0.1	Mobile	3.8	22.8	31.5	0.1	7.1	1.9	Total	12.5	25.9	41.6	0.1	7.4	2.2	Threshold	55	55	550	150	150	55	Exceeds Threshold	No	No	No	No	No	No	Construction Emissions	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}	Proposed Project	19.0	50.0	46.4	<0.1	17.2	9.8	Hotel & Restaurant	21.1	20.9	21.8	<0.1	7.6	4.3	Total	40.1	70.9	68.2	<0.1	24.8	14.1	Thresholds	75	100	550	150	150	55
Source	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}																																																																																	
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Threshold	55	55	550	150	150	55																																																																																	
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Thresholds	75	100	550	150	150	55																																																																																	
Noise	<p>The 1993 Final EIR noted that the project would introduce new noise sources into an area with very low pre-project ambient noise levels. The</p>	<p>The project will comply with noise standards during construction and through long-term use and occupancy. In the unlikely event that</p>	<p>Cumulative noise impacts during construction will be less than significant. Traffic related noise levels will be higher under the cumulative condition, but would again be less than significant. Noise</p>																																																																																				

	noise impacts were found to be consistent with county standards, and therefore less than significant. No mitigation was required or proposed.	blasting is required, the project would comply with county requirements to analyze potential impact and development mitigation measures to ensure compliance with adopted standards. The nearby Lee Vining Airport is a limited use facility that serves only general aviation pilots and has no aviation fuel services. The level of use has increased over time, but is now and is expected to remain low.	generated during onsite concerts is expected to decay to background levels within 320 feet of the source, and would not create significant adverse noise levels offsite, at the existing or planned residential units, the full service restaurant, or at the hotel. CONCLUSION: Less than significant cumulative impact on noise.
Aesthetic and Scenic Values	The 1993 Final EIR identified impacts to visual quality as a significant and unavoidable adverse impact of project implementation. Mitigation measures included use of design and development standards for the construction, operation and ongoing maintenance of the project.	<p>The proposed workforce housing project is the most visible of the newly proposed project elements. The housing component will be visible from points on the south shore of Mono Lake, including several of the most popular visitor locations (South Tufa Beach, Navy Beach and Panum Crater). Due to distance (3+ miles from the closest south Mono Lake viewing point at Panum Crater, locations) and design (the housing unit pad will be lowered to create a screening berm), the housing component will not have a significant adverse effect on aesthetic and scenic values from these locations.</p> <p>The housing and associated solar panels will also be visible from a roughly ½ mile segment of the US 395 Scenic Highway corridor in the vicinity of Picnic Grounds Drive. The separation distance at this location is less than 2000 feet, and the view is direct. The visual impact in this area will be minimized as a result of the screening berm created when the housing pad is lowered, and the short distance from which the units will be visible from US 395. However, this new visual element, in combination with the previously approved and highly visible hotel and full service restaurant, will add to the significant and unavoidable project impacts on visual quality that were recognized in the 1993 Final EIR, as well as new light and glare impacts from the solar panels on most structures.</p>	<p>Implementation of all previously approved and current proposed project elements will significantly increase the visual intrusion of human elements in the project area.</p> <p>Project elements will be visible from points on the south shore of Mono Lake, including several of the most popular visitor locations (South Tufa Beach, Navy Beach and Panum Crater). Due to distance (3+ miles from the closest south Mono Lake viewing point at Panum Crater, locations) and design (the housing unit pad will be lowered to create a screening berm), the natural features will continue to dominate the scenic environment, and the housing component will not have a significant adverse effect on aesthetic and scenic values from these locations; distance would also obscure views from the north and eastern shores.</p> <p>The promontory restaurant and (to a lesser extent) workforce housing elements will also be visible from parts of the US 395 scenic corridor. Separation distances in this area are less than 2000' and views are direct. Workforce housing views will be somewhat attenuated by grading and landscaping. However, this new visual element, combined with the previously approved and highly visible hotel and full service restaurant, will add to the significant cumulative impacts on scenic resources and visual quality, as recognized in the 1993 Final EIR.</p> <p>CONCLUSION: SIGNIFICANT cumulative impact on scenic resources, light and glare, and visual quality.</p>

TIOGA WORKFORCE HOUSING PROJECT**SECTION 7
ALTERNATIVES**

7.1 INTRODUCTION AND CEQA REQUIREMENTS

CEQA requires that an EIR analyze a range of reasonable alternatives to a project, or to the location of a project, that would feasibly obtain most of the project objectives while avoiding or substantially lessening one or more significant environmental effects of the project. CEQA Guidelines §15126.6(b) states that the discussion of alternatives should focus on alternatives that are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of project objectives, or would be more costly.

CEQA Guidelines §15126.6(c) states that the range of alternatives should include those that could feasibly accomplish most of the basic project objectives and could avoid or substantially lessen one or more of the significant effects. The EIR should also briefly describe the rationale for selecting the alternatives, and identify any alternatives that were considered by the lead agency but rejected as infeasible. Among the factors that may be used to eliminate alternatives from detailed consideration are: a) failure to meet most of the basic project objectives, b) infeasibility, or c) inability to avoid significant effects.

CEQA Guidelines §15126.6(c) states that the EIR should provide sufficient information about each alternative to allow meaningful evaluation, analysis and comparison with the proposed project, and allows use of a matrix to display major characteristics and significant effects of each alternative.

7.2 NOP COMMENTS ON ALTERNATIVES AND PROJECT MODIFICATIONS

A Notice of Preparation was circulated to the public and responsible and trustee agencies during October and November of 2016 to solicit comments on the EIR scope, and recommendations for a reasonable range of project alternatives. Numerous NOP comment letters were received, including several that requested consideration of various project alternatives. Following receipt of the NOP comment letters, the project applicant modified the project proposal. The modifications included two changes that responded directly to issues raised in the NOP comment letters, including:

- (1) Deletion of the proposal to add a 3rd floor to the hotel, and
- (2) Deletion of the proposal to increase seating in the full service restaurant

The modifications also increased the proposed number of workforce bedrooms from 80 to 150, with the goal to provide sufficient housing to accommodate a majority of the projected 187 future onsite employees.

NOP comments addressed to the hotel and full-service restaurant are no longer applicable, and thus not considered in this alternatives analysis. Similarly, this EIR does not address alternatives to existing uses on the project site (including the deli, the convenience store and hilltop housing, summer concerts and events).

The alternatives identified for consideration in the NOP comment letters included: (1) revisit the alternatives considered in the 1993 EIR; (2) consider a reduction of the workforce housing units by at least half to reduce impacts on traffic, water consumption and the Lee Vining economy; (3) consider conservation alternatives with green construction, graywater reuse, clustering of residential units, native landscaping, screening of onsite uses, and provisions to minimize light pollution; and (4) evaluate the No Project alternative and other options that could minimize project impacts. The

NOP is provided in Appendix A1. Copies of the NOP comment letters are provided in Appendix A2, and EIR §1.0 (Introduction) provides a summary of key points raised in the NOP comment letters.

7.3 FACTORS GUIDING SELECTION OF ALTERNATIVES

7.3.1 Potential Significant Adverse Environmental Effects

As noted, the CEQA Guidelines state that the discussion of alternatives should focus on alternatives that are capable of avoiding or substantially lessening any significant effects of the project. The significant environmental impacts associated with implementation of the Draft *RTP/General Plan Update*, as identified in this EIR, include:

- **VOLCANIC HAZARDS:** The potential for adverse impacts resulting from a volcanic eruption (and associated mudflows if in winter) is considered to be potentially significant, and unavoidable.
- **BIOLOGICAL RESOURCES:** Impacts on migratory species are considered to be significant and potentially unavoidable.
- **PUBLIC SAFETY:** Significant and potentially unavoidable impacts on police services and transportation related to the safety of pedestrians and cyclists travelling between the site and Lee Vining.
- **TRAFFIC IMPACTS:** Potentially significant and unavoidable impacts associated with turning movements from eastbound SR120 to northbound US395.
- **VISUAL IMPACTS:** Impacts to scenic resources in a state scenic highway, degradation of visual character or quality, and reduced daytime and nighttime views due to added sources of light and glare.

7.3.2 Project Objectives

The CEQA Guidelines state that the range of alternatives should include those that could feasibly accomplish most of the basic project objectives and could avoid or substantially lessen one or more of the significant effects. Failure to meet most of the basic project objectives is among the factors that may be used to eliminate alternatives from detailed consideration.

As stated in the 1993 Final EIR, the project objective was to: *"provide central Mono County with an inclusive resort facility that can draw upon north-south traffic traveling through Mono County as well as Yosemite-oriented visitor traffic traveling over Tioga Pass. The facility is to provide a complete range of services for the Mono Basin visitor including accommodations, meals, vehicle fuel, supplies, meeting/banquet rooms, and business center facilities. The resort hotel is designed to serve both the transient traveler and those whose destination includes the Mono Lake Basin or Yosemite National Park. The project is also intended to serve local residents with meeting facilities, a swimming pool that can be used by school swim teams and area swim clubs, and a full-service restaurant. Implementation of the Specific Plan is intended to add to the area's economy through increased employment opportunities, provision of additional needed motel rooms during peak months, and provision of additional rental housing. Visually, the objective of the project is to blend into the natural setting through careful structure siting, and architecture and landscaping complementing the environment."*

The 1993 objectives remain valid with the current project, joined by the additional objectives below:

- To provide sufficient workforce housing on the project site to accommodate a majority of employees of the hotel, the full-service restaurant and other onsite land uses;
- To lower energy costs and increase the energy- and water-efficiency of existing and future uses on the site;
- To ensure that infrastructure sizing is adequate to meet existing and future needs.
- To provide additional gasoline services consistent with demands.

7.4 SELECTION OF ALTERNATIVES

7.4.1 Alternatives Considered in this EIR

Five alternatives are considered in this EIR. The alternatives were selected with the intent to respond to NOP requests, and consider alternatives that might reduce significant project impacts while accomplishing project objectives. The five alternatives are identified below and briefly defined in the paragraphs that follow:

- No Project Alternative
- Alternatives Considered in 1993
- Reduced Development Alternative
- Modified Cluster Design Alternative
- Modified Apartment Design Alternative

Alternative 1: No Project Alternative. Under Alternative 1, the County would not approve the proposed Tioga Inn Specific Plan amendment #3. The No Project Alternative would preclude (a) construction of up to 150 workforce housing bedrooms, (b) a third gas pump island, (c) a new 30,000-gallon propane tank, (d) a replacement water storage tank, (e) construction of a new wastewater treatment system with subsurface irrigation using treated effluent, and an expanded septic system, and (f) modifications to several parcels and open space areas. All existing entitlements would remain in place.

Alternative 2: Alternatives Considered in the 1993 EIR: The 1993 EIR considered 4 alternatives including the No Project Alternative, a residential use alternative, an optional siting alternative, and an alternative with a different mix of uses. In response to an NOP comment letter, the 1993 alternatives are reconsidered in Alternative 2.

Alternative 3: Reduced Development Alternative: This alternative would reduce the number of workforce housing bedrooms by half, resulting in a proposal for up to 75 workforce housing bedrooms. Based on factors set forth in EIR §5.6 (Population and Housing) and EIR §5.8 (Public Services), this would result in about 50 workforce housing units, with a resident population of approximately 150 and a K-12 student population of about 31.

Alternative 4: Modified Cluster Design Alternative: This alternative would configure the workforce housing units in a tighter cluster with additional setback from the promontory restaurant. This layout would reduce the overall footprint, and provide additional separation between the residences and public uses.

Alternative 5: Modified Apartment Design Alternative: This alternative would modify the design layout of the proposed workforce housing units. Rather than the layout as now proposed (which includes a mix of individual structures housing studio, 1-bedroom, 2-bedroom and 3-bedroom units), this alternative would envision one or two apartment-style structures to house all units.

7.4.2 Alternatives Rejected from Further Consideration in this EIR

No alternatives to the proposed project have been rejected from further consideration in this EIR.

7.5 ASSESSMENT OF PROJECT ALTERNATIVES

7.5.1 Alternative #1: No Project Alternative

Under Alternative 1, the County would not approve the proposed Tioga Inn Specific Plan amendment #3. The No Project Alternative would preclude the construction of up to 150 workforce housing bedrooms, a third gas pump island, a second propane tank, a replacement water storage tank of the same size and general location, an expanded septic system and construction of a new graywater system, and modifications to the boundaries and acreage of several parcels and designated open space areas. No discretionary planning initiatives on this site would occur until and unless subsequent proposals are formulated, evaluated under CEQA, and considered for approval by the Mono County Board of Supervisors and other responsible and trustee agencies. The Specific Plan and development entitlements granted in 1993, as well as the subsequent entitlements gained through Specific Plan Amendments #1 and #2, would remain in place.

The No Project Alternative would avoid or minimize some but not all of several of the significant impacts identified in this EIR. Impacts that would be minimized include (1) a reduction in the number of people exposed to volcanic hazards; (2) a reduction in the number of people exposed to unsafe pedestrian and cycling conditions between the project site and Lee Vining, and (3) a reduction in visual impacts from the US395 Scenic Corridor and from the NFSRA; none of the significant environmental factors would be made worse by the No Project Alternative. The No Project Alternative

would meet three of the project objectives, including the use of architecture, siting and landscaping that blends into the natural setting, optimizing customer views, and strengthening the area economy (the latter two objectives would be met through prior approvals). The No Project Alternative would prevent attainment of the remaining project objectives including the provision of a full range of tourist services, onsite housing to accommodate most workers, increased energy and water use efficiency, upgraded infrastructure, and additional gas services.

7.5.2 Alternatives #2a, 2b, and 2c: Alternatives Considered in the 1993 Draft EIR¹

The 1993 Final EIR evaluated five project alternatives. The alternatives are identified below, and again evaluated as part of this Subsequent EIR in the paragraphs that follow.

The No Project Alternative: Assumptions were that the No Project Alternative would entail continued agricultural grazing use, with construction of one single family home. The EIR concluded that the no project alternative would avoid the significant project impacts on visual resources, but would create new adverse impacts pertaining to grazing. This option was rejected because it did not achieve defined project objectives.

- **CURRENT SEIR:** The No Project Alternative is addressed above in §6.5.1 and not reconsidered herein.

Residential Use Alternative: Two residential options were considered, one with fifteen 5-acre lots (each with a private well and septic system), and one with sixty lots and shared water and sewage disposal systems. The fifteen lot option had an estimated build-out population of 36; 143 residents were estimated for the sixty lot option. Both residential options were judged to have significant visual impacts without achieving any defined project objectives; the residential use alternative was rejected for these reasons.

- **CURRENT SEIR:** The 1993 Specific Plan approval and subsequent site development have foreclosed the option to develop the site as a whole for residential uses. Residential development is, however, a central component of the current SEIR. Whereas the 1993 EIR evaluated two market rate single-family residential development options, the current focus is on development of attached high-density residential units to provide affordable housing for site and area employees. The option to develop this site for single family housing is no longer a feasible alternative, and no further assessment is provided herein.

Optional Siting Alternative: The 1993 Optional Siting Alternative involved redesign of the project layout so that the restaurant would be located behind the hotel, the hotel would be moved southward away from the US395/SR120 scenic corridors, and the convenience store would be placed behind and screened from view by the hotel. This alternative was identified as environmentally superior to the proposed project because it would reduce (but not eliminate) the significant and unavoidable project impacts on visual resources. The Optional Siting Alternative was rejected because it would not meet the project objective to deliver outstanding views from the site.

- **CURRENT SEIR:** Although the project as approved in 1993 did not incorporate elements of the optional siting alternative, the convenience store (now developed) is not visible from US 395, and has only limited visibility from SR 120. The location of the hotel and full-service restaurant elements have not changed since the 1993 Specific Plan approval. Because these uses are not yet developed, it is still potentially feasible to consider alternative siting layouts.

The newly proposed workforce housing, in combination with the hotel and full-service restaurant, will occupy most of the remaining undeveloped portions of this project site. The layout alternatives would therefore center on exchanging locations of the three uses (i.e., placing the workforce housing on the hotel or restaurant site, and placing the hotel on the restaurant or workforce housing site, etc.).

Placement of the two-story workforce housing units on the two-story hotel site would increase visual impacts from SR120 due to the larger footprint of the workforce housing development, without reducing visual impacts from US 395. Similarly, placement of the 30' maximum height workforce housing units on the 20'

¹ The 1993 EIR identified the alternatives as Alternative 1: No Project; Alternative 2: Residential Use (now identified as Alternative 2a); Alternative 3: Optional Siting (now Alternative 2b); Alternative 4: Different Mix of Uses (now Alternative 2c).

maximum height full-service restaurant site would increase visual impacts from US 395 and many locations on Mono Lake, again due to the larger footprint of the workforce housing compared to the full-service restaurant. None of the alternative placement options would reduce potentially significant impacts, and none would meet the project objective to deliver outstanding views. Moreover, the current proposal does not reopen prior entitlements for the hotel and restaurant uses. For all of these reasons, the Different Mix Alternative is rejected from further consideration.

Different Project Mix: This 1993 alternative considered a different mix of uses (for example, hotel-restaurant-residential) and design options, such as including the full-service restaurant inside the hotel. The alternative was rejected because none of the options were judged to reduce visual impacts to less than significant levels and none would achieve overall project objectives.

- **CURRENT SEIR:** All of the currently proposed uses (i.e., workforce housing, water tank, propane, third gas pump island, road realignment) are proposed to address needs of this project. The workforce housing will provide affordable living spaces for project employees in a region that has little affordable housing available; the gas pump island will reduce congestion around the existing pump islands during peak periods; the new water tank will incorporate updated materials and design to replace the aging existing tank, and the roadway realignment will enhance safe access to the hilltop residential area. Moreover, all of the proposed uses will follow design guidelines that were established in the 1993 Specific Plan, to visually unify original and new project elements. There is no alternative mix of uses that would similarly respond to existing needs, and there is no alternative design option that would retain the aesthetic character created in the original Specific Plan. For these reasons, the Different Mix Alternative is rejected from further consideration.

Alternatives Screened from Further Consideration The 1993 EIR provided brief mention of 4 additional alternatives that were identified but not analyzed. The 4 additional alternatives included (a) use of a different site (rejected due to the lack of available alternative sites), (b) a project with only the restaurant (rejected because infrastructure costs would be infeasible for restaurant-only use of the site), (c) a project with only the convenience store (rejected because the then-existing economy would not support a free-standing gas station/convenience store outside of Lee Vining without other site attractions), and a project with only the hotel (rejected because hotel-only use would increase traffic).

- **CURRENT SEIR:** Although feasible in concept, the option to use a different site for the proposed employee housing is precluded by the very limited supply of developable land in the project region, and by the cost of available properties. Feasibility of workforce housing on this site is directly linked to the fact that the land is available, is already owned by the applicant, and is proximate to the employment. The convenience store/gas station only alternative would technically be feasible since other uses have not yet been developed, but this option would fail to respond to the significant existing demand for increased tourism facilities and would not override existing entitlements (all Specific Plan land uses would remain in place). The restaurant-only and hotel-only options have been rendered infeasible by site development since the 1993 EIR was prepared.

7.5.3 Alternative #3: Reduced Development Alternative

This alternative considers a reduction in the number of proposed workforce housing bedrooms. Based on factors set forth in EIR §5.6 (Population and Housing), a 50% reduction in the workforce housing component would result in 75 fewer workforce housing bedrooms, 50 fewer workforce housing units and 150 fewer future onsite residents.

As shown in Table 6-1, the reduced development alternative would be as successful as the no project alternative at minimizing environmental impacts, particularly with respect to Land Use, Traffic, Air Quality, Biology, Geology, Safety and Hazards, Aesthetic Values, and Noise. Environmental impacts that would be adversely affected by this alternative include GHG Emissions and Traffic (due to increased employee commuting, Land Use (anticipating that this alternative would reduce the acreage designated for Open Space-Preserve compared to the project as proposed), Hydrology (since the reduced development alternative would likely retain the existing septic treatment and disposal system, without landscape irrigation options), and Population/Housing (since the reduced development alternative would halve the available workforce units, necessitating that employees find offsite housing).

With respect to Project Objectives, the reduced development alternative would be less effective than the project at meeting all but two objectives (provision of additional gasoline services to meet demands, and energy efficiency).

This alternative would be more effective than the proposed project at avoiding or minimizing significant adverse impacts. Impacts that would be lessened include (1) a reduction in the number of people exposed to volcanic hazards; (2) a reduction in the number of people exposed to unsafe pedestrian and cycling conditions between the project site and Lee Vining, and (3) a reduction in visual impacts from the US395 Scenic Corridor and from the NFSRA. In turn, this alternative may increase GHG emissions and traffic impacts due to increased employee commutes. None of the significant environmental factors would be entirely avoided by the Reduced Development Alternative, and none would be exacerbated by this alternative.

7.5.4 Alternatives #4 and 5: Modified Design Alternatives (Cluster and Apartment)

This alternative would modify the design layout of the proposed workforce housing units. As now proposed, the housing layout includes 16 separate 1-story and 2-story structures each housing a mix of studio, 1-bedroom, 2-bedroom and 3-bedroom units. The units are distributed over an area of approximately 8 acres that is directly southeast of and visible from the promontory restaurant site, but separated from the remaining public areas (gas pumps, store, and hotel) by an intervening ridge. The units are distributed in a loosely clustered design that features two rows of units on a higher tier (elevation around 6,950') and two rows along a lower tier (at an elevation of approximately 6,915').

Two possible design alternatives are considered herein for the workforce housing. One option would be to configure the units in a tighter cluster with additional setback from the promontory restaurant. This layout would reduce the overall footprint (and thus the profile from offsite locations), and would also provide additional separation between the residences and public uses (and thus the privacy for workforce housing residents). Modified building orientation might increase solar exposure and enhance energy efficiency. This option was rejected because it would require significantly more grading (and jeopardize the goal to balance cut and fill onsite), without significantly reducing visual effects or resident benefits.

Another design option, Alternative 5, would be to construct two or three apartment-style structures to house all 150 bedrooms. This option would potentially reduce the amount of grading, and would further reduce the overall workforce housing footprint. However, the larger mass of the apartment-style buildings would potentially be more visible from offsite locations than the smaller clustered unit designed. The apartment design option was rejected because it would be less adaptable in accommodating workforce demographic changes over time, less amenable to phasing, less family-friendly, costlier to construct (due to additional code compliance requirements) and thus potentially less affordable to workers, and likely to increase visual impacts.

Modified Design Alternative 4 would be similar to the proposed project in terms of environmental impacts. The reduced footprint of the cluster design alternative would reduce impacts on biological resources (compared to the proposed project), but would increase impacts on geology due to the anticipated imbalance between cut and fill and the resulting potentially need to import or export fill materials.

With respect to Project Objectives, the modified design alternative (clustering only) would be more effective than the proposed project in achieving architecture, siting, and landscaping that blends into natural setting. The modified design alternative (clustering) would also be more effective at minimizing one potentially significant adverse impact since the enhanced clustering associated with this alternative would reduce (but not eliminate) the significant adverse impacts on aesthetic and visual resources.

As shown in Table 7-1, Modified Design Alternative 5 would also be similar to the proposed project in terms of environmental impacts. This alternative would be less effective than the proposed project in achieving an architectural, siting, and landscaping design that blends into the natural setting, and less effective than the proposed project in terms of minimizing the significant visual impacts of the project.

7.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE: Reduced Development

CEQA §15126.6 requires, if the environmentally superior alternative is the 'no project' alternative, that the EIR shall also identify an environmentally superior alternative among the other alternatives. In practice, this requirement is understood as a requirement to identify the environmentally superior alternative. The environmentally superior alternative is the alternative that accomplishes the largest number of objectives, and most effectively avoids or eliminates potentially significant adverse impacts, and is associated with the fewest adverse environmental impacts when compared to the proposed project.

A comparative analysis of the proposed project and each of the project alternatives is provided in Table 7-1 below. The table assigns a score of "0" to the proposed project and "-1," "0," or "+1" to denote how each of the alternatives compares to the proposed project in terms of meeting objectives, lessening the severity of environmental effects, and avoiding significant project impacts. A score of "0" indicates that the alternative would have the same level of impact as the proposed project. A score of "+1" indicates that the alternative would have a better (or reduced) impact when compared to the proposed project. A score of "-1" indicates that the alternative would have a worse (or increased) impact when compared to the proposed project. The project alternative with the highest total score is considered the environmentally superior alternative.

TABLE 7-1: Comparison of Project Alternatives with Proposed Project							
	#1: No Project Alternative	Other Alternatives Considered in 1993			#3: Reduced Development Alternative	#4: Cluster Design Alternative	5: Apartment Design Alternative
		#2a: Residential Use Only	#2b: Redesigned Site Layout	#2c: Alternate Mix of Uses			
ENVIRONMENTAL IMPACTS							
Land Use	-1	0	-1	-1	-1	0	0
Traffic/ Circulation	+1	+1	0	+1	-1	0	0
Air Quality/GHG	0	0	0	+1	-1	0	0
Biology	+1	0	0	0	+1	+1	0
Geology	+1	0	0	0	+1	-1	-1
Hazards	+1	+1	0	0	+1	0	0
Cultural	0	0	0	0	0	0	0
Hydrology	-1	-1	0	0	-1	0	0
Aesthetics	+1	+1	-1	0	+1	0	-1
Recreation	0	-1	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0
Population/ Housing	-1	0	0	-1	-1	0	0
Public Services	+1	0	0	0	+1	0	0
Noise	+1	0	0	0	+1	0	0
SUBTOTAL	+4	+1	-2	0	+2	0	-2
PROJECT OBJECTIVES							
Provide full range of tourist/traveler/ resident services	-1	-1	0	-1	-1	0	0
Optimize Customer Views	0	-1	-1	-1	-1	0	0
Strengthen area economy	0	-1	0	-1	-1	0	0

Architecture, siting, landscaping blends into natural setting	0	0	-1	0	+1	+1	-1
Onsite housing to accommodate most workers	-1	0	0	0	-1	0	0
Increased energy and water use efficiency	-1	-1	0	0	0	0	0
Upgrade infrastructure sizing to meet needs	-1	-1	0	0	-1	0	0
Meet demand for additional gas services	-1	-1	0	0	0	0	0
SUBTOTAL	-5	-6	-2	-3	-4	+1	-1
AVOIDANCE OF SIGNIFICANT EFFECTS							
Volcanic Hazards	+1	+1	0	0	+1	0	0
FAA Obstruction	0	0	0	0	0	0	0
Pedestrian Hazards	+1	0	0	0	0	0	0
Visual Impacts	+1	+1	0	0	+1	+1	-1
Traffic Impacts	0	0	0	0	-1	0	0
OTHER?? Bio??	+1	0	0	0	+1	0	0
SUBTOTAL	+4	+2	0	0	+2	+1	-1
TOTAL	+3	-3	-4	-3	0	+2	-4

Scoring provided in Table 7-1 indicates that the No Project Alternative, with a net score of +3, would be the environmentally superior alternative. The No Project Alternative has not been recommended or selected due to the importance placed on providing sufficient affordable housing to accommodate all onsite workers. The 'Cluster Design Alternative,' with a net score of +2, would also be more effective than the proposed project in terms of achieving overall impact reduction, fulfillment of project objectives, and minimizing significant unavoidable impacts. Although more effective overall at minimizing impacts and avoiding significant effects, the Cluster Alternative has not been recommended or selected because it would require significantly more grading and jeopardize the goal to balance cut and fill onsite, without significantly reducing visual effects or resident benefits.

TIOGA INN WORKFORCE HOUSING DRAFT SUBSEQUENT EIR**SECTION 8.o**
GROWTH INDUCING IMPACTS

8.1 INTRODUCTION AND CEQA BASIS

CEQA §15126.2(d) requires that an EIR discuss ways in which a proposed project could foster economic growth or population growth, or the construction of additional housing, including projects that may remove obstacles to population growth and activities that may encourage and facilitate other activities with potentially significant effects. Activities identified in this section include *“projects which would remove obstacles to population growth (a major expansion of a waste water treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.”* In general, growth inducing projects include activities that would stimulate an economy, or require construction of new infrastructure, or involve development in previously undeveloped areas.

8.2 DISCUSSION

The proposal to develop workforce housing on the project site is itself a response to an economic stimulus created by approval of the 1993 Specific Plan. The 1993 approval paved the way for the construction of new infrastructure, development in a previously undeveloped area of the Mono Basin, and creation of new jobs and tourism opportunities that represented an economic stimulus for growth.

The 1993 approvals included all employment-generating uses on the project site, but only enough housing to accommodate workers from the initial land uses (the convenience store, the gas station, and the deli). The 1993 approvals did not include entitlements for sufficient housing to accommodate workers in the hotel and full-service restaurant.

Since the 1993 approvals were granted, the supply of housing opportunities, and particularly workforce housing opportunities, has narrowed; the need for workforce housing has become an increasingly high priority issue in Mono County. Under current conditions, it would be challenging to secure adequate staffing for the previously-approved hotel and full-service restaurant without an affordable housing program.

It is reasonably foreseeable that the additional labor force created by residents of the Tioga workforce housing project will create a stimulus for future growth in the Lee Vining region. This possibility is strengthened by the fact that the project will have enough units to house essentially all of the anticipated future employees (150 bedrooms to accommodate an estimated 150 new employees), units will be designed to accommodate families, and employment generating uses are anticipated to be seasonal in nature. At least some of the bedrooms will accommodate household members who are available to fill jobs outside of the project site, which will have potential to induce new employment growth. The children of onsite employee residents will attend local schools, establish local relationships and be more

likely to become future residents and/or visitors to the region as they enter adulthood. The seasonal nature of onsite uses will free employees to work at other jobs during the winter months, augmenting economic growth and inducing further economic development. The new project residents will place added demands for services, facilities and goods thereby stimulating growth in Lee Vining area services and businesses.

The roughly 35 people currently living on the Tioga Mart site represent about one third of the total Lee Vining population according to the most recent population estimates. If approved as proposed, the project would generate an additional 300 residents, which would triple the Lee Vining area population. The increase is proportionally significant, particularly with reference to the 2016 Lee Vining population estimate of 98, which reflects a decline from the estimated 2010 population of 222. However, discussion presented in EIR §5.6 (Population and Housing) indicates that the estimated 300 new residents in the Tioga Workforce Housing project would represent approximately 12% of the adopted Mono Basin build-out population increases, as outlined in the Mono County General Plan.

Analyses in sections throughout this EIR indicate that project approval and implementation would result in both direct and cumulative impacts to the environment, some of which are potentially significant and unavoidable. Among the significant and unavoidable effects of the proposed Tioga Workforce Housing are impacts on migratory and resident species, increased exposure of people and structures to catastrophic mudflows, increased unsafe deer crossings in and around US395/SR120, significant hazards to the safety of pedestrians and cyclists traveling between the project site and downtown Lee Vining, significant hazards to motorists turning northbound onto US395 from east-bound SR120, additional burdens on public safety and police resources pertaining to the unsafe pedestrian and vehicular movements; and significant unavoidable impacts on light and glare as well as the scenic and visual character of the project region. The potential impacts of the project are summarized in EIR §2.0 (Executive Summary), and the potential cumulative impacts of the project are discussed in EIR §6.0 (Cumulative Impacts).

The significant adverse impacts of the Tioga Workforce Project are, with one exception, consistent with the significant adverse impacts of General Plan implementation as identified in the General Plan Final EIR.¹ The one exception pertains to traffic: whereas the General Plan EIR did not identify significant adverse traffic impacts, the project is associated with a significant adverse traffic and safety impact associated with northbound turning movements onto US395 from eastbound SR120. However, this significant adverse traffic and safety impact is associated with the prior 1993 approvals, and will occur whether the proposed Workforce Housing project is or is not approved. The possibility of mitigation for this impact (which involves obtaining grant funding for improvements to achieve safe vehicular and pedestrian movement in the vicinity) is associated only with the project proposal.

Discussion in EIR §5.5 (Land Use) indicates that the economic development stimulus associated with this project would be broadly consistent with goals and objectives of the *Mono County General Plan*, the *Mono Basin Community Plan*, and the *Mono County Economic Development Strategic Plan*, all of which emphasize the importance of tourism (and associated workforce housing) as the primary source of employment countywide. The project would also be generally consistent with the constraints and opportunities identified for Lee Vining in the Mono County General Plan, particularly with respect to the community support for enhancing existing resources (as opposed to new

¹ Significant unavoidable impacts identified in the General Plan EIR included: Impacts to biological resources (including special status species, riparian habitats, wetlands, wildlife movement and biological protection ordinances), impacts pertaining to geology (exposure to seismic effects and unstable geologic structures, soil erosion, and loss of mineral resources), impacts pertaining to health and safety (release of hazardous materials, emergency response, exposure to fire hazards, and exposure to avalanche and rockfall and volcanism), impacts to cultural resources (historic, prehistoric, paleontological and sacred), impacts to hydrologic resources (water quality objectives, waste discharge requirements, water supplies and erosion from drainage), recreation (impacts to facilities), aesthetic impacts (to scenic resources, visual character and light and glare), and impacts to public service (including impacts to police and fire and schools).

development), providing workforce housing opportunities, incorporating green building practices, and increasing job opportunities.

8.3 SUMMARY

The proposed Tioga Workforce Housing Project would have potential to induce further growth in the project region. Such growth would: (a) be within the range of General Plan population forecasts for the Mono Basin; (b) place added demands on services but generally fall within service providers' ability to respond; (c) result in direct and cumulative environmental impacts, some of which would be significant and unavoidable but have already been identified in the General Plan and/or are associated with the prior 1993 approvals and would occur with or without the proposed Workforce Housing project; and (d) contribute to economic development in a manner that is generally consistent with goals and objectives of the General Plan and Mono Basin Community Plan, and consistent with county economic development and affordable housing policies. Based on these findings, it is concluded that the project is growth inducing, but would not induce growth beyond planned population or housing or employment forecasts for this region.

TIOGA INN WORKFORCE HOUSING DRAFT SUBSEQUENT EIR



SECTION 9.0 SUMMARY OF UNAVOIDABLE AND IRREVERSIBLE ENVIRONMENTAL IMPACTS

9.1 INTRODUCTION AND CEQA REQUIREMENTS

CEQA Guidelines §15126 requires that an EIR consider all phases of a project when evaluating potential impacts on the environment, including planning, acquisition, development and operation. As part of this analysis, the EIR must also identify a) significant environmental effects of the proposed project, b) significant environmental effects that cannot be avoided if the proposed project is implemented, c) significant irreversible environmental changes that would be involved in the proposed project should it be implemented, d) growth-inducing impacts of the proposed project, e) mitigation measures proposed to minimize significant effects, and f) alternatives to the proposed project. CEQA Guidelines §15126 recommends that these subjects be addressed in separate sections or paragraphs of the EIR and also requires, where the subjects are not discussed separately, that a table be provided to show where each subject is discussed. This EIR discusses each subject separately in the sections listed below in Table 7-1:

TABLE 9-1: Sections of this EIR that Address Long-Term Project Impacts	
SUBJECT	EIR SECTION
Cumulative Effects	§6.0
Alternatives to the Proposed Project	§7.0
Growth-Inducing Impacts of the Proposed Project	§8.0
Significant and Unavoidable Adverse Effects of Proposed Project	§9.2
Significant Irreversible Environmental Changes	§9.3
Mitigation Measures Recommended to Minimize Significant Effects	§2.0 (Executive Summary) §10.0 (Mitigation Program)

9.2 POTENTIALLY SIGNIFICANT AND UNAVOIDABLE ADVERSE EFFECTS

Table 9-2 identifies the full range of potentially significant and unavoidable adverse impacts associated with implementation of the proposed Tioga Workforce Housing Project.

TABLE 9-2: POTENTIALLY SIGNIFICANT PROJECT IMPACTS		
EIR SECTION & SUBJECT	POTENTIALLY SIGNIFICANT EFFECTS	SIGNIFICANT & UNAVOIDABLE?
§5.1 Geology and Soils	Exposure of people & structures to seismic effects	No
	Cause substantial soil erosion	No
	Exposure of people & structures to unstable geology	No
	Soils unsuited to alternative wastewater systems	No
§5.2 Hydrology	Violation of Water Quality Objectives	No
	Violation of Waste Discharge Requirements	No
	Availability of adequate Water Supplies	No
	Erosion and Siltation from altered Drainage	No
	Exposure of People and Structures to 100-year Flood	No

	Risk of Dam Failure	No
	Risk of Seiche, Tsunami, Mudflow	✓
§5.3 Biological Resources	Impact Candidate, Sensitive or Special Status Species	No
	Impact Riparian Habitat	No
	Impact Federally Protected §404 Wetlands	No
	Interfere with Fish or Wildlife Movement or Migration	✓
	Conflict with Local Biological Protection Ordinances	No
	Conflict with an adopted Habitat Conservation Plan	No
§5.4 Cultural Resources	Impacts to prehistoric or historic resources	No
	Impacts to Paleontological Resources	No
	Impacts to Sacred Lands	No
§5.5 Land Use & Recreation	Physically Divide a Community	No
	Conflict with an Applicable Land Use Plan	No
	Impact Recreational Facilities or Open Space	No
	Impact the acreage or use of designated Open Space	No
§5.6 Population, Housing, Employment	Induce Substantial Population Growth	No
	Displace Residents or Housing	No
§5.7 Health & Safety Hazards	Potential for Release of Hazardous Materials	No
	Activities on Known Hazardous Materials Sites	No
	Exposure to airport hazards	No
	Inadequate emergency response	No
	Exposure to wildland fire risks	No
§5.8 Utilities, Energy & Public Services	Exposure to avalanche, rockfall, storms, volcanism	No
	Impacts on police, fire, schools, other services	✓
	Result in Wasteful, Inefficient Energy Consumption	No
§5.9 Traffic and Circulation	Adequacy of landfill capacity	No
	Compliance with Plans & Ordinances	✓
	Conflict with VMT Thresholds	No
§5.10 Air Quality & Greenhouse Gases	Impacts associated with Intersection Hazards	✓
	Conflict with Air Quality Plan, Standards, Impact Sensitive Receptors	No
	Create Objectionable Odors	No
§5.11 Noise	Generate GHG, Conflict with GHG-Reduction Plan	No
	Cause a Significant Increase in Ambient Noise Levels	No
	Expose People to Groundborne Vibration or Noise	No
§5.12 Aesthetics, Light & Glare	Expose People to Significant Airport Noise	No
	Impact Scenic Resources, Visual Character	✓
	Create New Sources of Light and Glare	✓

9.3 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

The proposed Tioga Workforce Housing Project would result in the irreversible consumption of nonrenewable resources. Resources anticipated to be irreversibly committed over the life of the project include, but are not limited to, lumber and other related forest products; sand, gravel, and concrete; petrochemicals; construction materials; steel, copper, lead, and other metals; and water supplies. Impacts to sensitive biological resources and migrating deer, already significant due to prior development and fire, would be compounded by the current project. Potentially significant impacts associated with unsafe pedestrian/cycling activities in the project area, and unsafe turning movements at US395/SR120, would be reversible through implementation of identified mitigation measures, but neither the applicant nor the County has authority to adopting or enact the mitigating actions. Impacts to the scenic highway and visual character of this region would be lessened by the growth of landscape elements, but not reduced to less than significant levels.

TIOGA WORKFORCE HOUSING DRAFT SUBSEQUENT EIR



SECTION 10.0

MITIGATION MEASURES AND MITIGATION MONITORING

10.1 CEQA BASIS

CEQA Guidelines §15091(d) requires lead agencies to adopt a program for reporting on monitoring the changes it has made in a project or made a condition of project approval to avoid or substantially lessen significant environmental effects. These 'mitigation measures' must be fully enforceable, generally through permit conditions or agreements. CEQA Guidelines §15126.4 describes how mitigation measures are to be addressed in environmental documents. Key elements of these requirements include:

1. **ATTRIBUTION:** The discussion of mitigation measures must distinguish between measures that are proposed by the project applicant, and other measures proposed by the lead agency or responsible or trustee agencies, or other relevant entities.
2. **EFFECTIVENESS:** Mitigation measures must be considered reasonably capable of reducing adverse impacts, and measures are to be provided for each significant effect identified in the environmental document.
3. **SIGNIFICANT EFFECTS ONLY:** Mitigation is not required for impacts found to be less than significant. Where several measures are available, the EIR should discuss the basis for selecting a particular measure.
4. **NO DEFERRAL:** Mitigation measures must be formulated as part of the environmental review and may not be deferred until a future time; however, the specific details of a mitigation measure may be developed at a later stage if necessary, provided the lead agency commits to the measures, adopts performance standards to be met, and identifies the type of actions that will meet adopted standards.
5. **SECONDARY IMPACTS:** If a mitigation measure would cause impacts in its own right, those impacts must be disclosed and analyzed though in less detail than significant effects of the project.
6. **ENFORCEABILITY:** The measures must be fully enforceable through legally binding instruments.
7. **NEXUS:** There must be an essential nexus between the mitigation and a legitimate governmental interest.
8. **PROPORTIONALITY:** The mitigation measure must be roughly proportional to the impacts of the project.
9. **LEGALITY:** If a measure cannot be legally imposed, it need not be discussed or analyzed.

CEQA Guidelines §15091 describes the relationship between project approvals and the mitigation of identified significant effects. This process requires the lead agency to make written findings, supported by substantial evidence, for each of the significant effects of a project, accompanied by a brief discussion of the basis for each finding. Possible findings include:

- a) **CHANGES HAVE BEEN MADE:** Changes have been incorporated into the project that will avoid or substantially lessen the significant impacts identified in the environmental document.
- b) **CHANGES ARE THE RESPONSIBILITY OF ANOTHER AGENCY:** The identified mitigation is the responsibility of another public agency and not the lead agency, and the measure can and should be adopted by the other agency. Note that this finding may not be made where the Lead Agency (in this case, Mono County) has concurrent jurisdiction with another agency to deal with the identified feasible measures or alternatives.
- c) **CHANGES ARE NOT FEASIBLE:** The identified mitigation measure or alternative is not feasible due to specific economic, legal, social, technological or other considerations.

10.2 MITIGATION MONITORING AND REPORTING PROGRAM

It is anticipated that the compilation of mitigation measures for the Tioga Workforce Housing Project may change as a result of comments received through the agency and public review process and/or through modifications recommended by the Mono County Planning Commission and/or adopted by the Mono County Board of Supervisors. Following completion of the Final Subsequent EIR, and before considering final project approval, Mono County will prepare 'Findings' that make one or more written findings for each of the significant project effects. Each findings will be accompanied by a brief explanation of

the rationale for the finding consistent with CEQA Guidelines 15091 (as described above in §10.0. As part of the Findings, Mono County will adopt a program (i.e., The Mitigation Monitoring and Reporting Program) for reporting on or monitoring the enforceable changes that it has required in the project or made a condition of project approval in order to avoid or lessen the identified environmental impacts. Mono County will be required to specify the location and custodian of all documents that comprise the full record of proceedings upon which the Board of Supervisors' decision is made. The full record shall include the Draft SEIR, comments on the Draft SEIR, responses to comments, the Final EIR, the Findings, the Mitigation Monitoring and Reporting Program and, if adopted, the Statement of Overriding Considerations (discussed in §10.3 below).

10.3 STATEMENT OF OVERRIDING CONSIDERATIONS

As part of the determination whether to approve a project, CEQA Guidelines §15093 requires the decision making body to balance the benefits of a project (including local, region-wide or statewide economic, legal, social, technological or other benefits) against the unavoidable significant environmental impacts and risks of that project. If the specific benefits are found to outweigh the unavoidable adverse environmental impacts, the adverse environmental impacts may be considered 'acceptable.' In cases where the lead agency approves a project with significant unavoidable adverse impacts, the agency must state in writing the specific reasons that support its action based on substantial evidence in the Final EIR and/or other information in the full record. The Statement of Overriding Considerations is included in the record of the project approval, and mentioned in the Notice of Determination. The Statement of Overriding Considerations is included with (and may not substitute for) the written Findings.

10.4 RESPONSIBLE AGENCY, REGULATORY AND CODE COMPLIANCE STANDARDS

If approved by the Mono County Board of Supervisors, the project will be required to comply with the requirements of all Responsible and Trustee agencies with permit authority; these agencies are anticipated to include the Lahontan Regional Water Quality Control Board, the SWRCB Division of Drinking Water, Caltrans, the California Dept. of Fish and Wildlife, the California Department of Forestry, Mono County Dept. of Environmental Health, Lee Vining Fire Protection District, and the FAA.. These agencies may impose conditions of permit approvals in addition to the Mitigation Measures contained in this EIR. The agencies with permit authority are normally responsible for ensuring compliance with conditions of approval.

The project will also be subject to a number of uniform code requirements and standard conditions of approval, many of which have been established to safeguard environmental resources, and/or to promulgate environmental goals and objectives. If the proposed project is approved, compliance with these measures will be mandatory (not discretionary). As such, these measures do not conform to the strict definition of mitigation. Although regulatory standards and codes are not generally incorporated into this mitigation program, the County will be required to ensure that the project is in full compliance with all relevant requirements.

10.5 CONTENTS OF THIS EIR SECTION

To facilitate compliance with the requirements of CEQA Guidelines §15091 and §15126.4, this section presents a compilation of alternatives developed through the Draft Subsequent EIR. Each alternative is listed under its relevant category including:

- (1) **Measures that the Lead Agency is responsible to enforce.** A majority of mitigation measures in this EIR have been included for the purpose of avoiding or substantially lessening significant impacts, and will be enforced by Mono County. Table 10-1A lists the mitigation measures in this category that will reduce impacts to less than significant levels, and Table 10-1B lists the mitigation measures that will reduce impacts but not to less than significant levels (i.e., unavoidable impacts). The three significant and unavoidable project impacts include (1) risk of mudflow, (2) impacts to scenic resources, and (3) new sources of light and glare.
- (2) **Measures that are the responsibility or purview of another public agency.** Table 10-2 lists the measures that are the responsibility of agencies other than Mono County, and that can and should be adopted or implemented by the other agencies if feasible (see Table 10-2).
- (3) **Recommendations.** Table 10-3 lists all recommendations that were developed during the course of the environmental review process. The listed recommendations will not avoid or substantially lessen the identified significant environmental effects, and compliance is not required. The recommendations are offered for consideration only.

This EIR contains no mitigation measures that are considered infeasible.

**TABLE 10-1A. Mitigation Measures that will Reduce Significant Impacts to Less than Significant Levels,
and are the Responsibility of Mono County to Enforce**

MITIGATION MEASURES		VERIFICATION TIMING AND RESPONSIBILITY
GEOLOGY AND SOILS		
GEO 5.1(a-1)	Soils: Site specific soils reports with appropriate recommendations for proposed improvements shall be made at the time that improvements are being designed.	Prior to issuance of Grading and/or Building Permits by Mono County
GEO 5.1(a-2)	Debris Flows: Debris flow mitigation (including debris/desilting/retention basins and/or rip rap or other mitigative measures) shall be used in any canyon or gully areas where structures would be located.	Requirement to be included as a condition of approval in the Grading and/or Building Permits issued by Mono County.
GEO 5.1(a-3)	Seismicity: Due to the project location in a zone of known active faulting, further geotechnical investigations shall be undertaken if soil removal and/or grading expose fault traces. This possibility shall be considered throughout the initial construction planning and earthwork phases.	Requirement to be included as a condition of approval in the Grading and/or Building Permits issued by Mono County.
GEO 5.1(b)	Low Impact Development: A Low Impact Development Best Management Practices Program (LID BMPP) shall be implemented during all construction stages, including pre-construction and post-construction practices for the prevention of erosion, sedimentation, and contamination resulting implementation of all project elements. BMPP measures shall at a minimum include: (1) disposal of all construction wastes in designated areas outside the path of storm water flows; (2) minimizing the footprint of construction zones and prompt installation of erosion controls; (3) stabilizing disturbed soils with landscaping, paving or reseeding to reduce or eliminate the risk of further erosion; (4) perimeter drainage controls to direct runoff around disturbed construction areas; (5) internal erosion controls to allow direct percolation of sediment-laden waters on the construction site; and (6) regular inspection and maintenance of all equipment used during construction. The project shall comply with requirements to obtain a General Construction Stormwater Permit, and prepare a Stormwater Pollution Prevention Plan.	Requirement to be included as a condition of approval in the Grading and/or Building Permits issued by Mono County.
GEO 5.1(c)	Supplemental Geotechnical Studies: Additional geotechnical studies shall be prepared, prior to Grading and/or Building Permits approval, to examine subsurface soil and groundwater conditions on all project areas that were not analyzed as part of the 1993 Final EIR. Areas to be studied shall at a minimum include land underlying the workforce housing project, the propane tank storage area, the proposed site of the new water storage tank, and all areas that would be newly impacted by the proposed septic and wastewater treatment system modifications.	Requirement to be included as a condition of approval in the Grading and/or Building Permits issued by Mono County.
HYDROLOGY AND WATER QUALITY		
HYDRO 5.2(a-1)	Slope Restoration and Monitoring: A Revegetation Plan shall be prepared as described in Measure BIO 5.3(a-1). This Plan shall include a map of all temporarily disturbed areas in the Project and shall outline how all temporary impacts to water resources and upland areas will be restored (recontoured) to approximate pre-project grade and	Requirement to be included as a condition of approval in the building permit issued by Mono County. County to oversee

**TABLE 10-1A. Mitigation Measures that will Reduce Significant Impacts to Less than Significant Levels,
and are the Responsibility of Mono County to Enforce**

MITIGATION MEASURES		VERIFICATION TIMING AND RESPONSIBILITY
	drainage conditions. The Plan shall provide performance criteria and measures, and adaptive management procedures to be taken in the event hydrologic goals are not being met. Annual reports of monitoring results prepared for transmittal to Mono County prior to December 1 shall include evaluation of drainage performance relative to Plan criteria, and photographs of drainage features, for a period of no less than three years.	monitoring results, and plan changes if and as needed.
HYDRO 5.2(a-2)	<u>Buffer Zone and Exclusion Fencing:</u> Buffer areas shall be identified and exclusion fencing shall be installed to protect surface water resources outside of the project area, and to prevent unauthorized vehicles or equipment from entering or otherwise disturbing surface waters outside the project area. Construction equipment shall be required to use existing roadways to the extent possible.	Requirement to be included as a condition of approval in the Grading and/or Building Permits issued by Mono County.
HYDRO 5.2(a-3)	<u>Minimal Vegetation Clearing:</u> Vegetation clearing shall be kept to a minimum. Where feasible, existing vegetation shall be mowed so that after construction, the vegetation can reestablish more quickly and thereby help mitigate the potential for storm water impacts.	Requirement to be included as a condition of approval in the Grading and/or Building Permits issued by Mono County.
HYDRO 5.2(a-4)	<u>Spill Prevention and Response:</u> A Spill Prevention and Response Plan shall be prepared that outlines project best management practices to prevent hazardous material spills, and the steps to contain and cleanup a hazardous material spill should one occur.	Plan to be filed with and approved by Lee Vining FPD and CalFire prior to Building and/or Grading permit issuance for new gas pumps and propane tanks.
HYDRO 5.2(a-5)	<u>Onsite Storm Flow Retention:</u> A comprehensive drainage study shall be developed which includes all phases of the project. The project shall incorporate features to remove sediment from stormwater before it is discharged from the site. The project shall retain runoff from new impervious surfaces, and surfaces disturbed during construction. Retention shall be achieved by directing runoff to drywells or landscaped areas that provide infiltration. Sediment removal and retention systems shall be designed to accommodate all runoff resulting from a 20-year storm event of 1-hour duration. It must be demonstrated that the stormwater system is designed in such a way that when the retention capacity is exceeded, runoff leaves the site in keeping with pre-project drainage patterns, and will not cause the design capacities of any downstream drainage facilities to be exceeded.	Requirement to be included as a condition of approval in the Grading and/or Building Permits issued by Mono County.
HYDRO 5.2(b-1)	<u>Wastewater Treatment:</u> Upon installation of the new wastewater treatment system the existing septic tank will be properly decommissioned, and the existing leachfield will be used only for disposal of treated effluent during the winter months when effluent flows are at a minimum and the subsurface irrigation system is suspended due to freezing conditions. Leach field size will be determined by LRWQCB requirements, based on the application rate for the treated wastewater effluent.	Requirement to be included as a condition of approval in the Grading and/or Building Permits. Mono County Health Department to oversee decommissioning of the septic tank; LRWQCB to oversee leachfield sizing.
HYDRO 5.2(b-2)	<u>Leachfield Percolation Standards:</u> Percolation rates for the new leachfield shall be determined in accordance with procedures prescribed by LRWQCB. Where the percolation rates are faster than 5 MPI, the minimum distance to anticipated high groundwater shall be no less than 40 feet.	Requirement to be included as a condition of approval in the Grading and/or Building Permits. LRWQCB to oversee leachfield location based on percolation rates.

**TABLE 10-1A. Mitigation Measures that will Reduce Significant Impacts to Less than Significant Levels,
and are the Responsibility of Mono County to Enforce**

MITIGATION MEASURES		VERIFICATION TIMING AND RESPONSIBILITY
HYDRO 5.2(b-3)	Effluent Treatment Standards: The package plant shall be designed to produce a treated secondary denitrified effluent achieving a total nitrogen concentration of 10 mg/L. The treatment plant's performance goals for BOD, TSS, T-N, coliform, etc. shall meet the US EPA secondary treatment standards.	Requirement to be included as a condition of approval in the Grading and/or Building Permits. LRWQCB to verify compliance.
HYDRO 5.2(b-4)	Title 22 Compliance: Operation of the proposed subsurface drip irrigation system will require either an approved Title 22 engineering report from Division of Drinking Water (DDW), or a letter from DDW stating that the project does not need to satisfy Title 22 criteria; the alternative leach field location shown on the Tioga Workforce Housing Concept Plan shall replace the proposed leachfield location if required for Title 22 Compliance.	Requirement to be included as a condition of approval in the Grading and/or Building Permits. DDW to determine whether Title 22 applies.
HYDRO 5.2(c-1)	Groundwater Level Monitoring: The applicant shall provide Mono County Public Health Department with monthly measurements and recordings of static water levels, airlift pumping water levels, pumping rates and pumped volumes for the onsite wells. The monthly measurements shall be provided to the County for at least the first year to establish a baseline; monitoring shall continue on at least a quarterly basis thereafter.	Requirement to be included as a condition of approval in the Grading and/or Building Permits. Mono County Health Dept. to oversee monitoring results, and plan changes if and as needed.
BIOLOGICAL RESOURCES		
BIO 5.3(a-1)	Shrubland Revegetation: Proponent shall prepare a Revegetation Plan for the purpose of returning all areas that are temporarily disturbed by the project to a condition of predominantly native vegetation. Mono County will review this plan for approval within 60 days of the start of project construction. The revegetation plan will, at a minimum, include locally derived seed or plants from the following list of species, in order to emulate remaining Great Basin Mixed Scrub on-site: Jeffrey pine, single-leaf pinyon, antelope bitterbrush, big sagebrush, mountain mahogany, desert peach, wild buckwheat (<i>Eriogonum microthecum</i> , <i>E. fasciculatum</i> , or <i>E. umbellatum</i>), yellow rabbitbrush, silvery lupine, chicalote, basin wildrye, and any of the regionally common needlegrasses. The Plan must also include methods and timing for planting, supplemental inputs including plant protection and irrigation using treated sewage effluent, success criteria that include a return to at least 50% of pre-project native vegetation cover within five years, and a monitoring and reporting program that includes annually collected revegetation progress data, data and trends summary, and photographs for transmittal to Mono County prior to December 1 of each of the first five years following project construction (or until all success criteria are attained.) Monitoring data collection and reporting shall be performed by a qualified botanist who has been approved by Mono County.	Requirement to be included as a condition of approval in the building permit issued by Mono County. County to oversee monitoring results, and plan changes if and as needed.
BIO 5.3(a-2)	Rockcress Avoidance: The construction contractor shall be required to install temporary fencing along the western edge of the existing roadway where it approaches the Masonic rockcress population, in order to prevent accidental damage due to incursion by equipment. Fencing shall remain in place through the completion of all construction phases.	Requirement to be included as a condition of approval in the Grading and/or Building Permits issued by Mono County.
BIO 5.3(a-3)	Nesting Bird Survey: A pre-disturbance nesting bird survey shall be conducted within seven days prior to the start of vegetation and ground-disturbing project activities, by a qualified biologist, if construction is scheduled to begin	Requirement to be included as a condition of approval in the Grading and/or Building

**TABLE 10-1A. Mitigation Measures that will Reduce Significant Impacts to Less than Significant Levels,
and are the Responsibility of Mono County to Enforce**

MITIGATION MEASURES		VERIFICATION TIMING AND RESPONSIBILITY
	during the period March 15 – August 15. All potential nesting habitat within 200 feet (passerine birds) or 600 feet (raptors) from the project-related disturbance limits will be included in the survey. Survey results will be reported to CDFW, Bishop, Mono County, and to the construction foreperson within 24 hours of survey completion, in order to formulate avoidance measures. Appropriate measures (at a minimum including nest buffering and monitoring) will be decided in consultation with CDFW on a nest-by-nest basis.	Permits issued by Mono County. CDFW, in consultation with Mono County and project applicant, to review bird survey results and reporting, and to determine whether added protections are needed.
BIO 5.3(a-4)	Badger Survey: A pre-disturbance denning badger survey shall be scheduled within three days prior to the start of vegetation and ground-disturbing project activities. The survey will be performed by a qualified biologist. The survey will include the entire area where disturbance will occur, as well as buffers of 100 feet in all directions. Survey results will be reported to CDFW, Bishop, Mono County, and to the construction foreperson within 24 hours of survey completion, in order to formulate avoidance measures. Unless modified in consultation with CDFW, active dens will be buffered by a minimum distance of 100 feet, until the biologist finds that den occupation has ended.	Requirement to be included as a condition of approval in the Grading and/or Building Permits issued by Mono County. CDFW, in consultation with Mono County and project applicant to review bird survey results and reporting, and to determine whether added protections are needed.
BIO 5.3(a-5)	Pet Enclosure, Pet Leashing, Eviction for Noncompliance: Tenants wishing to have pets shall be required to construct and pay for a fenced enclosure, as approved by property management, to prevent their pet(s) from entering undeveloped portions of the property and (unfenced) adjacent lands. The tenancy agreement for all units will include a common rule of leashing of all pets whenever they exit the housing units or fenced enclosure. Enforcement of the enclosure and leashing requirements shall continue through the life of the project; the penalty for violation of this regulation shall include eviction following two advisory noncompliance notices by the housing manager.	Requirement to be included in the Covenants, Conditions and Restrictions (CC&Rs) developed for the Workforce Housing property, and strictly enforced by the Workforce Housing Manager. Mono County shall be provided a copy of the complying CC&Rs and tenancy agreement prior to Certificate of Occupancy issuance.
BIO 5.3(d-1)	Shielding of Night Lighting: Night lighting shall be shielded and in compliance with Chapter 23, Dark Sky Regulations, of the General Plan to maintain at existing levels the degree of darkness along the corridor of undeveloped vegetation between Tioga Inn developments and US395. Deer movements across the highway during spring will be facilitated by keeping this corridor open (no linear barriers, no brightly lit signs, no future revegetation or project development) so that movements will be deflected to the east and south of the new housing area rather than back across the highway.	Requirement to be included as a condition of approval in the Building and/or Grading Permit issued by Mono County.
BIO 5.3(d-2)	Burn Area Restoration: All areas burned in 2000 within the property (14.8 acres, minus acres that are permanently converted to approved Tioga Specific Plan facilities) will be seeded using locally collected bitterbrush (<i>Purshia tridentata</i>), at a rate of 4 pounds/acre pure live seed. In addition, diverse shrubs and grasses with available locally collected seed (acceptable species are: antelope bitterbrush, big sagebrush, mountain mahogany, desert peach, wild buckwheat (<i>Eriogonum microthecum</i> , <i>E. fasciculatum</i> , or <i>E. umbellatum</i>), yellow rabbitbrush, silvery lupine, chicalote, basin wildrye, and any of the regionally common needlegrasses) will be spread, bringing the total application rate to 10 pounds/acre. Seeding will be performed just prior to the onset of winter snows in the same year that project construction is initiated. If, after a period of five growing seasons has passed, a qualified botanist	Requirement to be included as a condition of approval in the Building and/or Grading and/or Building Permits issued by Mono County. County to oversee monitoring and reporting program, and County to oversee revegetation plan changes if and as needed.

**TABLE 10-1A. Mitigation Measures that will Reduce Significant Impacts to Less than Significant Levels,
and are the Responsibility of Mono County to Enforce**

MITIGATION MEASURES		VERIFICATION TIMING AND RESPONSIBILITY
	finds that total live cover provided by native shrub and grasses has not increased to 20% above that measured at adjacent (unseeded) burn scar areas, then the entire burn area will be seeded again as described above.	
BIO 5.3(d-3)	Protected Corridor along US 395: Mule deer mortality along US 395 adjacent to the project site can be minimized by ensuring that the corridor between US 395 and all Tioga project elements (including the hotel, the full-service restaurant, and the workforce housing) remains entirely free of linear barriers, brightly lit signs, and new surface structures (excepting one new above-ground sewage/reclaimed water pump control structure with no more than 100' feet of building area), with no future revegetation of native plant materials. This mitigation measure applies only to lands owned by the project applicant and outside of the approved hotel and restaurant uses.	Requirement to be included as a condition of approval in the Building and/or Grading Permit issued by Mono County.
BIO 5.3(d-4)	Waste Receptacles: All waste receptacles will be designed to prevent access by ravens and bears. Signs will be clearly posted informing of the need to secure trash, pets, and stored food from wildlife access. Rental agreements will include restriction against storage of trash or unsecured food items outside residences (including in vehicles) for any length of time.	Requirement to be included as a condition of approval in the Building and/or Grading Permit issued by Mono County. Wording also to be included in the Workforce Housing CC&Rs and strictly enforced by the HOA manager.
CULTURAL & TRIBAL CULTURAL RESOURCES		
CULT 5.4(a)	Discovery of Archaeological Resources: All construction plans that require ground disturbance and excavation shall contain an advisory statement that there is potential for exposing buried archaeological resources. The interested Tribes shall be notified by postal mail and electronic mail no less than 10 days prior to the initiation of any grading or earthwork, and are invited to observe the work at any time without compensation. In the event of the discovery of archaeological resources during construction, ground disturbance shall be suspended within a 200-foot radius of the location of such discovery until the area can be evaluated by a qualified archaeologist. Work shall not resume in the defined area until the archaeologist conducts sufficient research and data collection to make a determination as to the significance of the resource. If the resource is determined to be significant and mitigation is required, the first priority shall be avoidance and preservation of the resource. All feasible recommendations of the archaeologist shall be implemented. Mitigation may include, but is not limited to, in-field documentation and recovery of specimens, laboratory analysis, preparation of a report detailing the methods and findings of the investigation, and curation at an appropriate collection facility. Because archaeological resources are likely to also be tribal cultural resources, evaluation and recommendations shall be developed in collaboration with the Kutzedika'a Indian Community of Lee Vining and the Bridgeport Indian Colony, and the tribes shall be responsible for determining who will monitor the subsequent ground disturbance. The tribal monitor shall receive reasonable compensation for time and travel costs. Reasonable compensation shall include mileage at standard IRS rates, and an hourly fee (including monitoring and travel time) not to exceed \$40.	Requirement to be included as a condition of approval in the Grading and/or Building Permits issued by Mono County.

**TABLE 10-1A. Mitigation Measures that will Reduce Significant Impacts to Less than Significant Levels,
and are the Responsibility of Mono County to Enforce**

MITIGATION MEASURES		VERIFICATION TIMING AND RESPONSIBILITY
CULT 5.4(b)	<p><u>Discovery of Paleontological Resources:</u> All construction plans that require ground disturbance and excavation shall contain an advisory statement that there is potential for exposing buried paleontological resources. In the event of the discovery of paleontological resources during construction, ground disturbance shall be suspended within a 200-foot radius of the location of such discovery until the area can be evaluated by a qualified paleontologist. Work shall not resume in the defined area until the paleontologist conducts sufficient research and data collection to make a determination as to the significance of the resource. If the resource is determined to be significant and mitigation is required, the first priority shall be avoidance and preservation of the resource. All feasible recommendations of the paleontologist shall be implemented. Mitigation may include, but not limited to, in-field documentation and recovery of specimens, laboratory analysis, preparation of a report detailing the methods and findings of the investigation, and curation at an appropriate paleontological collection facility.</p>	Requirement to be included as a condition of approval in the Grading and/or Building Permits issued by Mono County.
CULT 5.4(c,d)	<p><u>Discovery of Human Remains.</u> No evidence of Native American burials, which are considered Tribal Cultural Resources, was found in the project area. However, unmarked Native American graves may, potentially, be encountered during ground disturbance or excavation. Because no cultural tribal resources have been identified on the project site but the potential exists for subsurface resources that cannot be seen at this time, the interested Tribes shall be notified by postal mail and electronic mail no less than 10 days prior to the initiation of any grading or earthwork, and are invited to observe the work at any time without compensation.</p> <p>All construction plans that require ground disturbance and excavation shall contain an advisory statement that (1) there is potential for encountering human burials, (2) the Indian communities have been invited to observe the work at any time without compensation, (3) if human remains are encountered, all work shall stop immediately and the County shall be notified, and (4) that human remains must be treated with respect and in accordance with State laws and regulations.</p> <p>In the event of the discovery of human remains at any time during construction, by either project personnel or the Tribal monitor, ground disturbance shall be suspended within a 200-foot radius of the location of such discovery and the Kutzedika'a Indian Community of Lee Vining and the Bridgeport Indian Colony shall be notified. California Health and Safety Code §7050.5 stipulates that if human remains are discovered during project work, the specific area must be protected, with no further disturbance, until the county coroner has determined whether an investigation of the cause of death is required. If the human remains are determined to be those of a Native American, the coroner must contact NAHC by telephone within 24 hours. PRC §5097.98 states that NAHC must then notify the most likely descendant community, which then inspects the find and makes recommendations how to treat the remains. Both laws have specific time frames, and PRC 5097.98 outlines potential treatment options. Representatives of the most likely descendant community shall be responsible for determining who will monitor the subsequent ground disturbance. The tribal monitor shall receive reasonable compensation for time and travel</p>	Requirement to be included as a condition of approval in the Grading and/or Building Permits issued by Mono County.

**TABLE 10-1A. Mitigation Measures that will Reduce Significant Impacts to Less than Significant Levels,
and are the Responsibility of Mono County to Enforce**

MITIGATION MEASURES		VERIFICATION TIMING AND RESPONSIBILITY
	costs involved in developing recommendations for and treating the remains, and for monitoring subsequent ground disturbance. Reasonable compensation shall include mileage at standard IRS rates, and an hourly fee (including monitoring and travel time) not to exceed \$40.	
PUBLIC HEALTH AND SAFETY		
SFTY 5.7(d)	Emergency Evacuation: A public safety evacuation plan shall be prepared for use by onsite residents and businesses in the event of a natural disaster.	Requirement to be included as a condition of approval in the Building and/or Grading Permits issued by Mono County.
HAZ 5.7(e-1)	Fire Risk: The project shall incorporate the wildland fire protection measures listed below and detailed in the Community Wildland Fire Protection Plan – Home Mitigation section, CWPP pages 36-40 (or as updated), and in any other fire regulations (CalFire, PRC §4290 & N§4291, California Fire Code, etc.): <ul style="list-style-type: none"> • Maintenance of adequate defensible space for all homes; • Use of noncombustible materials for decks, siding and roofs; • Screening or enclosing of open areas below decks and projections, to prevent the ingress of embers • Routine clearing of leaf & needle litter from roofs, gutters and foundations; • Routine clearing of flammable vegetation away from power lines near homes; • Routine clearing of weeds & flammable vegetation to at least 30' from propane tanks; • Use of fire and drought tolerant plantings, especially within 30-feet of homes, and avoidance of flammable ornamentals such as conifers; • Routine thinning of vegetation along access roads and driveways; • Provision of turnarounds at the end of all driveways and dead-end roads; and • Reflective address markers on all driveways and homes. • Receive a will serve letter from the Lee Vining Fire Protection District. 	Requirement to be included as a condition of approval in the Building and/or Grading Permits issued by Mono County.
HAZ 5.7(e-2)	Fire Hydrants: Multiple fire hydrants shall be provided on the project site, at locations that will enable all project elements to be reached with use of existing LVFPD water hoses. All hydrants shall feature a breakaway design feature wherein flows shut down if the hydrant is damaged.	Requirement to be included as a condition of approval in the Building and/or Grading Permit issued by Mono County, with input from Lee Vining FPD.

**TABLE 10-1B. Mitigation Measures that will Reduce Significant Impacts but NOT to Less than Significant Levels,
and are the Responsibility of Mono County to Enforce**

MITIGATION MEASURES		VERIFICATION TIMING AND RESPONSIBILITY
GEOLOGY AND HYDROLOGY		
GEO 5.1(a-2)	<u>Mud and Debris Flows:</u> Mitigation Measure GEO 5.1(a-1) would require that debris flow mitigation (debris/desilting/retention basins and/or rip rap or other mitigative measures) be used in any canyon or gully areas where structures would be located. This mitigation measure would reduce the potential impact of eruption-related mudflows, but not to less than significant levels. The potential exposure of people and structures to mudflows from winter volcanic eruptions is considered to be a <i>significant and unavoidable impact</i> of project approval.	Requirement to be included as a condition of approval in the Grading and/or Building Permits issued by Mono County.
AESTHETICS		
AES 5.12(a,b)	<u>Screening Design Features:</u> All landscaping, landscape irrigation, building materials and design elements used in development of the proposed project elements shall be selected and applied in a manner that screens or minimizes offsite views of project elements to the maximum feasible extent, consistent with other mitigation requirements outlined in this EIR. Even with implementation of Mitigation AES 5.12(a), project impacts on scenic and visual resources will be <i>significant and unavoidable</i> .	Requirement to be implemented as part of the Mono County Building and/or Grading Permit review and approval process
AES	<u>Dark Sky Regulations:</u> Mandatory compliance with requirements of the Dark Sky Ordinance and Scenic Combining District will minimize the impact of new sources of light and glare from the Tioga Workforce Housing Project. Moreover, the requirements would also apply to outdoor lighting on existing elements of the Tioga site, as well as previously approved but not-yet constructed elements including the hotel and full-service restaurant. Lighting and glare impacts from these uses would be reduced as a result of project approval. However, even with these mitigating elements, it is anticipated that the project will have a <i>significant and unavoidable adverse impact</i> on light and glare.	Requirement to be implemented as part of the Mono County Building and/or Grading Permit review and approval process.

**TABLE 10-2. Mitigation Measures that are the Responsibility or Purview of
Public Agencies other than Mono County**

MITIGATION MEASURES		VERIFICATION TIMING AND RESPONSIBILITY
BIOLOGICAL RESOURCES		
BIO 5.3(d-5)	Deer Passage: Caltrans installation of a deer passage along the US395 culvert at Lee Vining Creek would significantly reduce the frequency of unsafe deer crossings in the project area, and associated collision hazards to deer and to motorists. Caltrans has installed deer crossings at other streams along the migratory portion of US395, with significant benefits. If the Tioga Workforce Housing Project is approved, the applicant will collaborate with Mono County Community Development Department to submit a Sustainable Communities grant application under the Rural Innovation Project Area (RIPA) program. A priority use of program funds, if awarded, will be to develop a safe pedestrian and cycling access route between the project area and the community of Lee Vining. This access route will be designed to incorporate a deer passage in the vicinity of the US395 culvert at Lee Vining Creek, following a study to determine the best location.	Sustainable Communities Grant application to be submitted by Mono County in collaboration with project applicant. It will be up to the U.S. Department of Housing and Urban Development (HUD) to determine whether the objectives of this application merit funding.
PUBLIC HEALTH AND SAFETY		
SFTY 5.7(c)	Air Navigation Safety: The project shall comply with established regulations set forth by the Federal Aviation Administration (FAA) (i.e., Title 14, Chapter I, Subchapter E, Part 77 , and FAA Advisory Circular 150-5300 13A), and by the California Department of Transportation Aeronautics Division (i.e., §21659 of the California Public Utilities Code).	Compliance with federal and state regulations, including requirements outlined in the FAA Determination letter dated 12/7/2018, are under the authority of the FAA and California Department of Transportation Division of Aeronautics. Mono County may request that FAA Determination Letters be provided to Mono County Public Works prior to issuance of Building and/or Grading Permits as informational documentation.
PUBLIC SERVICES AND UTILITIES		
SVCS 5.8(a-1)	Pedestrian Safety: If the Tioga Workforce Housing Project is approved, the applicant will collaborate with Mono County Community Development Department to submit a Sustainable Communities grant application under the Rural Innovation Project Area (RIPA) program. A priority use of program funds, if awarded, will be to develop a safe pedestrian and cycling access route between the project area and the community of Lee Vining.	Sustainable Communities Grant application to be submitted by Mono County in collaboration with project applicant. It will be up to HUD to determine whether the objectives of this application merit funding.
TRAFFIC AND CIRCULATION		
TFFC 5.9(a-2)	Vista Point Entry: To reduce conflicts between vehicles traveling along Tioga Road (SR-120), vehicles accessing the Caltrans' parking apron, and vehicles entering the Tioga Mart site, it is recommended that Caltrans consider implementing a designated point of ingress and egress for the apron parking area.	Caltrans would have sole authority over whether and when to implement this measure.

**TABLE 10-2. Mitigation Measures that are the Responsibility or Purview of
Public Agencies other than Mono County**

MITIGATION MEASURES		VERIFICATION TIMING AND RESPONSIBILITY
TFFC 5.9(a-3)	<u>Apron Parking:</u> To enhance safety and utilization of the apron adjoining the Tioga Mart site, it is recommended that Caltrans work with the project owner to modify the apron parking arrangement so as to maintain adequate sight distance for vehicles entering and exiting the Tioga project site.	Caltrans would have sole authority over whether and when to implement this measure.
TFFC 5.9(a-4)	<u>Relocation of YARTS Stop:</u> To enhance transit use, it is recommended that YARTS and Caltrans consider relocating the existing YARTS bus stop to improve sight distance at the intersection of the project site access road and SR-120. Bus stop relocation may also minimize the potential for conflicts between busses and vehicles parking on the apron and/or entering the project site.	YARTS and Caltrans would have joint authority over whether and when to implement this measure.
TFFC 5.9(c-1,2)	<u>Intersection Signalization or Roundabout:</u> It is recommended that Caltrans consider installing a traffic signal or a roundabout at the US 395/SR 120 intersection. This change would serve to enhance vehicle safety and improve the peak-hour level of service at this intersection.	Caltrans would have sole authority over whether and when to implement this measure.

TABLE 10-3. Optional Mitigation Recommendations	
Mitigation Measures	
HYDROLOGY AND WATER QUALITY	
HYDRO 5.2(c-3)	<u>Well Pump Video Survey:</u> To determine the degree of corrosion, the buildup of organic material and/or precipitates in the perforated intervals, and the current depth of the sediment fill in the bottom of the casing, the well pump may be removed and a video survey performed at the discretion of the applicant.
HYDRO 5.2(c-2)	<u>Well Monitoring for Sand Content:</u> Monitoring for possible pumping of sand may be performed on a semi-annual basis at the discretion of the applicant.
TRAFFIC AND CIRCULATION	
TFFC 5.9(a-1)	<u>Shuttle Passes:</u> At discretion of applicant, consider providing free YARTS shuttle and ESTA bus passes during the peak summer season to Tioga Inn guests and employees.

TIOGA WORKFORCE HOUSING PROJECT DRAFT SUBSEQUENT EIR



SECTION 11

REPORT PREPARERS & PERSONS CONSULTED

11.1 REPORT PREPARERS

CEQA Consultant

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Technical Consultants

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Antidegradation Analysis..... Wildermuth Environmental
Conceptual Drainage Analysis Triad Holmes Associates
Air Quality and GHG AssessmentGiroux & Associates
Noise Assessment.....Giroux & Associates
Traffic Impact Analysis..... MAT Engineering

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Mammoth Housing	Jennifer Halferty, Director
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Mono Lake Kutzadika'a Paiute Indian Community	Charlotte Lange, Chairperson Angela Eddy, Mono Paiute
Tribal Consultation, AB 52	Washoe Tribe of Nevada and California, Mono Lake Kutzadika'a Paiute Indian Community Charlotte Lange, Tribal Chair, Kuzedika'a Paiute

TIOGA WORKFORCE HOUSING PROJECT DRAFT SUBSEQUENT EIR



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APPENDIX A₁

Notice of EIR Preparation

**NOTICE OF PREPARATION
OF A SUBSEQUENT ENVIRONMENTAL IMPACT REPORT
AND SPECIFIC PLAN FOR THE TIOGA INN PROJECT**



LEAD AGENCY: Mono County Community Development Department

ADDRESS: Post Office Box 347 ♦ Mammoth Lakes, California 93546

COUNTY CONTACT: Gerry LeFrancois 760.924.1810

NOP ISSUED:

17 OCTOBER 2016

NOP COMMENTS DUE BY:

25 NOVEMBER 2016

SCOPING MEETING: 27 OCTOBER 2016 ♦ 4:30-6:30 pm ♦ Lee Vining Community Center

A. PURPOSE OF NOTICE

As Lead Agency, the Mono County Community Development Department ("the County") is planning to prepare a Subsequent Environmental Impact Report (SEIR) and Specific Plan for the Tioga Inn development. CEQA §15162 requires preparation of a Subsequent Environmental Impact Report (SEIR) when warranted by changed project circumstances, the availability of new information, potential for new environmental effects, and potential for new mitigation measures and/or project alternatives to reduce significant effects.

Mono County has prepared this Notice of Preparation (NOP) to invite your comments on the scope and content of environmental information in the forthcoming SEIR.

→ In particular, the County is requesting your input regarding:

- **Permits and Approvals:** Applicable permits and approvals that may be required from your agency and environmental review requirements associated with those approvals (please see NOP §H);
- **Significant Issues & Thresholds of Significance:** Potentially significant effects to be examined and Significance Thresholds that should be used;
- **Alternatives & Cumulative Projects:** Alternatives to the proposed project that merit evaluation in the forthcoming SEIR (please see discussion in NOP §I);
- **Related Projects:** Related projects or actions that should be considered in assessing cumulative effects;
- **Reference Materials:** Reference materials to review in setting forth baseline conditions, evaluating impacts, and mitigations.

B. PUBLIC ACCESS & PARTICIPATION

To optimize public access, the County will post project documents on the County website for review and downloading. SEIR copies will be provided at Lee Vining

Public Library and county offices in Mammoth Lakes and Bridgeport. Hard-bound copies can also be obtained for a nominal charge to cover reproduction costs. Agency and public comments and questions are welcomed throughout the review process.

C. OCTOBER 27 SCOPING MEETING

A scoping meeting will be held on 27 October 2016 from 4:30- 6:30 pm at the Lee Vining Community Center located at 296 Mattly Avenue in the community of Lee Vining. Following a brief presentation about the project and CEQA process, participants will be invited to comment on the proposed scope and focus of the forthcoming SEIR.

D. PROJECT INFORMATION

The applicants, Dennis and Jane Domaille, are proposing to construct the Tioga Inn and associated project features on the site of the existing Tioga Gas Mart and Whoa Nellie Deli, located at 22 Vista Point Drive in the unincorporated community of Lee Vining.

The project area encompasses 4 parcels totaling 67.8 acres of land within an overall ownership area of roughly 74 acres (including an outparcel with an existing road that connects Parcel 1 to the existing workforce housing on Parcel 4). State Route 120 (SR 120) provides access to the project site and also provides the only eastern access into Yosemite National Park. Located about one-half mile south of the main US 395 corridor through Lee Vining, the property is surrounded on the north, east and west by land owned by the Los Angeles Department of Water and Power (LADWP); adjoining acreage to the west is owned by Southern California Edison (SCE). The LADWP and SCE parcels are largely undeveloped but include a smattering of industrial uses, roads and utility improvements.

The project encompasses multiple elements, many of which were analyzed in the 1993 environmental and planning documents. The original concept was to provide

a full range of services and facilities for tourists (to Yosemite National Park, the Mono National Scenic Recreation Area, and the eastern Sierra Nevada generally), as well as meeting facilities, jobs and employee housing opportunities for area residents.

The current proposal embodies goals and concepts developed in 1993, with added refinements. Thus, the current proposal proposes up to 80 new workforce housing units, adds 100 seats to the full-service restaurant, adds a third story to the hotel to reduce its footprint while retaining the full 120 guest rooms, and adds a third gas pump island and overhead canopy. The proposal includes substantial additional parking to accommodate onsite guests (deli, hotel, restaurant and events) as well as a park-and-ride facility for Lee Vining residents and bus parking for Yosemite transit vehicles. The existing onsite septic system would be replaced by an onsite wastewater treatment plant to treat wastes before discharge to a designated leach field.

E. PROJECT LOCATION

The project is located at 22 Vista Point Road, close to the intersection of SR 120 and US395, and about one-half mile south of Lee Vining. The property is the location of the well-known Mobile Mart and Whoa Nellie Deli, established by Dennis and Jane Domaille in 1996. The proposed project retains all existing structures and services on the site, with the addition of the new elements described

herein. Exhibit 1 depicts the regional and local project vicinity, and Exhibit 2 shows the proposed layout of uses in the project site.

F. NOP RESPONSE PROCEDURE

Please include the name and telephone number of a contact person so that we can follow up if questions arise, and send your NOP by e-mail, fax or mail to:

Mono County c/o Gerry LeFrancois
Bauer Planning & Environmental Svcs., Inc.
P.O. Box 347 ♦ Mammoth Lakes, California 93546
Tel: 760.924.1810 ♦ Fax: 760.924.1801
e-Mail: glefrancois@mono.ca.gov

Due to time limits mandated by state law, **your response to this NOP must be sent at the earliest possible date and no later than 25 NOVEMBER 2016.** The schedule calls for the draft SEIR to be distributed for public review during late summer or autumn of 2017. If you have any questions, please feel free to contact Mr. LeFrancois (9760.924.1810), or the county's CEQA consultant (Sandra Bauer, Bauer Planning & Environmental Services, Inc., 714.397.3301).

G. NOP CONTENTS

This NOP contains ten sections addressing the proposed project and forthcoming SEIR. Table 1 below outlines the NOP contents and sections.

Table 1
NOTICE OF PREPARATION CONTENTS

A. NOP Purpose	F. NOP Response Procedure
B. Public Access	G. NOP Contents
C. Scoping Meeting	H. Responsible Agencies & Approvals
D. Project Information	I. Project Alternatives
E. Project Location	J. Environmental Effects

H. DISCRETIONARY ACTIONS, RESPONSIBLE AGENCIES

LEAD AGENCY: Mono County is the designated Lead Agency for the project. In order to implement the project, the County will be required to certify that the Final Subsequent EIR has been prepared in compliance with CEQA, approve the Mitigation Program, adopt findings, approve the Specific Plan, and verify that water supplies are adequate to serve the project.

RESPONSIBLE AGENCIES: In addition to the Lead Agency project approvals described above, the SEIR may be used by other public agencies that will consider separate permits and approvals required before the project can be implemented. Table 2 provides a preliminary outline of discretionary approvals and actions associated with the proposed Tioga Inn project.

Table 2

LEAD, RESPONSIBLE & TRUSTEE AGENCIES

LEAD AGENCY: MONO COUNTY

- Certification of the Subsequent EIR
- Adoption of the Mitigation Program
- Review by Mono Co. Health Dept. of report addressing water availability for the project
- Adoption of the Specific Plan
- Approval of Wastewater Treatment Plant ?

- Approval of NPDES General Storm Water Permit
- Review of Stormwater Pollution Prevention Plan
- Approval of a Waste Discharge Permit

Great Basin Air Pollution Control District

- New Secondary Source Permit

TRUSTEE AGENCY: CA Dept. of Fish & Wildlife (CDFW)

- SEIR review & comment on botanical and wildlife trust resources in the project area

RESPONSIBLE AGENCIES:

Lahontan Regional Water Quality Control Board

DISCRETIONARY ACTIONS: A key step in the initial review is to delineate between actions that were approved in 1993 and remain unchanged, and newly proposed actions that are now subject to discretionary approval. Table 3 is a preliminary outline

of the approved and proposed project elements. Only the newly proposed actions (shown in the right-most column) are subject to discretionary action as part of the current project proposal.

Table 3. EXISTING, APPROVED & PROPOSED LAND USES AND ACREAGES

[illegible]

I. ALTERNATIVES & CUMULATIVE EFFECTS

The purpose of alternatives is to identify feasible ways to avoid or reduce significant impacts identified in the environmental review, while meeting basic project objectives. The range of alternatives will therefore depend on findings in the SEIR, but at a minimum the SEIR will consider the mandatory 'No Project' alternative. Cumulative effects are defined as impacts that are created as a result of the project evaluated in the EIR together with other projects causing related impacts; the cumulative assessment relies heavily on the identification of other closely related past, present, and reasonably foreseeable probable future projects.

- ➔ You are invited to comment on the range of alternatives, and on the list of projects to be analyzed in the cumulative analysis.

J. ENVIRONMENTAL EFFECTS

The SEIR will be comprehensive in scope, addressing the full range of potential environmental issues. The document will focus on key issues that are expected to include:

- ❑ **Water Supply:** The SEIR will provide an updated review of project water use requirements, water supply and water availability in the project area. The review will include results of a well stress test to determine whether increased well production would have potential to impact area well facilities;
- ❑ **Waste Treatment and Water Quality:** The SEIR will assess the proposed new wastewater treatment plant and adequacy of the existing waste disposal leach field to accommodate additional loading. The SEIR will also consider water quality associated with the siting of a second well site relative to the proposed leach field. Compliance with applicable requirements and standards set by the Lahontan Regional Water Quality Control Board (LRWQCB) and the Mono County Environmental Health Dept. will be addressed;
- ❑ **Biological Resources:** An updated assessment of wildlife, vegetation and habitats will supplement information in the 1993 EIR. The SEIR will assess biological resource impacts based on current listings and regulations, and will analyze impacts to the Casa Diablo deer herd including updated review of the availability of bitterbrush-dominated stands of Great Basin Mixed Scrub and Jeffrey Pine Forest;
- ❑ **Traffic:** The SEIR will provide an updated review of ingress and egress requirements, parking and traffic demands associated with special events, overflow parking requirements, Caltrans' concerns regarding use of the SR-120 right-of-way, and Encroachment

Permit requirements. Multi-modal issues will be considered, including internal and external bicycle and pedestrian trails and facilities as well as linkage to regional trail systems serving Lee Vining and Yosemite;

- ❑ **Aesthetics:** The SEIR will incorporate updated visual and schematic assessments to reflect the proposed project modifications. Schematic renderings will be taken from the locations used in the 1993 EIR to facilitate comparison of aesthetic impacts associated with the 1993 and current project plans;
 - ❑ **Air Quality & Greenhouse Gases (GHG):** The assessment of construction and mobile source emissions will be updated, with a new assessment of GHG emissions, including impacts from the newly proposed 80-unit workforce housing structure. The assessment will also consider compliance of proposed hotel fireplaces with applicable air quality standards including PM₁₀;
 - ❑ **Cultural Resources:** Impacts on cultural resources will be assessed for the revised project, along with a mandatory consultation with Native American tribes;
 - ❑ **Public Safety:** Project impacts on public safety will be reassessed in light of proposed new access lanes and parking for onsite uses as well as proposed park and ride facilities and parking for Yosemite buses;
 - ❑ **Solid Waste:** The Subsequent EIR will assess solid waste generation for the revised plan, as well as the adequacy of solid waste disposal facilities to accommodate the added demands;
 - ❑ **Fire Safety:** Consultation with Cal Fire will be updated to evaluate adequacy of emergency access features and compliance with current fire safety regulations;
 - ❑ **Cumulative Effects, Alternatives, Mitigation Measures:** The cumulative impact assessment will be updated along with the analysis of alternatives and mitigation measures that could avoid or reduce potentially significant environmental impacts;
 - ❑ **Specific Plan:** The Specific Plan will be updated in tandem with the SEIR. Both documents will draw substantially upon information provided in the 1993 document, but with revisions to reflect changes in the project proposal and current state and county guidelines for Specific Plan and CEQA content and format.
- ➔ The County seeks your comments on the proposed scope and focus of analysis, as well as applicable thresholds of significance and key issues of particular concern. Please include this information as part of your response to the NOP and/or your comments at the scoping meeting.

APPENDIX A2

Comment Letters
on Notice of EIR Preparation

To: Mono County Community Development Department - Gerry LaFrancois

Comments on Specific Plan for Tioga Inn Project in Lee Vining , Oct. 27, 2016

From: Janet Carle, PO Box 39, Lee Vining, CA 93541
760-709-1162
jcarle@qnet.com

Thank you for the opportunity to comment on the Tioga Inn Project in Lee Vining.

I am Janet Carle, a retired State Park Ranger who worked at the Mono Lake Tufa SNR for over 20 years. I have also worked part-time as the Coordinator of the Mono Lake Volunteer program for 13 years. Recently, I helped found the Mono Climate Action group in the Basin. I am speaking today for myself as well as 14 others who have read and endorsed my comments. Their names appear at the end of my comments. Because of the short notice, we have not discussed this project at a meeting of 350 MONO, so I am not officially representing the group.

Overview: This is a critically important project for the Mono Basin, Mono County and the whole Eastern Sierra. The site is not only the eastern gateway to internationally-renowned Yosemite National Park, but also the gateway to the Mono Lake Basin, with its history of battles over water diversions and successfully reaching an agreement with Los Angeles to protect the inflows to Mono Lake. This site is a crossroads, with thousands of international visitors passing through every summer.

There is a golden opportunity with this proposal to create a project worthy of the site and its gateway status -- a groundbreaking, climate-friendly, renewable, next generation project that the community can be proud of, and that sets an example for the whole Sierra of what can be done with thoughtful planning and building. Wise energy and water use is also good for business -- major money will be saved by the tenants and the owners, and visitors want to stay in places that are "doing the right thing," recycling water and using energy wisely. Our local climate action group, 350MONO, is working toward the Mono Basin becoming a climate-friendly community, and this could be a signature project. There is certainly a great need for more motel rooms in town and for affordable workforce housing.

ENERGY: The scope of this project suggests a massive increase in energy use. The current Mobil station is installing rooftop solar as we speak. This project needs to be totally passive solar designed, with good southern exposures, insulation, roofs with solar panels, etc. Our mountain climate demands thoughtful building that minimizes the need for heating in the winter. *We would like to see enough solar installation and energy saving design elements to be a net zero energy user, and platinum LEED certified as well as exceeding the requirements of Title 24 of the State energy code.* This is the future. *Outside lighting should also be muted and pointed downwards to preserve our night skies.*

WATER: This is a huge issue throughout the Sierra. With climate change, snowfall is problematic and the old formulas of water recharge are on shaky ground. This project uses well water, a limited resource that needs to be used wisely and recycled as much as possible. With a big hotel, 2 big restaurants, 80 units of housing and a laundry, water use will go up far beyond the present demand. There is a potential for gray water (laundry, washing, showers, etc) use on landscaping, black water (treated sewage) to be dispersed underground, and an overall design that reduces water use. The Rush Creek Lodge at the Big Oak Flat entrance to Yosemite has shown that this is possible. They are

operating 143 hotel rooms on 20 acres, re-using 3.8 million gallons annually from showers, sinks and laundry to supply 95% of the water needed for outdoor irrigation of native landscaping with a gravity-flow system. They also have a capacity of 19,000 gallons per day of subsurface blackwater dispersal (treated sewage). The Tioga Inn project includes a waste water treatment plant. We would like to see *a cutting-edge, gray water recycling and black water dispersal system required by the Plan*. (see attached info on Rush Creek Lodge and their systems). There is an upcoming conference coming up in a few days on this topic near Big Oak Flat, info attached. *Rainwater capture systems* could also be designed into the project. The Mono Lake Basin's history is all about water. This project should be a showcase for using water wisely. *Native, drought-tolerant landscaping throughout this new project is desirable*. This is the future.

AFFORDABLE WORKFORCE HOUSING: There is certainly a need for additional affordable housing in the Basin. Eighty additional units is a huge increase however, especially for year-round winterized housing. This would essentially double the available housing in Lee Vining. So many additional year round residents will need more services and will impact things like the local schools. There is a need for a thoughtful discussion about the scope of the housing and the consequences that will come. The current proposal is for 80 small cabins. This is inefficient in a mountain climate with major energy demands for heating in the winter. *Two or three apartment-style buildings* could be more energy efficient. (There is a good example in Yosemite Valley with the new workforce housing near Curry Village.) Passive solar, a good southern exposure and state-of-the-art insulation is desirable.

COMMUNITY IMPACTS

Lee Vining is a small town with a big, international role to play, especially in the summer. A project of this magnitude will have an unavoidable impact on the town. It can be a positive impact. This development can be something the whole community could be proud of, as it brings jobs and prosperity to the Basin. But there will also be more intensity in the summer: more traffic and more visitors everywhere. The project developers should be encouraged to reach out to the community and try to integrate the project's needs with those of the town, such as having a room locals can use for meetings, and sponsoring and supporting local events at the facility. We also hope for an aesthetically-pleasing design that blends in well with the site.

We are all in this together, and we will all be living with this project for years to come. There is so much potential here for a next generation, groundbreaking showcase project. Please, Mono County Planners, look toward the future and let's do it right.

Janet Carle, Mono City
Sharon Geiken, Bridgeport
Robbie DiPaolo, Lee Vining
Ilene Mandelbaum, Lee Vining
Elena Espinosa, Walker
Rebecca Watkins, Lee Vining
Ann Howald, Hilton Creek
Maureen McGlinchy, Mono City
Jora Fogg, June Lake
Danielle Dowers, San Francisco
Gina Ruiz, Mono City
Duncan King, Mono City
Lynn Boulton, Lee Vining
Rhonda Starr, Mammoth Lakes
Dave Carle, Mono City

DEPARTMENT OF TRANSPORTATION

DISTRICT 9
500 SOUTH MAIN STREET
BISHOP, CA 93514
PHONE (760) 872-0785
FAX (760) 872-0678
TTY 711
www.dot.ca.gov



*Serious drought.
Help save water!*

November 17, 2016

Mr. Gerry Le Francois
Mono Community Development Dept.
P.O. Box 347
Mammoth Lakes, California 93546

File: Mno-120-11.8
NOP/SEIR
SCH #: 1992012113

Tioga Inn Development – Notice of Preparation of a Subsequent Environmental Impact Report (NOP/SEIR)

Dear Mr. Le Francois:

The California Department of Transportation (Caltrans) District 9 appreciates the opportunity to comment during the NOP phase for the proposed Tioga Inn expansion (Project), with access at State Route (SR) 120. We appreciate our interaction with you, owner – Mr. Domaille, and Project consultants. We offer the following:

- **Table 2, Responsible Agencies:** Caltrans should be added to the list, since an encroachment permit will be required for any driveway intersection improvements within State right-of way (R/W). (Consultation with Yosemite Area Rapid Transit System (YARTS) staff may also be beneficial.)
- **Traffic:** Please include the following in traffic analysis:
 - Estimate turn movements and queuing to determine impacts and merited improvements to the SR 120/US 395 intersection, and the driveway/SR 120 intersection. Possible highway improvements could include the addition/alteration of turn and/or acceleration lanes. A two lane driveway egress (existing) may be functional. However, a two lane ingress might create undesirable weaving movements prior to the hotel/gas station junction. (As you know, last September we provided traffic count data to a Project consultant.)
 - The areas both south and north of the driveway affect its operation, and must be included in traffic analysis. To the south is the YARTS bus stop/parking area. To the north, the dirt pullout area used for parking has been expanding and improper parking - limiting sight distance, has been observed. (The County and Caltrans could examine placing SR 120 parking restrictions in the Project vicinity.)
 - Ensure pedestrians and bicyclists are accommodated.

- Any improvements within SR 120 R/W will need to be constructed to Caltrans standards via the Encroachment Permit process.
 - It is commendable that the Project proposes to include “substantial additional parking to accommodate onsite guests (deli, hotel, restaurant, and events) as well as a park-and-ride facility for Lee Vining residents and bus parking for Yosemite transit vehicles.”
 - **Aesthetics:** Visual Impact analysis should consider that US 395 is designated a State Scenic Highway and that SR 120 is eligible for such designation.
 - **Hydrology:** Ensure no additional drainage is directed onto State Highway System R/W.
 - **R/W Encroachments:** Much of the picnic/landscaped area is in SR 120 R/W. The attached sketch (SR 1609-0048) shows the R/W line and some of the encroaching items. A barbed wire R/W fence was constructed with the SR 120 new highway alignment project (circa 1970). At some point in time the fence was removed south of the picnic area and north of the Project driveway (rolled-up fence remains at both ends). Mr. Domaille joined us during a site review on November 8, 2016, and said he had not contacted any agency regarding picnic area expansion.
- The Domailles will be receiving a Notice of Encroachment from the Caltrans Maintenance/Traffic Operations office. Regardless of any development proposal, further interaction with Caltrans is necessary to remedy this situation.
- **Driveway Location:** As Mr. Domaille is aware, in 1994 alterations to the property’s legal SR 120 access opening occurred, resulting in the 30-ft centered at sta. 226+33.16 and noted on enclosed “09 Mno 120 11.7 R/W Record Map.” (The paved driveway itself currently exceeds this by about 6-ft.) The proposed Project access could likely be even wider. Interaction with Caltrans R/W might be necessary to address the driveway width.

We value our cooperative working relationship with Mono County concerning private development affect upon the State transportation system. For any questions or to set up a meeting, please contact me at (760) 872-0785 or gayle.rosander@dot.ca.gov.

Sincerely,



GAYLE J. ROSANDER
External Project Liaison

Enclosures

c: State Clearinghouse
Mark Reistetter, Caltrans

From: Allison Brooker [<mailto:alliex@me.com>]
Sent: Tuesday, November 15, 2016 6:20 PM
To: Gerry LeFrancois <glefrancois@mono.ca.gov>
Subject: NOP Comment: TIOGA INN PROJECT

Dear Gerry LeFrancois,

Thank you for the opportunity to comment on the proposed Specific Plan for the Tioga Inn Project.

I have been a frequent visitor to Lee Vining and the Eastern Sierra for more than 50 of my 57 years of life. I consider myself very lucky to spend every summer camping at the top of Tioga Pass. I know the entire area well and it is very dear to me. My mother and her father before her were very active in fighting to preserve Mono Lake and the surrounding environs.

I have just become aware of this Tioga Inn project recently. I was wondering how it could be that I was not aware that all this was approved in 1993, but there was no internet, blogs or Facebook pages then! Is there no action to be taken to scale this development back?

My objections to the increase in scope to this project are based on aesthetics, cultural impact and concern for the overall economic health of Lee Vining.

There are no visuals contained in the NOP document on which to comment. How can we comment on aesthetics if there is only a footprint to review?

The existing Mobil Mart in my mind is an unremarkable, oversized mini-mall gas station to begin with. A bigger version of that will not be better!

The personality of towns along Highway 395 have been complexity denigrated over the decades. Mojave is one gas station and fast food outlet after another, resulting in local small businesses being pushed out and a major loss in the quality of life to the town's inhabitants. There have been major declines to the character of Independence and Big Pine. If we have the power to make choices to protect the historical nature and character of Lee Vining, I move to do so. Lee Vining will not be able to come back if we permit a larger entity to dominate business in the area, due to their prime location at the exact intersection of Hwys 120 and 395.

Although the Tioga Mart is technically a small business, and the owners are local, exploiting this location to the detriment of an entire town should be minimized to the best of your ability.

Here are my specific comments:

- A massive three story hotel structure is way out of proportion to the environment and dwarfs the local businesses
- An 80-unit housing structure would also be too large a scale and out of proportion to the area. Logically it would remain underutilized in the off months. Tioga Pass has the shortest season of all the trans-Sierra passes. Again, I can't comment on what it would look like since visuals are not presented. This is so important! It could look like a Motel 6 or the Westin Monache. We need to see the plans to comment on it! If they cannot be presented to us, then this decision must be postponed.
- 200 restaurant seats are too many and grants the Tioga Inn an unfair advantage over the local businesses. 100 seats are more than plenty.
- A car rental agency outside a National Park for which the movement has been to reduce single vehicle traffic makes no sense! It makes no sense period in this location. One would have to drive there in a car or take a bus to get there in the first place to then rent a car.
- Two gas pump islands is enough! They are quite large and I have never had to wait to purchase gas there.
- I do support the electric vehicle charging station
- While I do support the notion of 'meeting facilities, jobs and employee housing opportunities for area residents' a large scale, unremarkable architectural structure will do more harm than good. The beautiful Mono Basin Scenic Area Visitor Center offers facilities and an auditorium that well accommodates the activities and events of the area. I have attended many and found nothing lacking.

Other experts can speak to the impact on wildlife and environment. It is quite a large scale project and that there won't be impacts to either seems extremely unlikely.

I strongly urge Mono County does NOT move forward with approving this expansion. More detailed information must be made available to comment on. This is a fragile and cherished environment that needs to be respected and preserved, not marred with large-scale, unremarkable structures for the ease and convenience of motorists passing through on short-term visits.

If there is an opportunity to reduce the scope of this 'approved' development, I will be there every step of the way to participate in that action.

Thank you again for the opportunity to comment.

Kind regards,

Allison Brooker
2556 Glen Green Street
Los Angeles, CA 90068
213.910.9422
alliex@me.com

November 1, 2016

Gerry LeFrancois
Mono County Community Development Department
PO Box 347
Mammoth Lakes, CA 93546
glefrancois@mono.ca.gov

Re: Scoping Comments on the Tioga Inn Project

Dear Sir:

There are many good components about the Tioga Inn Project but I have one overriding concern and that is the amount of groundwater that will be consumed by this project. California is in the 6th year of a prolonged drought. To approve a water-intensive development at this time is knowingly creating a huge problem 5-10 years down the line. Dennis Domaille does not believe in Global Warming, but I do and so do 97% of the world's scientists. It is the reason we are in the 6th year of a drought and it will continue indefinitely until GHG levels are brought down to 350 ppm. Greg Stock, the Yosemite National Park geologist, has been measuring the Lyell Glacier for years and projects it will melt out in 5-10 years of drought (see <https://vimeo.com/132441992>). If one of California's largest glaciers is shrinking, the others will be disappearing around that same time too. The Mt. Conness, Mt. Dana and Mt. Gibbs glaciers/snowfields feed Lee Vining Creek and keep it flowing well into the fall. LV Creek recharges the groundwater on the southwest side of the Mono Basin. It will be a crisis when these glaciers are gone. Whether someone draws from the young recharge water or the ancient aquifer, they are drawing from groundwater that is part of the public trust and must share.

It is critical to know how much groundwater the project will use when it is fully developed. The 1993 Tioga Inn Specific Plan projected the project's groundwater usage would be 150 gpm. This needs to be re-calculated. Since part of the project was developed 20 years ago, there is more information to go on. In the Oct. 27th community meeting, Dennis said he was pumping 66 gpm for the Tioga Gas Mart and the residences from May-October and much less during the winter. He said hotels generally use 30 gpm/room (30x120=360), which would be a total of 426 gpm (360+66) making the Tioga Inn Project the single biggest user of groundwater in the Mono Basin. It would exceed what Mono City collectively uses. The town of LV isn't metered yet, but will be. Until then, we don't know how this project would compare to the town. However, the LVPUD and the MCPUD have the ability to restrict their users' water consumption, if necessary.

The SEIR needs to take much more into account than was considered in the 1993 EIR, which fell far short of the mark. Here are my recommendations:

1. **Mono Lake**--One of the County's most important assets is Mono Lake. Mono Lake is at a tipping point right now from the 40-year drought LADWP imposed on the lake and the natural drought of the past 5 years. The lake is at its second lowest level since Europeans came to this basin. Even with 80% of normal snowpack in the mountains above us last winter (2015-16), Mono Lake dropped a foot. The lake is at risk and the SEIR needs to prove that pumping groundwater for the Tioga Inn Project will not affect it.
2. **Local Springs**--There are many freshwater springs around and under the lake. Wildlife use the springs at the lakeshore. Deer, coyotes, bobcats, and mountain lions drink from these springs. Birds drink from these streams too and wash their feathers in it. As springs and streams dry up due to Climate Change, protecting the ones that remain becomes a priority. The Mono Basin is a wildlife corridor and will become even more important as animals migrate, seeking refuge from the impacts of Climate Change. The springs also contribute the calcium that creates tufa, the unique feature of Mono Lake that brings 365,000 visitors from around the world each year. The SEIR must show that the project's groundwater pumping must not affect these springs. The project's Well #1 starts 400' above the level of Mono Lake and goes 580' deep. It could affect the springs. A current stress test needs to measure the flow of the springs and needs to age the water from the well and the springs to determine if they are connected.
3. **LV Creek**--In 1984, when the first test was done on the Tioga Inn Project's Well #1, LV Creek was fully diverted by LADWP and the streambed from the diversion to Mono Lake was dry. The creek was re-watered in 1986 under specific agreements as to how many cfs were to flow downstream. More recently, the agreement has been refined even further to mimic the natural hydrological flows. The SEIR must ensure that the project's groundwater pumping does not undercut those agreements. It must not reduce the contractual cfs in LV Creek from the diversion to the mouth of the creek. The 1992 well tests did show there was no impact, but the stream flow and ground saturation was just starting. I suspect the lower LV Creek flow was not checked below the town.
4. **Neighboring Wells**--There are private wells on nearby properties that precede Dennis's well. The closest well is on the Andrew's property that is across the highway from Well #1. They are a Native American family that has been living here since the Europeans came to the Mono Basin. There is also a well at the USFS Ranger Station and probably some in town. The LVPUD is required to have a backup water source and will be drilling a well nearby too. The current LVPUD water source is a spring up LV canyon that was dwindling in volume last year due to the drought. As the drought continues, the town of LV will be relying more and more on well water. All these wells (including the project's) will eventually dry up due to the drought, but the process will be accelerated by the project's higher rate of pumping. It is not fair that local citizens should have to pay to drill new wells every so many years because of this project. That imposes a huge financial burden on those that can least afford it. The project's specific plan should stipulate that the

developer must post a bond to fully reimburse the owners of the neighboring wells for the cost of drilling new wells for as long as the project is pumping groundwater—especially the Andrew family's well.

5. **Surface Vegetation**--Less recharge water flowing beyond the Tioga Inn Project's well site(s) to the basin floor, might affect the surface vegetation in the basin. Sagebrush, Bitterbrush, Rabbitbrush, and Jeffrey Pines have deep root systems that can reach the shallow groundwater flows coming from the mountains above. There may be a point where the pumping for the Tioga Inn Project prevents a sufficient amount of water from flowing past the well site and into the basin to keep the natural vegetation in the basin alive. Bitterbrush is a very nutritious for deer, antelope, and the sheep that still graze in the Basin. It provides cover for the Bi-State Sage Grouse, which also live in the Basin. A baseline assessment should be made and the vegetation monitored.
6. **Prepare for Adjudication**--The SEIR or the County should list each neighboring well, its depth, when it was put in, and its current usage to prepare for future adjudication of groundwater rights as the drought continues. The SEIR should also determine the size of the aquifer that the project is tapping into and the age of the water, whether it is ancient water or young water (from stream recharge). California is far behind the rest of the western, drought-stricken states in adjudicating groundwater rights. A little foresight on the part of the County now, can lay the groundwork for resolving future conflicts, especially since it has approved a project that will certainly trigger one.

The genie is out of the bottle with the 1993 project approval, but the County can still mitigate the consequences. The specific plan can require annual monitoring of the water table level, the recharge flow, the local springs, the basin vegetation, etc. More importantly, it can and must cap the Tioga Inn Project's groundwater use. There **must** be a restraint. The restraint could be tied to the recharge rate i.e. as the glacier melt dwindles, pumping is reduced equivalently or there might be a cap on how much the ground table is allowed to drop. Once the threshold is reached, the project would be cut back to the level of the other users and after that, all users should be reduced equally. We want to avoid the situation where the citizens in LV are conserving water, flushing only once a day, and showering every other day to save Mono Lake while hotel guests are freely using water without any concern for the consequences. Recycling grey water will not solve this problem and I strongly recommend that the hotel not include a swimming pool. Please keep the water hog in check.

Sincerely,

Lynn Boulton
PO Box 234
Lee Vining, CA 93541

From: Lynn Boulton [<mailto:amazinglynn@yahoo.com>]
Sent: Tuesday, November 8, 2016 10:27 AM
To: Sandra Bauer Sandra@bpesinc.com
Subject: Re: Tioga Inn Project--Scope of Hydrology Evaluation

Dear Ms. Bauer,

I sent this email early yesterday and it was just now returned. The Mono County website doesn't have the correct email address for you in the agenda packet, which is where I got your email address. So this email is too late for you to consider raising the contract rate with the County as it is on the Board's agenda for today. You probably needed more time to change the contract anyway.

I'm concerned that the planned hydrology tests are limited to just figuring out if Dennis' well has enough water to support his project plans and are not robust enough to evaluate the impacts of a significant increase in groundwater pumping on the Mono Basin environment. I hope the hydrology tests include determining the age of the groundwater Dennis' well is tapping into, the age of the springs going into Mono Lake, the age and size of the southern basin's aquifer, and the impacts to neighboring wells, the local springs that flow into Mono Lake, and to the flows in LV Creek. Will they?

Regards,
Lynn Boulton
Lee Vining

Gerry LeFrancois
Mono County Community Development Department
PO Box 347
Mammoth Lakes, CA 93546
glefrancois@mono.ca.gov
cc: wsigamura@mono.ca.gov

Re: Scoping Comments on the Tioga Inn Project

Dear Sir:

I appreciate the opportunity to comment on the Tioga Inn Project. Additional higher paying jobs and employee housing is needed in Lee Vining and I'm sure, visitors will welcome more hotel rooms. However, I believe the project will detract from the peaceful and natural setting of the Mono Basin. It splits Lee Vining into an upscale self-contained area and a quaint, run-down town center. It will lead to a traffic light at Highway 120 and 395, the first between Gardnerville and Bishop, and it will create longer queues at the entrance to Yosemite National Park.

The Hotel:

I'd like to see the project scaled down to mitigate the project's impact on the Mono Basin viewshed and to be more in line with the County's dark sky policy. I support a two-story, not three-story, hotel and recommend that the restaurant be built inside (or beside the hotel) and not at the flagpole. Perhaps the County could negotiate the reversal of approval for the restaurant at the flagpole in exchange for a partial 3-story hotel. If not, the coffee shop in the 1993 plan can be built lower (with excavation) than the Tioga Gas Mart to not block its view of Mono Lake. With the old or the new plan, the view of the lake from the Tioga Gas Mart will be partially blocked anyway by the hotel. The hotel will act like a wall to everyone's right narrowing the arc of the view to just the northeast. Even with a restricted view people will still enjoy eating outdoors at the Whoa Nelly Deli. Besides, Mono Lake will be continuously shrinking with Global Warming so the value of its view will diminish over time. To prevent the wall effect the hotel creates, maybe the front of the hotel can be broken up. Maybe part of the hotel could be more forward than the rest, tiered, or maybe just a part of it could be 3-stories.

I assume all the mitigations in the 1993 Specific Plan still apply. However, one of the mitigations required the hotel to have an alpine design. That would work in Mammoth, but an alpine style in Lee Vining doesn't really fit with sagebrush. Instead I'd like to suggest that the exteriors of the hotel and the restaurant(s) be unique, tasteful, and rustic—maybe matching the USFS Lee Vining Visitor Center. It would be a travesty to have a hotel chain's or restaurant chain's regular design in such an unusual setting and location. If a chain were to move in, they should design unique buildings especially for this location.

Because anything built in sagebrush-steppe terrain will stand out, an alternative is to convert the sagebrush to a Jeffery/aspen tree forest by planting a lot of trees in front of the hotel and around it to hide the buildings and block the lights. The hotel will have a moraine behind it so it is only visible coming from town. I think one could get away with a bit of forest there and have it look more or less natural. There are a few Jeffery trees growing there now. It would also match the terrain in the riparian zone of Lee Vining Creek just across the street. This approach assumes that greywater would be used to make the trees grow. Trees will obviously block the view of Mono Lake from the hotel, but hotel guests spend less than a minute looking out their windows even when there is a view.

To minimize the amount of pavement and the unnatural feel that comes with it and to have a darker sky, the hotel parking should be underground. Then the parking area could be as large as one wants and as lit up as one wants and there would be more sagebrush terrain for wildlife passing through and less of a “pave paradise” effect.

Gas Pump:

The sodium lights of the existing gas pumps are extremely bright and very visible from town and the highway. Dimmer lights should be used for the existing two gas pumps as well as for the third gas pump. The Tioga Gas station’s lights are brighter than the lights at the Shell station in town.

The Flagpole Restaurant:

The 1993 Tioga Inn Project Specific Plan determined that a restaurant on top of the moraine east of the flagpole conformed to dark sky and low profile/aesthetic requirements of the Mono County General Plan because the building would be a pretty (no guarantee) and could be screened by natural landscaping. I disagree. It will be sitting on top of a bare moraine, on a promontory that is visible from around the lake. The native sagebrush is not high enough to cover it. Screening it with trees will not make it blend in with the surrounding low sagebrush-steppe vegetation. A clump of trees in the middle of the sagebrush will look out of place. However, since a small restaurant has already been approved for that location, the new site plan needs to minimize the visual impact. A 24-hour restaurant should not be allowed, nor neon trademark signs on or around the building (or on the promontory), nor lighted trademark signs after closing time, and no trademark signs visible from anywhere in the Mono basin from that promontory. Shock went through the room when Dennis mentioned the appalling possibility that an Applebee’s might be there. All we need is an Applebee’s neon sign that can be seen from anywhere in the Mono Basin. Besides, there is nothing special about their food that would be in line with the uniqueness of the Mono Basin. I personally think a windbreak with outdoor benches to watch the sunset would be more fitting instead of a restaurant. There could even be a footpath to/from the hotel.

Employee Housing:

Employee housing is one of the few benefits this project can give to the town of Lee Vining. Yet, 80 beds or 40 units are too many especially when they are little cabins packed closely together. That means 40 more lights at night plus lights illuminating the way to the community bathrooms. That number should be cut in half and every unit must include a bathroom. People should not have to go outside in the middle of

a winter night to another building to go to the bathroom. The current employee housing is attractive only to 20-somethings who come with just a backpack of belongings for the summer. It will not attract a wider range of employees. If it is to help the town, then normal housing is required. What is needed are studio or 1-bedroom apartments big enough for a queen-size bed or two single beds (not bunk beds) with minimal amenities. People would prefer to pay a lower rent (in the \$400-\$700/month range) than have garages, private laundry rooms, living rooms, or dining rooms. People just need a small sleeping area, small kitchen, a bathroom, a small TV/eating area, and some storage/closet space. One communal laundry room could serve all the renters in the complex.

By taking advantage of the southern exposure to the sun, an apartment building, with common walls between units and proper insulation, might be warm enough in the winter without needing a heat source inside each unit. If more heat is needed, renters can buy a plug-in heater. Certainly 80 wood-burning stoves would create too much smoke for everyone—for the hotel guests as well as the locals. The apartment building could be fitted with solar panels for hot water and electricity on the roof or there could be a set of stand-alone solar panels for the whole apartment complex off to the side. This is an opportunity to be an energy efficient housing project.

Another reason to cut down on the number of employee units is to keep the units from being seen from Highway 395 during the day and from other parts of the Mono Basin at night. The more units there are, the further they will extend to the south or up the slope of the moraine and be seen. Right now the cabins can't be seen from the highway, but with more, they would be visible as one comes around the bend near the Test Station Road turnoff going north. Screening the units with Pinyon trees, Sagebrush, and Bitterbrush won't be as effective as nestling them down in a hollow. The bench they are on could be carved out to make a bowl so that part of the moraine rises up behind them to the south and east as a screen. It would be best if the natural ridgeline of the moraine were to remain the same.

The Water Tank:

Screen the second water tank with Pinyon Pine trees—it will be just as visible as the Verizon tower is now from many directions. I can see the VZ tower from the Lee Vining Creek trail even. There is a cluster of Pinyon trees behind the Verizon tower now that can be exploited to screen a green tank. Just add more Pinyon trees and maybe a Jeffrey or two.

Landscaping:

Require drought resistant, *native* landscaping (not lawn, not spruce trees)—to conserve water e.g. Sagebrush, Rabbitbrush, Bitterbrush, Juniper trees, Jeffrey Pines, Pinyon Pines, and Mountain Mahogany for screening and native pollinator flowers for the small spaces around the buildings. The Native Plant Society can provide a list of flowers.

Wildlife:

Since this project is set in the home of wildlife, herbicides should not be used. There are many birds, rabbits, and chipmunks on the property that eat the dandelions, seeds and worms in the lawn and along the sagebrush edge. Occasionally deer browse on the lawn areas as well. Please let's not poison the wildlife.

The increase in year-round traffic with this development will keep the deer, coyotes and bobcats away in summer and, now, in winter too. On winter mornings after a snowfall, one can see coyote and bobcat tracks in the snow leading to the LV Creek. They go across the eastern end of Dennis' property, crossing Highway 120, and turning down the driveway to the Andrew's house on the SCE property. The SEIR should acknowledge the loss of this route for wildlife. Wildlife will be forced to circle around behind the development to travel up Lee Vining Canyon or to go around the town to the east (via lower LV Creek). This development will force them to cross 395 much more often. On 1/1/16 a coyote was hit by a vehicle and died in the center divider of 395 just where the lanes split below Dennis' flagpole. The Tioga Inn Project will bring more traffic and exacerbate the situation. Underpasses are needed along Highway 395 at the eastern end of Dennis' property and at the northern end of town for wildlife to go around this development and the town.

If we look down the road 20 years, the Tioga Pass Road will probably be open much longer due to Global Warming and less snow in winter. There will be more traffic and more wildlife collisions all along it. Lee Vining Canyon is a wildlife corridor and animals cross the road. An over/underpass might be needed further up Lee Vining Canyon as well to help wildlife cross Highway 120.

The SEIR should also provide an update on the impact the current development had on the Casa Diablo herd that used to pass through Dennis' property to go up LV Canyon—the 113 deer. Only the occasional deer, one bear, one bobcat, and one coyote have come through Parcel 4 in the six years I've lived there. Wildlife avoids humans.

Bear-proof dumpsters and *trashcans*—bears have visited the Tioga Gas Mart and they come into town each year. Fewer are hibernating with Global Warming.

Town Impacts:

Encourage cross-pollination between the LV town guests and the Tioga Inn guests. There could be a footbridge and a nature trail connecting the two. The trail could cross LV Creek (well west the Andrew's place) and join up with one of the roads off of Utility Road that enters town between the LV Elementary School and the Post Office—no lights along it. Although no one has been injured walking along the highway, it is very unnerving walking along the curve wondering if the drivers are paying attention. It would be nice if some the County taxes from the Tioga Inn project could go towards improvements in Lee Vining instead of Mammoth.

People come to the Mono Basin to get away from the crowds and traffic and to experience nature in the raw. Let's not lose what is so precious and special about the Mono Basin.

Sincerely,

Lynn Boulton
PO Box 234
Lee Vining, CA 93541

From: Lynn Boulton [<mailto:amazinglynn@yahoo.com>]
Sent: Tuesday, November 15, 2016 9:29 PM
To: Wendy Sugimura wsugimura@mono.ca.gov; Gerry LeFrancois <glefrancois@mono.ca.gov>
Cc: Sandra Bauer Sandra@bpesinc.com
Subject: Re: Tioga Inn Project--Scope of Hydrology Evaluation

Wendy,

I'm thinking the well stress test should be done twice, at peak run-off in June and also at the lowest run-off in October or November. It is the low that will be the most important one to evaluate if there is enough recharge to support the quantities of the hotel's water use during the winter. Last time they only did it in June 1992 at the peak. -Lynn

Malcolm and Ellen Mosher
1054 Lundy Lake Road
Lee Vining, CA 93541

November 16, 2016

Dear Mono County EIR Review Committee,

We attended the hearing at the Lee Vining Community Center in October, we raised several issues at that time, and per your suggestion I formalize those issues here in specific categories.

Water Issues

1. With regard to water, the EIR appears to have reasoned that the water consumption for this project was sustainable in 1993, but this is 23 years later, we have had an unprecedented drought for 5 straight years, and this year has the appearance of being more of the same. The demands for water are going to be much greater by way of all the rental property the owner wants to add and the jump from 150 seats in the approved restaurant to his new request for 400. With global warming and climate change, how can we be certain of that the proposed water usage is even sustainable for the original 1993 plan?

Traffic Issues

1. In 1993, who envisioned the dramatic increase in traffic going up to Yosemite as well as coming down from Yosemite? As a resident traveling southbound on 395 to the dump, I have had numerous cars dart out in front of me from 120 to head southbound, and going northbound I have had the more than a few cars dart out in front of me to get into town or head northbound. The proposed project is going to increase the volume of traffic going or down from 120.
2. In 1993, who envisioned the volume of cars driving through town. The speed limit is posted as 30, but it is rarely enforced, there are pedestrians crossing the streets all day long, and we can assure you that very few observe that speed limit. Most go 35-45 through, and quite a few go in excess of that. This is an area that needs to be policed on a regular basis, it is not being done at all currently, and between the proposed rental properties and the 400-seat restaurants, the volume going through town is going to increase, and it is highly doubtful that these people will be any more likely to observe the posted speed limit than everyone else that bombs through town.
3. The hotel and the restaurants are going to add a significant increase to parking in town. People being what most are, guests at the hotel are not going to want to walk from the hotel to the town; they will drive and park. Parking today is very limited during the summer due to the current volume of visitors in town. Where will the increase park? An ugly parking lot is not a solution either.
4. I have mentioned the traffic above with respect to the center of town; by the school it is another matter. In years past, I remember law enforcement monitoring the traffic speeds by the school. I have not observed that at all in the last two years, and we can assure you that no one observes that speed limit there; the traffic routinely passes the posting at 50-60 mph and they do not begin to slow down until they hit the area by the Mono Cone. This is not an issue as such for the proposal on the table, but the traffic is already out of control by the school, law enforcement has done nothing about it (I realize that they may have more important work to do), and sooner or later there is going to be a tragedy. While the hotel and restaurant proposal is not involved in the current traffic, is there any reason not to believe that the new traffic from these new establishments is not going to follow the same pattern? The greater issue here is that the increase in traffic already is not monitored by law enforcement, and I should think that an EIR has to included the increased need for more law enforcement or a possibly traffic light (which I doubt anyone wants). Where will the funding come for increased law enforcement.

Discreet or Eyesore

1. The original approval was for a two-story structure that will sit on a promontory, and it will be highly visible. To increase it to three stories is going to increase it by another 3rd. Frankly I am utterly mystified how an EIR can be produced without knowing the exact height of the building. Environmental Impact has to consider resources like water, traffic impact, and there is also the visual impact and a three-story building, including structures on the roof for elevators, a/c, and venting. This could easily fall in the 55-60 foot height, and on that promontory, it will loom up and appear gigantic. In my humble opinion, the elevation must be known, and story-poles should be erected to give all a chance to see exactly how big this is going to be. Story-poles are required in Santa Clara County and I suspect in other counties.
2. Night Lighting. When we built our house, the County said we must have night lighting, and that is a concept that I embrace. How is a hotel with 120 rooms, all the additional proposed facilities, and two 200-seat restaurants NOT going to light up the night from lighting within the hotel. The only way to control lighting coming through the windows of the hotel is through heavy tinting of the glass. Then there is the lighting for the parking lots. Between the hotel and the two restaurants, the parking area will be huge. If these are elevated lamps on poles, that lighting, even if pointing only downward, is going to light up the sky by the sheer volume of lights.
3. Between the lights within the hotel on a promontory, plus the external restaurant, plus all the parking lots, the area will shine like a beacon all over the Basin, whether one is in Mono City or one is at South Tuolumne. From the Old Marina, the lights may not be visible, but glow will be.
4. The original approval provided for a 50-seat coffee shop plus the 100-seat restaurant on Parcel 2. The new proposal for 400 seats is nearly 200% increase, and this is on top of the Mobile Mart, the Whoa Nellie Deli, and the service station. As a resident, I strongly oppose this.

Parcel 2 Specifics

1. With all due respect to the owner, the claiming that these are work-force housing is fiction; these are income rental properties. Like the issue regarding the height of the hotel, how can one possibly gauge the environmental impact without knowing exactly what he plans to build. Are they all studio units? How many are one bedroom? How many are two bedroom? This has an impact on water usage, sewage, night lighting, traffic, wildlife - just about everything you can think of.
2. For one and two bedroom units, one has to consider children and the impact on the Lee Vining school system, classroom sizes, teachers, special education for non-English speaking students.
3. The owner's suggested diagram is completely misleading; it lists 51 structures. So for 80 bedrooms, that represents 29 two-bedroom units, and this could mean an increase of from 29 to 90 students to the school system. This could then result in bonds in the form of taxes on Lee Vining to pay for the infrastructure to take on a huge increase in students. This is environmental impact because it affects every one who pays taxes in Lee Vining.
4. Essentially what he proposes is a very low budget mini Mono City. This is about greed and maximizing every square inch for profit. By his own admission, he said these would be bare-bones units and he would rent them for the highest he can get for them. The impact in all respects is big for Lee Vining.
5. The owner needs to be precise in specifying exactly how many structures he wants, how many bedrooms per structure, the height of each structure (one story, two story), how many garages will be included.

We urge you to require that he be precise in specifying the height of the hotel, the number of structures in the so-called work-force housing, their heights, the number of bedrooms per unit. Without this information, you cannot possibly know the real impact of his proposal on the physical environment and the impact on all aspects of the community.

Personally, the owner was granted permission in 1993, but Lee Vining and the environment have changed. Since he was granted permission in 1993 and it cannot be rescinded, he should be held to what was granted in 1993. All of his new proposals have extraordinary impact on the landscape, the

community, and the classic issue of environment such as water, pollution, electricity, runoff and drainage. Putting in grass lawns in front of the hotel that would be visible from the highway - simply incongruous with the area and the visuals of the landscape. This is Lee Vining, not Beverly Hills.

What will be the impact of this on the workforce. This hotel will have very limited value during the Fall, Winter, and Spring, depending on when Tioga Pass closes. This means seasonal employment. What will happen to the workers when the hotel staff is reduced by 80-90%?

Finally, consider the impact on the other businesses in the town. The hotel will severely affect the motels in town, and the 400-seat restaurants will wipe out the food services in town. Further Applebees and Outback Steak are no better than Nicely's. These are low-end fast-food joints. The proposed shops in the hotel will affect the shops in town that sell odds and ends, particularly the Bronze Bear and the Yosemite Trading Post. How will this not gut the businesses in town? There needs to be something for everyone, and the scaled-back 1993 proposal at least provides equal opportunity for all to co-exist, but not the revised proposal that is on the table. The proposal to increase the pumping islands from two to three is yet another means of trying to take over all business in town. I am of course for equal and fair opportunity, and free enterprise is of course an American ideal, but completely cornering all markets with the veiled purpose of driving other local business out of existence is not fair.

As for where to produce a rendering, on the next page is a suggested view, taken from Test Station Road



Sincerely,
Malcolm and Ellen Mosher

November 17, 2016

Mono County
c/o Gerry LeFrancois
Bauer Planning and Environmental Services, Inc.
P.O. Box 347
Mammoth Lakes, CA 93546

Comments regarding the proposed Tioga Inn Project.

We are homeowners in Lee Vining and have reviewed the Notice of Preparation of a Subsequent Environmental Impact Report and Specific Plan for the Tioga Inn Project. We have a number of questions and concerns in connection with this proposal.

a. The Size of the Project.

This project is huge. It would almost double the number of lodging rooms in the town of Lee Vining. While hotel rooms are frequently sold out in the summer, are there really enough visitors to fill these rooms? The 120 rooms in the proposed hotel plus the 200 seat restaurant would place a heavy burden on the existing services in Lee Vining. The 80 workforce housing units, while laudable in their inclusion in the plan, could increase the population of Lee Vining by up to 200 people. (80 workforce units at 2.5 occupants per unit). What might be the effect on local schools?

b. Water.

There must be a careful analysis of the effect of well drilling to support 200 housing units (120 hotel and 80 workforce) as well as the restaurant on the existing water supply in the town. This past summer Lee Vining was on significant water restrictions and a huge increase in groundwater draw could degrade the availability of water on the existing users.

Also I am concerned about the effect of this large groundwater draw on the water levels in Mono Lake. The lake level has been falling for years and is approaching critical levels in terms of salinity and the likely occurrence that the land bridge between Black Point and Negit will be reopened.

c. Sewage

While the expansion plan includes a sewage treatment plant the effluent will be disposed of through a leach field. It appears that the leach field flow could end up in Lee Vining creek and thereon to Mono Lake. Have there been studies to see what negative effects this outflow could have on fish populations in Lee Vining Creek?

d. Fire Department

The proposal calls for a 3-story hotel. The Lee Vining Fire Department does not own equipment to properly fight a fire on a 3-story building. This issue came up a few years ago during the construction of a private resident in Lee Vining. Visitors staying in the proposed 3-story building would not be able to be properly protected from fire. Even if equipment were made available for the Lee Vining Fire Department, the firehouse is too small to park any such equipment.

e. Visibility and Views

The proposed site overlooks the Mono Lake National Forest Scenic Area. The proposed 3-story building could be a visual blight of the Scenic Area. Are there adequate setbacks in the plans to make sure that the buildings are not visible from the Scenic Area?

In summary, as currently proposed this project is too large and too great a burden on the community of Lee Vining and the natural resources that make our town so special.

Thank you.

Larry & Carol Holt
81 Paoha Drive / P.O. Box 24
Lee Vining, CA 93541

619-733-8922



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EDMUND G. BROWN, Jr., Governor
CHARLTON H. BONHAM, Director



November 18, 2016

Gerry Le Francois
Mono County
PO Box 347
Mammoth Lakes, CA 93546

Subject: Notice of Preparation of a Draft Environmental Impact Report
Tioga Inn Project
State Clearinghouse No. 1992012113

Dear Mr. Le Francois:

The California Department of Fish and Wildlife (Department) appreciates the opportunity to comment on the Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the Tioga Inn Project (project) (State Clearinghouse No. 1992012113). The Department is responding to the NOP as a Trustee Agency for fish and wildlife resources (California Fish & G. Code, §§ 711.7 & 1802, and the California Environmental Quality Act [CEQA] Guidelines, § 15386), and as a Responsible Agency regarding any discretionary actions (CEQA Guidelines, § 15381), such as the issuance of a Lake or Streambed Alteration Agreement (California Fish & G. Code, § 1600 *et seq.*) and/or a California Endangered Species Act (CESA) Permit for Incidental Take of Endangered, Threatened, and/or Candidate species (California Fish & G. Code, §§ 2080 & 2080.1).

The Project proposes to construct the Tioga Inn and associated project features on the site of the existing Tioga Gas Mart and Whoa Nellie Deli, in the unincorporated community of Lee Vining. The project area encompasses 4 parcels totaling 67.8 acres of land. The project consists of multiple elements, many of which were analyzed in the 1993 environmental and planning documents. The original concept was to provide a full range of services and facilities for tourists, as well as meeting facilities, jobs and employee housing opportunities for area residents.

COMMENTS AND RECOMMENDATIONS

The Department has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitat necessary for biologically sustainable populations of those species (i.e., biological resources). The Department offers the comments and recommendations presented below to assist Mono County (the CEQA lead agency) in adequately identifying and/or mitigating the project's significant, or

potentially significant, impacts on biological resources. The comments and recommendations are also offered to enable the Department to adequately review and comment on the proposed project with respect to impacts on biological resources. The Department recommends that the forthcoming DEIR address the following:

Assessment of Biological Resources

Section 15125(c) of the CEQA Guidelines states that knowledge of the regional setting of a project is critical to the assessment of environmental impacts and that special emphasis should be placed on environmental resources that are rare or unique to the region. To enable Department staff to adequately review and comment on the project, the DEIR should include a complete assessment of the flora and fauna within and adjacent to the project footprint, with particular emphasis on identifying rare, threatened, endangered, and other sensitive species and their associated habitats. The Department recommends that the DEIR specifically include:

1. An assessment of the various habitat types located within the project footprint, and a map that identifies the location of each habitat type. The Department recommends that floristic, alliance- and/or association based mapping and assessment be completed following *The Manual of California Vegetation*, second edition (Sawyer et al. 2009). Adjoining habitat areas should also be included in this assessment where site activities could lead to direct or indirect impacts offsite. Habitat mapping at the alliance level will help establish baseline vegetation conditions;
2. A general biological inventory of the fish, amphibian, reptile, bird, and mammal species that are present or have the potential to be present within each habitat type onsite and within adjacent areas that could be affected by the project. The Department's California Natural Diversity Database (CNDDDB) in Sacramento should be contacted at (916) 322-2493 or <http://wildlife.ca.gov/Data/CNDDDB> to obtain current information on any previously reported sensitive species and habitat, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code, in the vicinity of the proposed project. The Department recommends that CNDDDB Field Survey Forms be completed and submitted to CNDDDB to document survey results. Online forms can be obtained and submitted at: <https://www.wildlife.ca.gov/Data/CNDDDB/Submitting-Data>.

Please note that the Department's CNDDDB is not exhaustive in terms of the data it houses, nor is it an absence database. The Department recommends that it be used as a starting point in gathering information about the *potential presence* of species within the general area of the project site.

3. A complete, *recent* inventory of rare, threatened, endangered, and other sensitive species located within the project footprint and within offsite areas with the potential to be affected, including California Species of Special Concern (CSSC) and California Fully Protected Species (Fish & G. Code, § 3511). Species to be addressed should include all those which meet the CEQA definition (CEQA

Guidelines, § 15380). The inventory should address seasonal variations in use of the project area and should not be limited to resident species. Focused species-specific surveys, completed by a qualified biologist and conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, are required. Acceptable species-specific survey procedures should be developed in consultation with the Department and the U.S. Fish and Wildlife Service, where necessary. Note that the Department generally considers biological field assessments for wildlife to be valid for a one-year period, and assessments for rare plants may be considered valid for a period of up to three years. Some aspects of the proposed project may warrant periodic updated surveys for certain sensitive taxa, particularly if the project is proposed to occur over a protracted time frame, or in phases, or if surveys are completed during periods of drought.

4. A thorough, recent, floristic-based assessment of special status plants and natural communities, following the Department's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (see <https://www.wildlife.ca.gov/Conservation/Plants>);
5. Information on the regional setting that is critical to an assessment of environmental impacts, with special emphasis on resources that are rare or unique to the region (CEQA Guidelines, § 15125[c]).

Analysis of Direct, Indirect, and Cumulative Impacts to Biological Resources

The DEIR should provide a thorough discussion of the direct, indirect, and cumulative impacts expected to adversely affect biological resources as a result of the project. To ensure that project impacts to biological resources are fully analyzed, the following information should be included in the DEIR:

1. A discussion of potential impacts from lighting, noise, human activity, and wildlife-human interactions created by zoning of development projects or other project activities adjacent to natural areas, exotic and/or invasive species, and drainage. The latter subject should address project-related changes on drainage patterns and water quality within, upstream, and downstream of the project site, including: volume, velocity, and frequency of existing and post-project surface flows; polluted runoff; soil erosion and/or sedimentation in streams and water bodies; and post-project fate of runoff from the project site.
2. A discussion of potential indirect project impacts on biological resources, including resources in areas adjacent to the project footprint, such as nearby public lands (e.g. National Forests, State Parks, etc.), open space, adjacent natural habitats, riparian ecosystems, wildlife corridors, and any designated and/or proposed reserve or mitigation lands (e.g., preserved lands associated with a Natural Community Conservation Plan, or other conserved lands).

3. An evaluation of impacts to adjacent open space lands from both the construction of the project and long-term operational and maintenance needs.
4. A cumulative effects analysis developed as described under CEQA Guidelines section 15130. Please include all potential direct and indirect project related impacts to riparian areas, wetlands, vernal pools, alluvial fan habitats, wildlife corridors or wildlife movement areas, aquatic habitats, sensitive species and other sensitive habitats, open lands, open space, and adjacent natural habitats in the cumulative effects analysis. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant communities and wildlife habitats.

Mitigation Measures for Project Impacts to Biological Resources

The DEIR should include appropriate and adequate avoidance, minimization, and/or mitigation measures for all direct, indirect, and cumulative impacts that are expected to occur as a result of the construction and long-term operation and maintenance of the project. When proposing measures to avoid, minimize, or mitigate impacts, the Department recommends consideration of the following:

1. *Sensitive Plant Communities*: The Department considers sensitive plant communities to be imperiled habitats having both local and regional significance. Plant communities, alliances, and associations with a statewide ranking of S-1, S-2, S-3, and S-4 should be considered sensitive and declining at the local and regional level. These ranks can be obtained by querying the CNDDDB and are included in *The Manual of California Vegetation* (Sawyer et al. 2009). The DEIR should include measures to fully avoid and otherwise protect sensitive plant communities from project-related direct and indirect impacts.
2. *Species of Special Concern* (SSC) status applies to animals generally not listed under the federal Endangered Species Act or the California Endangered Species Act, but which nonetheless are declining at a rate that could result in listing, or historically occurred in low numbers and known threats to their persistence currently exist. SSC should be considered during the environmental review process.
3. *Mitigation*: The Department considers adverse project-related impacts to sensitive species and habitats to be significant to both local and regional ecosystems, and the DEIR should include mitigation measures for adverse project-related impacts to these resources. Mitigation measures should emphasize avoidance and reduction of project impacts. For unavoidable impacts, onsite habitat restoration and/or enhancement should be evaluated and discussed in detail. If onsite mitigation is not feasible or would not be biologically viable and therefore not adequately mitigate the loss of biological functions and values, offsite mitigation through habitat creation and/or acquisition and preservation in perpetuity should be addressed.

The DEIR should include measures to perpetually protect the targeted habitat values within mitigation areas from direct and indirect adverse impacts in order to meet mitigation objectives to offset project-induced qualitative and quantitative losses of biological values. Specific issues that should be addressed include restrictions on access, proposed land dedications, long-term monitoring and management programs, control of illegal dumping, water pollution, increased human intrusion, etc.

4. *Habitat Revegetation/Restoration Plans*: Plans for restoration and revegetation should be prepared by persons with expertise in southern California ecosystems and native plant restoration techniques. Plans should identify the assumptions used to develop the proposed restoration strategy. Each plan should include, at a minimum: (a) the location of restoration sites and assessment of appropriate reference sites; (b) the plant species to be used, sources of local propagules, container sizes, and seeding rates; (c) a schematic depicting the mitigation area; (d) a local seed and cuttings and planting schedule; (e) a description of the irrigation methodology; (f) measures to control exotic vegetation on site; (g) specific success criteria; (h) a detailed monitoring program; (i) contingency measures should the success criteria not be met; and (j) identification of the party responsible for meeting the success criteria and providing for conservation of the mitigation site in perpetuity. Monitoring of restoration areas should extend across a sufficient time frame to ensure that the new habitat is established, self-sustaining, and capable of surviving drought.

The Department recommends that local onsite propagules from the project area and nearby vicinity be collected and used for restoration purposes. Onsite seed collection should be initiated in the near future in order to accumulate sufficient propagule material for subsequent use in future years. Onsite vegetation mapping at the alliance and/or association level should be used to develop appropriate restoration goals and local plant palettes. Reference areas should be identified to help guide restoration efforts. Specific restoration plans should be developed for various project components as appropriate.

Restoration objectives should include protecting special habitat elements or re-creating them in areas affected by the project; examples could include retention of woody material, logs, snags, rocks, and brush piles.

5. *Nesting Birds and Migratory Bird Treaty Act*: Please note that it is the project proponent's responsibility to comply with all applicable laws related to nesting birds and birds of prey. Migratory non-game native bird species are protected by international treaty under the federal Migratory Bird Treaty Act (MBTA) of 1918, as amended (16 U.S.C. 703 *et seq.*). In addition, sections 3503, 3503.5, and 3513 of the Fish and Game Code (FGC) also afford protective measures as follows: section 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by FGC or any regulation made pursuant thereto; section 3503.5 states that it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take,

possess, or destroy the nest or eggs of any such bird except as otherwise provided by FGC or any regulation adopted pursuant thereto; and section 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

The Department recommends that the DEIR include the results of avian surveys, as well as specific avoidance and minimization measures to ensure that impacts to nesting birds do not occur. Project-specific avoidance and minimization measures may include, but not be limited to: project phasing and timing, monitoring of project-related noise (where applicable), sound walls, and buffers, where appropriate. The DEIR should also include specific avoidance and minimization measures that will be implemented should a nest be located within the project site. If pre-construction surveys are proposed in the DEIR, the Department recommends that they be required no more than three (3) days prior to vegetation clearing or ground disturbance activities, as instances of nesting could be missed if surveys are conducted sooner.

Further Coordination

The Department appreciates the opportunity to comment on the NOP of a DEIR for the Tioga Inn Project (SCH No. 1992012113) and recommends that Mono County address the Department's comments and concerns in the forthcoming DEIR.

If you should have any questions pertaining to the comments provided in this letter, or wish to schedule a meeting and/or site visit, please contact Rose Banks at (760) 873-4412 or at Rose.Banks@wildlife.ca.gov.

Sincerely,

Heidi Calvert

for

Leslie MacNair
Regional Manager

Literature Cited

Sawyer, J. O., T. Keeler-Wolf, and J. M. Evens. 2009. A manual of California Vegetation, 2nd ed. California Native Plant Society Press, Sacramento, California.
<http://vegetation.cnps.org/>

From: paul/revolver usa [<mailto:paul@revolverusa.com>]

Sent: Friday, November 18, 2016 11:46 AM

To: Gerry LeFrancois <glefrancois@mono.ca.gov>

Subject: comment on Tioga Inn project

Hello,

After poring over the details in the Notice of Preparation and accompanying maps for the Tioga Inn Project, I would like to express my concern -- on several levels. These structures are far out of proportion with the "carrying capacity" of the area, as well as out of place in the general landscape, especially in the context of Mono Basin's fragile ecosystems.

First, let's look at this project from an aesthetic angle. Currently, the moraines at the bottom of Lee Vining canyon do a good job of concealing the bulk of the Mobil station from 395. From the maps you provide, it seems nearly certain a 3-story structure would be visible from 395 and 120, presenting a startling change to the familiar natural landscape.

Secondly, we need to address the project from a commercial standpoint. Due to decreased visitation/demand over the winter months, existing retail and hospitality outlets in Lee Vining either shut down or are greatly scaled back during the months when highway 120 is closed. How would a 120-room hotel and 100-seat restaurant sustain itself during the off-season?

During (yet not limited to) the season when 120 *is* open, I see this development severely affecting existing restaurant and motel businesses. These are run by local citizens who've spent years building their reputations and clientele. Competing against a hospitality complex of this scale would be difficult, if not impossible. The impact would be extreme, and detrimental to the community.

If those businesses shut down, it would give visitors (and locals) less of a choice of where to stay and where to eat. This "Walmart effect" does nothing to enhance the character or the livability of the area. It enhances only the bank account of the developer - at the expense of the local citizenry as well as that of visitors from around the country and around the world. The latter are the economic lifeblood of the community and, to a great degree, Mono County - people who appreciate the Basin's unique beauty and charm, and return year after year to spend their time and money there.

Currently, lodging in the area is spread out among Mammoth, June Lake, Lee Vining and Bridgeport. The Tioga Inn Project would concentrate large numbers of people within a very small space.

The population of Lee Vining was listed as 220 in the 2010 census, and has been trending downward since the 1990 census. Considering 75% occupancy in the proposed hotel during the height of the tourist season, with an average of two or three visitors per room, you'd be looking at between 180 and 270 visitors at any one time. Add to that 70 to 80 employees and we've suddenly more than doubled the population of Lee Vining for the duration of the tourist season. This is where my comment about carrying capacity comes into play. How can such a large influx of transient population not impact the Mono Basin and immediate area around Lee Vining?

Which brings me to the most important factor. Pending an EIR, my concerns go beyond the aesthetic and commercial/competitive effects. The threat of any negative environmental impact on vital watershed in such close proximity to Mono Lake is alarming. A "designated leach field" is proposed

across 395, a short distance from Lee Vining Creek -- in an area where the ground consists mostly of porous volcanic tuff, located slightly over a mile above a spring-fed terminal lake. Will the EIR include geologic and hydrologic surveys with this in mind? What will the contingency plans be if the water treatment system fails, or if an outflow pipe ruptures, or if a moderate-to-major earthquake hits this seismically active area?

So much progress has been made in restoring this sensitive region, and so much remains to be done. Yet the developer is asking us to consider these not-insignificant risks to be acceptable - in the name of economic gain.

Even the original two-story plans for this site would have an adverse impact on each of the factors I've discussed. Perhaps in 1993 this establishment might have seemed like something worth pondering. In the current business and environmental climate, however, a development of the scale and configuration described -- then or now - isn't something I can support.

This project is far better suited to Mammoth, where development of this sort has become the norm. The Tioga Inn Project is a potentially destructive development that does not fit in with Mono Basin's culture, commercial community, landscape, or ecosystems.

Sincerely,

Paul Ashby
Orinda, CA
415 516-5929

November 18, 2016

To: Gerry LeFrancois

Mono County Community Development

PO Box 347

Mammoth Lakes, Ca 93546

Comments on the NOP, SEIR and Specific Plan for Tioga Inn Project

The Revised Proposal for the Tioga Inn represents an opportunity to be a model project that compliments and adds diversity to the commercial makeup of the Mono Basin and local economy. However, in its current mix of goals, objectives and components, this is not the case.

The original Tioga Inn Specific Plan, analyzed in the 1993 EIR, called for the creation of a large scale development, big enough to accomplish the goals and objectives of providing all the services and amenities of an all-inclusive resort for the Mono Basin plus housing for resort employees. The EIR identified at least two "significant irreversible environmental changes which would be involved in the proposed action should it be implemented": "a partial reduction in the area's visual quality" and "growth inducing impacts."

There were alternatives considered in the 1993 EIR which reduced the number of project components to address these significant impacts, but these alternatives were rejected because they did not meet the "overall project objective", were deemed "economically infeasible", and/or would create additional "significant impacts."

Twenty-three years later, with a revised plan being proposed, it is important to revisit these conclusions. A partial development of the site has been in place and operation for twenty years. The gas mart, deli and convenience store have demonstrated that a much smaller project with a select few of the components has been, contrary to the alternatives discussion in the EIR, economically feasible as operated seasonally. Visual impacts, although notable, are arguably less than anticipated for the whole project, because of the set-back location of the more limited development.

The original analysis never asked or answered a fundamental question: is a larger, all-inclusive resort of such a scale an appropriate development for the Mono Basin and its community? It did not consider the appropriateness of a project so large as to double the size of the developed footprint of the Lee Vining area, yet wholly separate from Lee Vining, essentially a leap-frog development.

The Economic Analysis Technical Report for the EIR downplayed the realities of a seasonal tourism-based economy. In fact, it gave a rosy but unrealistic forecast, based on unsupported projections, of the size of the clientele base that would patronize a new hotel and restaurant development for the winter half of the year. In summer, it is true that there are periods when existing motel accommodations do not meet visitor demand. In the winter, however, the business provided by seasonal tourism supports only two out of six local motels that are able to stay open more than 5 or 6 months of the year. Even before Tioga Pass closes, local motels and restaurants often close for the winter. The proponents own deli/convenience store business closes from the end of October to mid-April, certainly an acknowledgement that even in 2016, staying open in the winter does not pencil out.

A new Economic Analysis should be done that examines: what would be the economic impact of the revised project on other local businesses? The 1993 Economic Analysis projected 25% shift of the share of business from Lee Vining and June Lake to the new resort. The stated project goal of “reducing trips to town” by providing everything needed by resort patrons could result in a “Wal-Mart Effect”, further reducing tourist patronage of other Lee Vining businesses. The goal of being a one-stop all-inclusive resort may have negative repercussions on an already fragile, seasonal tourism-based economy.

On the other hand, if the projections for economic feasibility for a new big resort do not pan out, the project may follow the general pattern of seasonal closures. The projected property tax and transient occupancy tax increase for Mono County may be unrealistic. The Mono Basin community, furthermore, has little use for a development which could stand empty half the year, occupying what was open space in a critical location relative to the stunning viewshed of the gateway to Yosemite National Park.

I believe that the supplemental EIR must address this issue of the increased scope and scale of the revised project and provide alternatives of reduced size, scale and intent. The analysis should show how increased size, siting and height of structures, scope and unrealistic objectives of the newly revised project will magnify and worsen numerous impacts.

The SEIR should disclose the fact that the project proponent plans to sell or lease the project site with an approved Specific Plan to an outside developer, most likely a major corporate franchise or franchises with pre-conceived requirements for size, project components and design practices. It cannot be assumed that these types of corporations will be sensitive to community goals and objectives. Any revised plan, therefore, should require a Design Review Permit, and must spell out in detail the required standards and restrictions for siting, scope and design that will protect the area’s unique and sensitive scenic and natural resources, as well as require energy efficiency in the form of passive solar design and active solar installations, water conservation and other green building practices. Standards concerning new signage, and location and dimensions of new roads need to be thoroughly considered and prescribed. Mitigation for greenhouse gas emissions from the expansion of the development should include funding to build a trail for pedestrians from town to the development to encourage pedestrian VS car use.

The SEIR must show how the revised project will be compatible with the highly detailed Mono Basin Community Plan Goals and Objectives. It is highly unlikely that issues such as avoidance of leap-frog development, visual impacts and the preservation of dark night skies, habitat loss and conflicts with migratory wildlife can be mitigated to insignificance.

The SEIR needs to examine the likely increased demands on existing services and infrastructure such as fire protection, paramedic emergency services and law enforcement. The volunteer Lee Vining Fire Department currently does not have the equipment or person-power to protect a development of the proposed height and size of the proposed project. What are potential impacts on the size of the Lee Vining Airport? Will there be increased pressure to expand that facility, adding to the cumulative impacts on the scenic vista, vegetation and deer herd that have yet to be mitigated?

A three story structure plus two more separate areas of development for a second restaurant and housing, including parking, simply cannot be sufficiently visually screened. The proposed restaurant on the hill projects above the horizon as viewed from many locations. Approval of a three story high structure sets an inappropriate precedent for the sage-brush steppe setting of the Mono Basin. The result will be a jarring visual mark on the landscape, visible from many locations in a National Scenic Area, a State Reserve and National Scenic Highway. The increased nightly light pollution will create a new large glow visible from a near and far.

Wildlife habitat loss and barriers to deer and other wildlife migration are also significant and cumulative impacts. The previous mitigation of leaving open space for the deer herd would be consumed by development. In the very least a mitigation for deer habitat lost from the development should include funding for bitterbrush plantings in the Azalea Fire area, right behind the development, which has had poor recovery since the fire, to provide a green belt corridor for deer holding and migration.

The impacts of an increased concentration of visitor use in the Lee Vining Creek stream drainage needs to be examined, as this finite habitat is of critical importance to a higher diversity of wildlife on the edge of the Great Basin, that require access to the water, thermal and hiding cover and linkage to the High Sierra that this riparian corridor provides.

The SEIR should determine the source of recharge for the groundwater aquifers in the area of the development's wells. What is the long-term potential of draining these aquifers, impacting area vegetation or reducing spring recharge into Lee Vining Creek and along the Mono Lake shoreline- in a time of continuous drought and climate change? Permitted drawdown of these aquifers would set a dangerous precedent for Mono County.

The proponent has stated that water recycling and landscaping goals will significantly reduce water consumption. The waste water management plan needs to be spelled out. In particular, non-native vegetation needs to be minimized. Recycled water could be used to support plantings of native trees and shrubs that would help screen structures, but the amount of water that requires treatment needs to be disclosed.

Mono County needs to minimize parking requirements to reduce disturbance to native vegetation. This includes reducing parking required for restaurant guests who are already parked for the motel. The use of porous surfaces for parking areas to absorb rainfall and snowmelt should be encouraged to minimize runoff and erosion.

The plan should require pesticide and herbicide-free landscape maintenance. Currently, herbicides are being unnecessarily applied to the grounds of the Whoa Nellie Deli and housing areas, without posting, where residents and patrons, including children, roll in the grass and dance barefoot. Mono County, in response to community concerns, maintains the County Park in Lee Vining very successfully without herbicides and pesticides. Tourists to this area who come to enjoy nature would be pleased to know that a development's grounds are pesticide-free and safe for children, pets and wildlife.

A “workforce housing” development is being proposed that could alleviate some of the housing needs for the Mono Basin. The need in the Mono Basin, however, is for housing that is affordable, not just market-rate housing. It needs to be truly available to the demographic that will fill the service positions the resort would create. That means it should not only accommodate single workers, but also families, who often provide multiple employees for local businesses, but can’t find housing of sufficient capacity for growing families.

The footprint and visual issues for as many as 80 units of housing, plus parking, however, is too big a development for all impacts to be adequately mitigated. In addition, it is highly unlikely that a three story hotel structure (unless the first floor is underground), and a whole separate restaurant structure on the hill can be adequately screened to avoid significant impacts to the scenic vistas, especially against the backdrop of the Tioga Pass.

I believe that if the proponent significantly scaled down the proposal and sought a developer who shared a vision more compatible with the wide-range of community goals and needs, a developer who also understands the responsibility and the opportunity to protect an irreplaceable viewshed and sensitive natural environment, then this project could be something the community and county could support.

Thank you for the consideration of these comments.

Sincerely,

Ilene Mandelbaum
PO Box 89
Lee Vining, Ca 93541

To: Gerry LaFrancois, Mono Co Community Development Department
707-924-1810
glefrancois@mono.ca.gov

From: Ann Howald, Retired Botanist, #40 Finster Valley Rd, Hilton Creek, CA and
210 Chestnut Avenue, Sonoma, CA 95476
707-721-6120
annhowald@vom.com

Re: **Comments on the Proposed Tioga Inn Development Project, Lee Vining, CA**

Date: 19 November 2016

I'm a retired botanist who has spent summers in the Mammoth Lakes and Lee Vining areas since 1975. For 41 years I've been a paid researcher and a volunteer for the University of California's Valentine Reserve at Valentine Camp in Old Mammoth, and at the Sierra Nevada Aquatic Research Lab on Convict Creek. For more than 25 years I've taught field seminars and been a volunteer for the Mono Lake Committee. I've worked for the Inyo National Forest on Mammoth Mountain, on botanical surveys. I'm a member of the Bristlecone Chapter (Mono and Inyo counties) of the California Native Plant Society. I'm a member of 350Mono, our local group advocating positive responses to climate change, and of the Mono Basin Historical Society. I've taught UC Extension courses and field courses for Santa Rosa Junior College in the Eastern Sierra. I'm currently completing a publication documenting the plant life of Mono County. I attended the public scoping meeting on this project held at the Lee Vining Community Center on October 27, 2016. The following comments represent my own views. Thank you for considering them.

General Comments:

The Tioga Inn project site is located at the eastern gateway to Yosemite National Park, in Lee Vining, a place that is visited each summer by thousands of visitors from around the world. This project can be a showcase for the Eastern Sierra and a fitting entranceway to Yosemite National Park, and can demonstrate to all our visitors that we in the United States, in California, and in the Eastern Sierra, care about the environment and are addressing the challenges of climate change by using good planning, state-of-the-art design, and wise use of water, energy and space. These actions are especially important now. Such a large project has the potential to affect the lives of everyone in Lee Vining, and many in other nearby communities. There are environmentally friendly technologies that can be implemented in all aspects of the design and operation of this project, and many ways in which potential impacts to the community of Lee Vining can be mitigated. I sincerely hope that the Community Development staff will require when possible, and otherwise promote the use of "green" technologies during the review of this project under CEQA in the Subsequent EIR, and during the permitting process.

Definition of "Significant Impact" under CEQA:

I request that the preparer of the SEIR state clearly in the document what qualifies as a "significant impact" under CEQA for each of the potential impact categories below, and also state clearly how any impacts found to be significant during the project review will be mitigated to a level of insignificance, as required by CEQA.

Water Use:

This project has the potential to use large quantities of water, especially in summer when visitor numbers are highest. The Eastern Sierra is a high desert environment, and recent drought years have demonstrated the wide-ranging effects of increasingly dry conditions, which can be expected to persist and possibly grow more extreme with climate change. Drier conditions mean there is less water for wildlife, plants and people, leading to increased wildfire hazard, economic impacts from reduced tourism, and increased survival threats to plants and animals, and the ecosystems upon which they depend. The SEIR needs to thoroughly address impacts from increased water use. The Tioga Inn project should use every possible water-saving and water-recycling technology to reduce water consumption. Gray water recycling should be included in the project design. Low flush toilets, low flow showerheads, on demand water heaters in the housing units, and other water-efficient technologies should be required project design elements. Signage should be used in the hotel to encourage visitors to minimize water use, as is regularly done in Australia and other drought-affected areas of the world. Landscaping, if any, should utilize native plants that don't require summer watering.

Impacts on Lee Vining Creek and Mono Lake:

At the scoping meeting, the project proponent stated that he already has one groundwater well and he's planning to drill another one. Groundwater and surface water are part of the same system. Pumping large amounts of groundwater from within the lower Lee Vining Creek watershed has the potential to reduce surface flows in the creek, and therefore to reduce freshwater inflows to Mono Lake, which could increase the likelihood of failures in that ecological system. In addition, groundwater is the ultimate source for the freshwater springs along the shore of Mono Lake, and within the lake itself - springs that are important sources of fresh water to resident and migrating birds, and that contribute to the underwater formation of the lake's signature tufa towers. Although groundwater extraction is not regulated in California under most circumstances, the potential impacts of the project, through increased groundwater pumping, to the aquatic and riparian resources of Lee Vining Creek and Mono Lake, should be addressed during the CEQA review process, and mitigated if found to be significant.

Energy Use and Greenhouse Gas Emissions:

Energy-efficient technologies should be incorporated into all aspects of this project. As Janet Carle and others from 350Mono have previously commented, the goal should be for this project to be, at a minimum, a net zero energy user. Use of solar panels and other LEED technologies could result in net electricity production, which is a financial benefit to the operator. Solar panel installation should be required for the hotel, above any outdoor parking areas, on the separate restaurant, and on the housing units. Energy-efficient appliances should be used throughout - in the hotel and restaurant kitchens, the hotel laundry, and the housing units. All buildings should be insulated to the highest standards. As mitigation, the SEIR could require financial support of a walking and bicycle trail connecting the Tioga Inn/Mobil Mart complex, which would reduce greenhouse gases from vehicles, as well as reduce traffic, and could ease parking problems in Lee Vining due to increased numbers of visitors. It is our responsibility to take all feasible actions to reduce the production of greenhouse gases and attempt to slow down the warming of the planet.

Housing:

The proposed number of individual housing units ("bedrooms"), at 80, has the potential to occupy a large amount of space. The proposed separate cabins are not space-saving, inherently not energy-efficient, and would require large amounts of energy to keep heated in the winter.

The SEIR should address this by requiring that these units be grouped together to create more environmentally friendly living spaces.

Traffic:

For the SEIR, a traffic study should be performed to determine traffic impacts of the project at the intersection of Highway 120 and Highway 395, and in downtown Lee Vining. The increase in scope of this project from what was proposed in 1993, and the increases in baseline traffic, over what existed in 1993, is adequate justification for redoing any traffic study completed at that time. Promoting ridesharing, carpooling, and increasing bus services, and constructing a path connecting the Tioga Inn and downtown Lee Vining are ways of mitigating traffic impacts, as well as reducing greenhouse gas emissions.

Parking:

Currently, parking conditions in Lee Vining are difficult in summer. Many residents, businesses, and the churches and schools, experience major parking inconveniences due to tourist visitors. Given the baseline of current conditions, any loss of parking for residents in Lee Vining due to this project should be deemed a significant impact. The project design should include adequate on-site parking for all resident and commuting workers, all customers of the Mobil Mart, and all visitors to the hotel and restaurants. In addition, visitors should be encouraged to leave their vehicles at the Tioga Inn by providing bus service into town, and constructing a pedestrian and bicycle path connecting the Inn with downtown Lee Vining.

Visual impacts:

Maintaining a dark sky in the Mono Basin is highly desirable because this area offers excellent stargazing opportunities, which are enjoyed by the local community and its tourist visitors through sponsored evening events. The lights of Lee Vining already are a visual impact on the night sky. Simulations of the changes in the visual landscape that could result from the Tioga Inn project should be created for both daytime and nighttime conditions, from several vantage points in the Mono Basin, including locations near to, and at some distance from, the project site. Possible locations for the latter are: the northwest shoreline area of Mono Lake, for example, near County Park and Black Point, and the southwest shoreline area of the lake, for example, at South Tufa. These are areas heavily visited by local residents and tourists alike, and the visual impacts of the project from these vantage points should be minimized. Night sky impacts cannot be mitigated by planting trees. Light pollution can be greatly reduced by requiring outdoor lighting designed with this goal in mind, and by reducing night lights from hotel windows by using the appropriate window technology.

Biological impacts:

The SEIR should address biological impacts from the proposed project. Deer migration impacts were mentioned during the scoping hearing, and should be evaluated. The need to consider potential impacts to Lee Vining Creek and Mono Lake from increased water use are discussed above. New biological surveys for protected plants and wildlife are needed, since the status of many species has changed since 1993. Qualified surveyors should be used, and should follow proper protocols. For plant surveys, The Rare Plant Survey Guidelines of the California Native Plant Society should be followed to assure that the survey accurately identifies potential impacts, as required by CEQA.

Fire Safety:

The Lee Vining area has experienced two major fires in the last two years that have threatened the town and the surrounding area. Fire safety is a major issue that must be adequately

addressed in the SEIR. During the public scoping hearing, the Lee Vining fire chief explained that the current fire fighting resources in Lee Vining are inadequate to fight a fire in a three-story building like that of the current hotel design. There is no ladder truck, and there is no place to store such a vehicle. A major upgrade of the area's fire fighting resources are needed if the town and nearby properties are to be protected from fire. Without adequate fire protection, residents will not be able to purchase fire insurance, which will affect property values throughout the area.

Community Impacts:

Increases in local population size that will result from this project will affect schools, churches, businesses, availability of public services, and many other aspects of small town life in Lee Vining. Some of these impacts will be positive, but the SEIR needs to recognize and address the potential problems that can arise from dramatic and rapid population growth in such a small town.

From: info@murpheysyosemite.com [<mailto:info@murpheysyosemite.com>]

Sent: Saturday, November 19, 2016 3:48 PM

To: Gerry LeFrancois <glefrancois@mono.ca.gov>

Subject: Comments on Tioga Inn Specific Plan Update and Subsequent Environmental Impact Report

Please see below our comments and concerns regarding the Tioga Inn specific plan update and subsequent environmental impact report.

Name: Rocky & Cara Audenried (Property Owners)
Joey & Cecily Audenried (Managers of Properties)

Address: PO BOX 350 & 57
Lee Vining, CA 93541

Phone#: 760-647-6316

Email: info@murpheysyosemite.com

To Whom It May Concern:

We were recently alerted of the updated plan regarding the Tioga Inn and are rather concerned by the news. At the end of October, we were able to attend a community meeting regarding the updates proposed for the Tioga Inn and hear other community members opinions and questions as well. After all the information gathered from the meeting, we would like to provide our feelings and concerns regarding this project. We have also provided our history and current status in Lee Vining to provide more insight on our beliefs of this proposed development.

As of today we own and run 3 business in Lee Vining; Mono Cone LLC, Mono Cup Coffee LLC, and Murphey's Motel LLC. We have not only lived, but been business owners in Lee Vining for over 25 years. Lee Vining, is a very special town known for its small, quaint size, and beautiful setting in the Eastern Sierras. Having lived in this town for the time that we have, we are familiar with locals/travelers and their reasons for coming here. We are the gateway to Yosemite, but those that come to our town, do so for it's quaint size and "mom and pop" motels, restaurants, and shops. Travelers come for the beauty of our area and the enjoyment of our local "small town" charm. That's what makes Lee Vining so unique. In the 25 years we have been in Lee Vining, there have been very few changes to the town's structures and commercial properties. We have never seen a proposed project of this magnitude for our area and are very concerned of what will become of our town if it comes to fruition.

Our main concerns are as follows:

- What will happen to all the small business currently functioning in Lee Vining at this time? If this planned proposal is executed, how will the smaller restaurants, motels, shops, be able to compete and survive? The current proposal is for a 120 room, 3 story hotel and 2 - 200 seat restaurants. Why would anyone need to come into Lee Vining when a facility of this size would be able to accommodate all of their needs? They are also planning a fitness center, laundromat, car rental, banquet room, gift shop. It's almost as if they would have their own little city in

one spot. As we all know, Lee Vining is a seasonal town and many/most properties currently live off of the earnings in the peak summer season. A facility of this magnitude could easily put many small business owners out of business if they are unable to maintain the seasonal earnings with this form of competition. The charm and personality of this town would change forever and not for the better. Also, during peak times we send our overflow of travelers to neighboring cities for motels. If the Tioga Inn is approved and built, it is very likely this will effect our neighboring cities as well.

- As a current business owner it is extremely challenging to find employees in our town and neighboring towns. The proposal currently discusses more housing for employees, but where will all these employees come from? Again if this plan goes through, will many of our current employees here in Lee Vining flock to the new property? If this is the case how will our town and businesses continue to function? This could cause many businesses in town to shorten their hours or even close down due to lack of employees. If current employees in town do not assist in the new project where do they propose to find workers? Currently in Mammoth Lakes, many businesses seek employees from other towns, states, countries etc. for their peak seasons. Does this new facility expect to do this as well? If so, how will our town keep up with this many new employees and their families? Our schools, fire department, and more would be greatly affected by this raise in population growth. Is our town ready to accommodate this flux in population?
- Lee Vining is a quaint town that allows travelers and locals to enjoy the scenic views of our grand area. Travelers visit to enjoy the scenic beauty of the area. They do not come to our town to enjoy the hustle and bustle of a big city and all the luxuries it entails. The proposed size of this facility will definitely create a new impact on the visual aspect of our area. With all the detailed items proposed on the property; motel rooms, restaurants, new parking structures, and more, this will definitely change the scenic beauty of the entrance to Yosemite National Park. Also with the increased amount of facilities planned at the location, how will sound and lighting change in the area? Do our travelers really want to view a huge motel, gas station, parking lot, restaurants as the entrance to the grand Yosemite National Park? Currently our motel guests comment on how much they enjoy our entrance because of the scenic beauty and smaller towns that do not take away from this aspect.
- Our other concern is the entrance of a "chain" property in our area. If a chain property is built, will that open the door to other chain business in our town? Do we really want to see fast food chains, starbucks, etc in our area? Or do we want to continue with our family run small business?

Overall, we truly hope all community members comments will be considered at great length before any further approvals. Please look at the overall changes this project will have on all our business and townspeople of Lee Vining and also the visual aspect of our beautiful area. This is a very serious proposition to those who currently own and run properties in Lee Vining and we hope all comments will be reviewed accordingly.

Thank you for your time and consideration,

Rocky, Cara, Joey, and Cecily Audenried

November 20, 2016

Mono County Community Development Dept.
Attn. Gerry LeFrancios
P.O. Box 347
Mammoth Lakes, CA 93546
Sent via email: glefrancois@mono.ca.gov

Dear Gerry,

Thank you for the opportunity to provide scoping comments on the Notice of Preparation (NOP) for the Tioga Inn Specific Plan and Subsequent EIR (SEIR). While I am generally supportive of the project, I am concerned about the following issues and hope you will analyze them in the forthcoming CEQA analysis (i.e., SEIR and related or additional documents). I hope that these issues will be addressed in the County's preferred alternative.

1. Minimize and mitigate impacts to Lee Vining Canyon

The federal lands in Lee Vining Canyon are largely undeveloped (except for the Forest Service facilities) and contain important wildlife habitat for mule deer, mountain lion, black bear and many other animal species. Development of transient and year-round housing will likely lead to increased human use of public lands in Lee Vining Canyon. Dog harassment of wildlife is a big concern. Proliferation of new off-road or mountain bikes trails, and associated impacts on wildlife habitat, is also a concern.

The SEIR should include measures to mitigate the impacts of parcel development and increased human activities associated with the development on Lee Vining Canyon's wildlife. The County and proponent should work with the California Department of Fish and Wildlife and the Forest Service to develop and implement effective mitigation measures both on the parcel and surrounding the project area (e.g., in Lee Vining Canyon west of the project site).

A wildlife study that is supplemental to previous wildlife studies should be conducted, with a special emphasis on mule deer. The study should look at the changes in mule deer use of the area at the base of Lee Vining and Horse Meadow/Gibbs Canyon (which includes the land where the parcel sits) in the past 20 years. I've lived in Lee Vining for 32 years, and when I first moved here, it was customary that the deer would move east to spend their winters once the first big snows fell. In recent years of little to no snow, however, mule deer appear to have taken up winter residency near our towns, in the sagebrush-bitterbrush flats that surround Lee Vining (a group lived right below Lee Vining last winter and another group lived next to Mono City). I think the Lee Vining/Horse/Gibbs area may have always been a major migration area for mule deer (mule deer use in spring/summer/fall in Lee Vining Canyon and surrounding mountains is extensive, based on personal observations of both animals and tracks), but it appears this area may have evolved into year-round habitat for mule deer, at least in drought years. This trend might be expected to continue with climate change. As evidence of both mule deer migration and residency habitat, there have been many vehicle-deer collisions along the section of highway 395 that borders the parcel (I was involved in a deer collision accident in this area in Dec. 2014); additional traffic generated by the development will likely only increase the risk of collisions and deer mortality.

Because the project area contains Great Basin sagebrush habitat it may also be considered potential habitat for the bi-state sage grouse.

2. Mitigate impacts of increased on traffic on Tioga Pass Road up to Yosemite

The addition of 80 year-round housing units and 120 transient/hotel units has the potential to dramatically increase traffic on Tioga Road going into Yosemite, and at the Park entrance gate. Lines to get into Yosemite this past summer were at times down to Tioga Pass Resort, and the additional traffic induced by this development will only add to congestion along the Park entrance road and in the Tuolumne-Tioga region of the Park. The plan should consider ways to mitigate traffic impacts into Yosemite. One way would be to increase the number and frequency of YARTS shuttles into the Park during peak seasons by requiring the proponent to help fund additional shuttles as mitigation for traffic impacts. At least one additional YARTS Lee Vining-Yosemite Valley shuttle should be considered (early AM and late PM return times), as well as multiple Lee Vining-Tioga Pass shuttle buses (with staggered AM and PM departure/pick up times); the latter shuttle would conceivably need to be put in place by YARTS or by the developer and should be free of charge to those staying or living at the Tioga Inn. (Note: People can catch a free Tuolumne area shuttle bus at Tioga Pass. This shuttle is run by the Park Service and operates frequently during peak seasons.

<https://www.nps.gov/yose/planyourvisit/tmbus.htm>)

The plan should also consider the impact of buildout of the Tioga Inn parcel on existing YARTS parking. Many people park in the dirt just outside the current development footprint to catch a YARTS shuttle or carpool to the Park with friends. Will the existing parking be displaced and is there an alternative where day users can park? The proponent should work with Caltrans to determine where YARTS shuttle parking can be located in the project vicinity.

3. Preserve visual character of the Gateway to Yosemite and Mono Lake

Sitting at the Gateway to Yosemite and Mono Lake, it's critical that the Tioga Inn facilities be thoughtfully developed to preserve the visual quality of and scenic views from the highway 120-395 junction. I do not think a three story development is warranted in this location due to the visual impacts that will result, and request that the hotel be limited to two stories. (To my knowledge there is only one three-story building in Mono County, and that is located within the urban footprint of Mammoth Lakes.) Mono County should appoint a Design Review Committee to provide input on project design and associated landscaping and hold a community meeting to display various potential design alternatives and gather public input on the project design. This step should occur before a design theme and landscaping plan are selected and prior to development of the preferred alternative.

Another useful tool in the supplemental analysis would be for the County to hire an expert to prepare "visual simulations." This tool has been used for many other proposed developments, especially in visually sensitive locations such as the Mono Basin.

4. Develop connectivity between Tioga Inn facilities and Lee Vining

Currently, it's a "dangerous" endeavor for people to walk from their lodging in Lee Vining to eat dinner or see music up at the Mobil, especially during summer and holiday weekends when traffic is heaviest at the highway 120 & 395 junction. The expected significant increase in traffic from doubling the restaurant capacity and adding 200 hotel and housing units (combined) will make it even more

dangerous for pedestrians to walk to and from town. Mono County and the proponent must consider a way to enhance “walkability” between Tioga Inn and Lee Vining for multiple reasons: a) most importantly, to make it safe for visitors and residents to walk to town; b) parking in Lee Vining is already a problem in summer so creating walkability is important to mitigate for anticipated additional traffic congestion; c) to enhance the experience of visitors so they can walk to town for meals and shopping, or to visit the Chamber and Scenic Area visitor centers, or to enjoy a walk the Lee Vining Creek trail; and d) so year-round residents can walk to town for groceries and to get their mail.

I suggest that the County and proponent consider a pedestrian “skyway” or walkway across highway 120 to get pedestrians over the highway and limit the risk of vehicle-pedestrian accidents (or vehicle-vehicle collisions due to stopped traffic as pedestrians cross highway 120). Signs that warn vehicles of pedestrian traffic, a traffic light and/or a crosswalk with flashing lights along highways 120 and/or 395 are other possible measures that should also be considered around the 120-395 junction. The County should work with Caltrans and others to determine if there are additional feasible mitigation measures to ensure safe passage of pedestrians in this area.

On a recent visit to the redwoods, we utilized a pedestrian skyway leading from a parking area on one side of the road to the LadyBird Johnson redwood grove on the other side of the road. The skyway was tastefully built and ensured effective and safe passage for pedestrians to the trail into the grove (the road itself, while not a state highway, is heavily used by logging trucks). An artfully designed pedestrian walkway across highway 395 that reflects a “mountain” theme should be required as a project mitigation (and provided it is allowable by Caltrans). If this is determined by Caltrans not to be feasible then other more traditional (and arguably less effective) measures as suggested above will be needed.



Pedestrian bridge across road in Redwood National Park. See <http://www.redwoodhikes.com/RNP/LBJ.html>

5. Leverage development of Tioga Inn facilities to benefit existing and new business in Lee Vining

The Tioga Inn, when developed, has the potential to enhance the town's existing economy and to foster the development of new business in town by creating greater demand for additional restaurants, shops, local services and the like. On the flip side, if Tioga Inn is completely self-contained and strives to provide all the services that are in town, it could significantly and adversely impact commerce in town. The County and proponent should work with community members in Lee Vining to determine how development at Tioga Inn can help leverage and benefit business in town. For example, creating walkability between the two areas as suggested above will benefit town businesses. What other incentives can the County create to foster additional business development in Lee Vining? This issue should be considered by community members, possibly via development of an Economic Development Subcommittee.

Thank you for considering my comments.

Sincerely,

A handwritten signature in cursive script that reads "Sally Miller".

Sally Miller
P.O. Box 22
Lee Vining, CA 93541

CC: Tim Alpers
Bob Gardner

Comments regarding Preparation of a Subsequent Environmental Impact Report (SEIR) and Specific Plan for the Tioga Inn Development

To:

Mono County Community Development Department
Gerry LeFrancois
Post Office Box 347
Mammoth Lakes, CA 93546
(760)924.1810
glefrancois@mono.ca.gov

From:

Barry McPherson
905 NE 7th St
Newport, OR 97365
Cell phones:
(760)965-6708
(503)708-8688
bdmcpherson@coho.net

I have deep roots in the Mono Basin, and deep concerns about development in the Basin. I was born in Bridgeport in 1947 and grew up in the home of my parents (Wallis R. and Virginia B. McPherson) situated below Mono Inn, the resort that my Grandmother Venita R. McPherson operated from the early 1920s until her death in 1961. After graduating from Lee Vining High School in 1965, obtaining a BS in Zoology at UCSB in 1969, and working at the Sierra Nevada Aquatic Research Laboratory on Convict Creek when it was a U.S. Fish and Wildlife Service facility, I moved to Oregon in 1970. I earned an MS in Fisheries at Oregon State University in 1973 and spent a career as a salmon and steelhead biologist in the Oregon Department of Fish and Wildlife.

With my wife Denise McPherson, I inherited historical McPherson property on Mono Lake below, above, and to south of Mono Inn in 1997 after both of my parents had died. My parents had sold Mono Inn and some of the land around it in the 1960s. We have managed the four rental houses on this historical property since 1977, including the house in which I grew up, two other houses from the 1930s, and one dating back to the 1990s. We have spent time every year staying in motels in Lee Vining or trailer camping nearby and doing business with Mono County stores, restaurants, gas stations, contractors, and various Mono County government offices.

So it with these deep roots and current interest in the Mono Basin that I base my comments on the proposed Tioga Inn development and what should be addressed in the Subsequent Environmental Impact Report (SEIR). I hope my comments convey the overall theme that any development in the Mono Basin needs to be done in ways that sustain the unique natural beauty and ecological function of the Basin, and be done in ways that serve the community of people living in the Basin for past decades and far into the future. The Tioga Inn development could be a positive addition to Lee Vining and the Mono Basin if done carefully with this theme as the driving force.

Fire Issue

One of the biggest concerns I have for the Mono Basin is increased risk of fire. Two major wildfires in

the last 2 years have threatened Lee Vining from the south and then from the north. The Marina Fire in 2016 presented a major risk to my property and my tenants as well. An increased number of people and vehicles spending time close to Lee Vining overnight or for multiple days and nights needs to be evaluated for increased risk of wildfires. Preventative measures need to be evaluated and recommended in the SEIR. Ways that the proposed development can help the Lee Vining Volunteer Fire Department prevent and fight fires need to be addressed, such as building more and better capacity of firefighting equipment and buildings. Clearly, a 3-story lodging development would be beyond the capacity of the present volunteer fire department to handle should a fire break out in the new development. An adequate hook-and-ladder fire truck would need to be acquired as well as a building to store it in, and the proposed development should bear a major part of the cost of such upgrades.

In-town Parking Issue

The SEIR needs to address the substantial increase in places to park in Lee Vining due to those staying at the Tioga Inn driving into Lee Vining for shopping, eating, and services like US Postal services. Increased exhaust fumes from the additional vehicular traffic needs to be evaluated for impacts on neighborhoods and schools in Lee Vining.

Night Sky Light Pollution Issue

A key issue that needs to be addressed in the SEIR is impact of outdoor lighting on the ability of residents and visitors to enjoy the amazingly beautiful stars and planets over the Mono Basin at night. Skies as dark as those of the Mono Basin are becoming increasingly rare due to human development done without adequate means of limiting stray light (light pollution) from fixtures needed only to light surface areas. Lighting fixtures for parking lots, sidewalks, and other outdoor areas have been manufactured for decades that greatly limit stray light. The SEIR needs to thoroughly evaluate the potential of the Tioga Inn development to increase stray light affecting visibility of stars and planets at night in the Mono Basin, evaluate alternative lighting systems, and make recommendations. Since the Lee Vining community already has many problem light fixtures, I recommend the developers be asked, or even required, to provide financial assistance to the community to reduce stray light problems as a partial offset to the unavoidable stray light problems Tioga Inn will create with even the best and latest technology.

Greenhouse Gas Emission Issue

Global warming and associated drought and extreme storm events (wind and precipitation) from fossil fuel consumption and other greenhouse gas emissions are issues that need to be addressed at the local level whenever possible. Fuel efficient building design, lighting, and appliances need to be assessed and recommended or required in the SEIR. "No vehicle idling" requirements need to be established, clearly posted, and enforced within the proposed development. Ways to efficiently transport people to and from the proposed development to Lee Vining for shopping and services need to be evaluated and recommended. The emphasis needs to be on safe and gentle walking/universal access trails and mini-bus service provided by the proposed development.

As a major tourist facility neighboring a National Scenic Area and National Park of international renown, I think particularly rigorous efforts should be made to address greenhouse gas emissions. The SEIR must take this special location into account and go beyond a typical SEIR for a typical location not neighboring such local, national, and international treasures.

Water Conservation Issue

Water conservation has been a big issue in the Basin for at least 150 years. It is a growing issue that was substantially ramped up with the Los Angeles Department of Water and Power diversions of inflow streams to Mono Lake over 75 years ago. And now the area has suffered years of drought and will be facing additional dryer decades ahead with less spring and summer flow and lower lake levels as global warming/climate change continues to intensify those conditions.

Therefore, the planned Tioga Inn needs to implement the highest levels of water conservation inside and outside throughout the project --- and provide guests with interpretive signs, literature, and other communications on the need for water conservation and how Tioga Inn is addressing water conservation. High efficiency showers, toilets, restaurant facilities, low water demand native plant landscaping, water recycling, gray water use outdoors, and other such measures need to be implemented and well publicized in hotel rooms, restaurants, and employee housing associated with the Tioga Inn development. Rainwater capture and use systems need to be part of roof design, as well.

Mitigation for water use at the Tioga Inn development should also be required of the developers, such as assistance to Lee Vining residences, schools, and businesses. This would include assistance with purchase and/or installation of more water-efficient showers, toilets, washing machines, outdoor watering systems, and more.

Other Community Issues

Increased numbers of visitors and resident workforce members always translates into need for increased community services for safety, security, schools, and emergency medical situations. It is essential that a plan for the Tioga Inn development needs a lot of local input and ways for the development to assist the community with equipment and personnel that will be needed to address these expanded concerns. That would include things such as EMT's, teachers, classrooms, ambulance capacity in the Basin, security equipment and personnel, and more. Assistance in acquiring at least one stoplight in Lee Vining should be part of the agreed-to plan.

The Tioga Inn would be an ideal place to add larger meeting rooms for community meetings. These should also be made available for holding people during emergencies such as earthquakes, snow slides, wildfires, and flash floods. This should also be part of the agreed-to plan.

Conclusion

If the above issues can be adequately addressed, the Tioga Inn development could be a welcome development in the Mono Lake Basin. Thank you for the opportunity to comment.

Barry McPherson

November 20, 2016

(Contact information at top of page 1)

To: Mono County Community Development Department attn: Gerry LeFrancois

Comments on Tioga Inn Project in Lee Vining

From: Nora Livingston, PO Box 371, Lee Vining, CA 93541, (415) 686-1935 no.livingston@gmail.com

Thank you for the opportunity to comment on the Tioga Inn Project in Lee Vining.

I am a Naturalist Guide in the Mono Basin and I have lived here on and off for 8 years. I love this little town very much and hope it will be my home for a very long time. I work for the Mono Lake Committee (though these comments are my own views, I am not representing the Committee in any way in this letter) and see a lot of the tourist traffic all summer. This town wouldn't be alive without it. That being said, I do believe a project of this scope needs a LOT of assessment as to how it will affect the town and its businesses, as well as the environment, both immediately on site of the project and the indirect impacts as well. If, and only if, all of these concerns are addressed, should this project go forward.

I am concerned about a few things about this project:

FIRE SAFETY: Local fire department officials have stated that the Lee Vining Volunteer Fire Department doesn't have a truck with a ladder large enough to fight a fire on a three-story building that large. If they were to get such a truck, they would then need to build a new firehouse. With the limited funds for the LVFD, this would be difficult without substantial monetary help. Also, adding 80 employees AND having over 200 extra guests may cause the town resources like the Fire Department's time to become depleted in times of high visitation.

INCREASED TRAFFIC at HWY 120 intersection: The intersection of HWY 395 and HWY 120 is notorious for accidents. I am worried that adding a hotel in that particular location would cause a greater number of accidents as that intersection would become much busier.

LIGHT POLLUTION: Lee Vining is lucky to have few lights---we can see the stars every night! Visitors come from LA where they can't see them EVER to be able to bask in the glory of the milky way. The added lights of the hotel would need to be addressed. Perhaps special windows and street lights can help with this. It MUST be included in the design. See <http://physics.fau.edu/observatory/lightpoll-prevent.html>

ENERGY: This proposed building will be much larger than any other in Lee Vining, and it will require a lot of energy to run. This must be addressed with fossil fuels in mind. SOLAR energy is the answer. The building must also be designed to be as energy efficient as possible. This is the future, we know how unsustainable fossil fuels are and how damaging they are to the environment. Anything built new needs to be on the forefront of energy technology, or life as we know it will soon come crashing down and this hotel would be obsolete anyway. I recommend designing a LEED certified building to address the needs of the future.

IMPACTS TO SCHOOLS: The local schools may not be able to handle an extra 30+ kids if the employees have families. This should be considered. IF this project goes forward, there should be some kind of mitigation paid by the project to help fund developments in the schools to hire more teachers and expand their campuses to accommodate more children.

WATER: This project will consume a lot more water. We are in the middle of a catastrophic drought and there is no end in sight. Conserving water is of the utmost importance, especially in the Mono Basin where Mono Lake has been impacted by excessive diversions for decades. Drought has further brought down the lake level. This Basin needs all the water it can get. If this project will negatively impact water allocation and runoff to the lake in any way, now or in the future, it should not happen on such a grand scale. If it does get built, it needs to have state-of-the-art gray water systems and water recycling plans, including a black water system.

AFFORDABLE HOUSING: The currently plan adds much needed housing to the community. While this is great, they need to be truly affordable and winterized for year round living. Dennis mentioned that his employees are paid well and therefore can afford their housing. Not all businesses in Lee Vining can afford to pay their employees as well as the Tioga Gas Mart (and potentially the Tioga Inn) can and living in the Eastern Sierra is expensive with food and gas prices as high as they are. The buildings should also address all the energy and water efficiency problems I addressed earlier, while also being affordable. If you can figure out how to do that, I'm on board.

I hope to live in the Mono Basin for a long time. I want this community to thrive and I understand that future development may be necessary to help businesses survive, but this particular project seems to be less community-minded and more individual-minded to serve the owner's wants. I want development projects in the town to come up because they address a need that is not being met and could also bring prosperity to the owner, in that order, not the reverse. If this project will address all of these concerns and be able to be a cutting-edge example of a business for a better future of our community and our planet, then I will support it. If it falls short, cuts corners, and impacts the community and environment negatively, I will fight it tooth and nail.

Thank you for the opportunity to comment. Please, do what is right and good for our future.

Nora Livingston, Lee Vining

From: garyn@schat.com [<mailto:garyn@schat.com>]

Sent: Monday, November 21, 2016 9:55 AM

To: Gerry LeFrancois <glefrancois@mono.ca.gov>

Subject: Tioga Inn

Thank you for the opportunity to comment on the Tioga Inn project in Lee Vining.

Our first concern always when evaluating such a project is WHERE'S THE WATER? Both surface and ground water sources have been in steady decline recently and almost all scientific studies suggest that this trend will continue. How will the greatly increased groundwater draw to support this project affect Mono Lake and the Lee Vining PUD supplies?

Since this project is still in the planning stage, now is the time to include requirements for passive solar, photovoltaic systems, graywater recycling, blackwater dispersal, and super insulation.

All but one restaurant and several motels shut down for the winter because visitation drops off dramatically when Tioga Pass closes. Is this project economically feasible?

Mr. Domaille has stated that he intends to sell the approved plans to a "chain" motel operator. I am not sure how binding these approved plans would be to the eventual operator, or if this would represent a "foot in the door" for greater expansion.

Please consider these concerns. Gary Nelson and Deborah Lurie

From: ryan.david.carle@gmail.com [<mailto:ryan.david.carle@gmail.com>] **On Behalf Of** Ryan Carle
Sent: Monday, November 21, 2016 12:39 PM
To: Gerry LeFrancois <glefrancois@mono.ca.gov>
Subject: comments on proposed Tioga Inn expansion

To: Mono County Community Development Department - Gerry LaFrancois

Comments on Specific Plan for Tioga Inn Project in Lee Vining , Oct. 27, 2016

From: Ryan Carle, 2621 N Rodeo Gulch Rd, Soquel, CA 95073
760-709-1179
ryan.david.carle@gmail.com

Dear Mr. LaFrancois,

I am writing in regards to the specific plan for the proposed Tioga Inn project in Lee Vining, California, which as currently proposed would entail building a 3-story/120 bedroom hotel, staff housing with 80 bedrooms, new parking lots, and expansion of the current restaurant and gas station at the current Mobil site. This site is right at the base of the road to Yosemite and the entrance to the Mono Basin.

I grew up in the Mono Basin and have lived there for two-thirds of my life, though I currently am located in Santa Cruz. I care deeply about the Mono Basin and preserving its cultural, scenic, and economic values. This area serves as the gateway to Yosemite National Park and the Mono Lake National Forest Scenic Area, and its unique beauty is experienced by thousands of international and domestic tourists annually. **I am writing to encourage you to only let the proposed Tioga Inn development occur if they meet the highest possible standards for green building and low visual impacts, and develop in a way that is responsible in its population and cultural impact on our community.**

The community of Lee Vining needs affordable housing, but **the proposed development of 80 units would increase the population of Lee Vining by 54%! This is conservatively assuming a 1.5 person occupancy per unit (120 people total). Lee Vining's population was 222 people in 2010 (U.S. Census, 2010). Adding 120 more people would increase the population of the entire Mono Basin by 30%, as Mono City and Lee Vining combined totaled 394 people in 2010 (U.S. Census, 2010).**

Adding this many people to the Mono Basin would have a major impact on our schools and other community services. Drawing hundreds of people to a self-contained resort outside of town may negatively impact businesses in town. More residents, along with a 120 room hotel, would alter our quality of life, for example by increasing traffic. The turn from Highway 120 to 395 at the Mobil is already dangerous and this project would increase the traffic by hundreds of cars a day. **I encourage you to cap the number of residences at 40, which would represent a more reasonable, though still large, 22% increase in Lee Vining's population and 15% increase for the whole Mono Basin.** I reiterate that affordable housing is needed, but not 80 units. **At the least I recommend further study of how many units are actually needed and what impact they would have on the community, i.e. how much housing currently exists in Lee Vining to accommodate laborers at the new hotel?**

A development of this size will also be resource intensive. This project may not be terribly large by the standards of urbanized places, but it will dramatically increase the amount of energy and water consumed in the Mono Basin. **I urge you to minimize this impact by requiring the building meet the highest standards for green building and low visual impact.** There is currently a movement underway to designate the Mono Basin a *climate-friendly community* (see [350.org](https://www.350.org) Mono Basin chapter; <https://www.facebook.com/350MONO/>) that sets an example for the world of how we can adapt to and prevent climate change. Making sure this development project meets the highest possible standards for sustainability will be a significant step in realizing the plan to make the Mono Basin a world-wide example for climate-change resilience.

Therefore I urge you to only allow the Tioga Inn development if it requires:

1. Enough solar installation and energy saving design elements to be a net zero energy user, and platinum LEED certified as well as exceeding the requirements of Title 24 of the State energy code.
2. A cutting-edge, gray water recycling and black water dispersal system
3. Native, drought-tolerant landscaping
4. Outside lighting should also be muted and pointed downwards to preserve our night skies.
5. Two or three apartment style building for staff housing, which would be much more energy and land-use efficient than the currently proposed 80 small cabins. These apartments should also include passive solar, good southern sun exposure, and gray and black water systems to make them as efficient as possible.

These reasonable requirements will substantially minimize the negative impacts on the environment and community, in this very special place beloved by locals and thousands of people worldwide. **Our actions now signal to our local communities and the world how we will proceed into a future in which we are resilient to climate change, and respectful of local communities and the environment.**

Sincerely,
Ryan Carle

2621 N Rodeo Gulch Rd.

Soquel CA 95073

From: Don Condon [<mailto:condon.don@gmail.com>]

Sent: Monday, November 21, 2016 9:42 AM

To: Gerry LeFrancois <glefrancois@mono.ca.gov>

Subject: Tioga Inn Project

Mr. Lefrancois,

We would encourage the reviewers, to the extent of their jurisdiction, to ensure that this Project is environmentally sound and at a minimum will meet Leed Platinum requirements. The resources, natural and otherwise, in this area are extremely limited.

Therefore the most sustainable project possible is warranted. People come to this area with and interest and appreciation of natural beauty and the fragility of the environment. In addition a new resort that models best practices in sustainability will be a draw to tourists and thus good for business and the local economy.

Sincerely,

Donald Condon

Vivian Barron

983 Fairway Circle

Mammoth Lakes, Ca. 93546

510 467-2197

condon.don@gmail.com

From: Yoel Kirschner [<mailto:yoelkirschner@gmail.com>]

Sent: Monday, November 21, 2016 1:52 PM

To: Gerry LeFrancois <glefrancois@mono.ca.gov>

Subject: Tioga Inn Project in Lee Vining , Oct. 27, 2016 (Comment)

To: Mono County Community Development Department - Gerry LaFrancois

Comments on Specific Plan for Tioga Inn Project in Lee Vining , Oct. 27, 2016

Dear Mr. LaFrancois,

I write in regards to the proposed Tioga Inn project in Lee Vining, California, and urge you to consider an environmentally preferred alternative for the proposed project. As currently proposed, a 3-story/120 bedroom hotel, staff housing with 80 bedrooms, new parking lots, and expansion of the Mobile site, at the base of highway 120 in the town of Lee Vining would be constructed.

I ask that you consider reducing the size of the staff housing by at least half the number currently proposed, and consider the use of efficient apartment style buildings, as opposed to individual houses for staff quarters. Any construction should follow the principles of green building, including construction resulting in the lowest visual impact. The town of Lee Vining has a population of roughly 220. Adding a development of this size would change the nature of the community and have potentially negative repercussions through increased traffic and road accidents, increased water use, and possibly by diverting economic activity away from existing services in the town of Lee Vining.

I lived in Bishop, CA during my tenure as a natural resources technician with the US Forest Service, and still make trips to the Mono Basin, both to visit Yosemite National Park, and to visit the Mono Basin in its own right. I would like to see any future development in the area to be undertaken with the utmost restraint, in light of the Mono Basin's unique environmental and cultural resources.

Sincerely,
Yoel Kirschner
Foreign Service Environmental Officer
U.S. Agency for International Development
Washington, D.C.

November 21, 2016

Mono County
Community Development Department
P.O. Box 347
437 Old Mammoth Road
Mammoth Lakes, CA
93546

Attention: Gerry LeFrancois

Regarding: NOP - Subsequent Environmental Impact Report and Specific Plan for the
Tioga Inn Project

Dear Mr. LeFrancois,

This letter has been prepared on behalf of the Lake View Lodge and Tim and Stephanie Banta in response to public comment and the Notice of Preparation for Subsequent Environmental Impact Report and Specific Plan (Plan) for the Tioga Inn Project, located south of the community of Lee Vining, California.

The plan calls for construction of a 120 unit three-story hotel with 200 seat restaurant, fitness center, laundry, car rental, banquet room, gift shop, restaurant parking, overflow/oversized vehicle parking, an 80-unit work-force housing complex, and onsite utilities including sewage leach field. This plan was originally proposed in 1993, and is considered by the community to fall in-line with decades of speculative development schemes within the Mono Lake Basin, including the Conway Ranch development plan of the late 1980s' early 1990s', the Cunningham Development Plan, Mono Inn Development Plan amongst others. The plan calls for a large scale, Vale Co. or Whistler B.C. boutique development, adjacent to the exclusive eastern entrance into Yosemite National Park. The planned development also borders the Mono Lake Tuffa State Reserve and the Mono Basin National Scenic Area.

It is of deep concern this plan still does not consider the magnitude of socioeconomic impacts to the Mono Basin and communities of Lee Vining, Mono City, or June Lake. The plan provides a very weak analysis of the development and the affected environmental and natural resources within the Mono Basin and Yosemite National Park. The plan does not provide an assessment of impacts to local or county emergency and first response resources and their ability to provide service. The following provides comment to this end.

Comment 1

The plan does not consider impacts to the existing work force of Lee Vining. Currently, there is not a workforce throughout the year to support the number of people/families under the current plan. It would be necessary to bring in a workforce from out of the area to support the project. It is assumed the majority of this workforce would be transient and would not deliver the tax base required to provide necessary local or county services. Currently, the unemployment rate for full

time residences of Lee Vining and Mono City is low. It is not understood how the planned development will bring new jobs into the community. Rather, it would likely trump the existing local workforce and business. The planned development will adversely impact the economy of Lee Vining and Mono City. The plan will undermine the local economy and destroy the livelihoods of

Vining and June Lake. The plan will undermine the local economy and destroy the livelihoods of Mono Basin residences. Please consider impacts to the current available workforce and the economies of the adjacent communities.

Comment 2

The plan does not address the services required to sustain a development of this magnitude. For example, the plan does not provide discussion regarding ability to provide additional teachers to Lee Vining school system, postal services, daycare, food (i.e. the local grocery store cannot support the current development), internet, or emergency services. Specifically, the community of Lee Vining cannot support a rapid expanse development project which would tax the already limited educational and social resources. Please provide an analysis of social services in addition to an analysis of community services required to support a development of this magnitude. Please provide a rational describing how the planned development would enhance social and community resources.

Comment 3

Please address the ability for the development to provide emergency fire and medical services. The nearest emergency responders are the Lee Vining Volunteer Fire Department (LVFD), who were responsible for saving the applicant's life on the subject property year ago. The LVFD is a volunteer department, and currently there is not enough volunteer personnel to support medical and fire suppression requirements for a three-story hotel and development of this magnitude.

The LVFD would require a major equipment upgraded, and additional training and personnel to provide the support required for a development of this size. Additional funding would be required. The plan would strain the resources of the local volunteer fire department. An expensive ladder truck must be purchased to provide fire suppression for the three-story hotel. Please provide a statement detailing how the planned development would provide emergency medical services and fire suppression support for the planned development.

Additionally, does the water demand for the project account for a fire suppression water supply and/or storage? Is there a water storage facility, tank or reservoir planned exclusively for fire water in addition to potable supply? Can the current water supply system sustain pressure and sustainable delivery during a fire?

Comment 4

The plan does not provide a development strategy which enriches the unique aesthetic, environmental and natural heritage of the Mono Basin. Rather, the planned development would degrade and vandalize these unique attributes. The plan calls for a large scale, Vale or Whistler style development. A development of this magnitude would destroy the attributes which make the Mono Basin unique. The Mono Basin is unique because it is a National Scenic Area and State Park without such large scale multilevel developments. Please provide a development plan which considers the unique aesthetic, environmental and natural heritage of the Mono Basin. For example, please consider; footprint reduction measures, green construction and design alternatives, building height reduction measures, view scape considerations, and noise, traffic, and light pollution mitigation measures.

Comment 5

Concurrent with the comments provided above, the Subsequent EIR must consider environmental consequences and alternative actions for the proposed development, which should include a no development alternative. The current Tioga Inn Specific Plan & Final EIR (May, 1993) is weak. The following resources require additional evaluation.

1. Socioeconomics and social resources require an update and further evaluation to determine impacts to adjacent communities, emergency and social services, increase in crime and medical calls etc.
2. Waste management; the plan must identify ability to accommodate management of additional waste. The Pumice Valley Transfer Station may require improvements to accommodate a large increase waste generated from the planned development. The SEIR should consider alternatives for waste management.
3. The SEIR should consider alternatives to mitigate potential impacts to the environment, and any receiving water(s) resulting from construction and operation of the proposed sewage disposal system. The FEIR (1993) does not adequately address potential impacts to groundwater or surface water resources resulting from long-term operation of the proposed

sewage system. Groundwater is within 330 feet below ground surface of the proposed facility and the underlying geology is presumed to be of permeable material. The SEIR must adequately address cumulative impacts to water resource and provide alternative actions to mitigate potential impacts to groundwater and surface water resulting from the proposed sewage disposal system.

4. The FEIR (1993) does not adequately address cumulative impacts to groundwater or surface water resources resulting from extraction of groundwater to support the planned development. There is little detail regarding the water budget for the planned development or ability to meet demand in an emergency such as a fire. The groundwater investigation provided in the FEIR (KLIENFELDER 1992), analytically derives high end specific capacity and yield estimates based on low end pumping rates over a short-term pumping test. Furthermore, it is presumptuous to assume a step drawdown test preceded by a short-term constant rate test (21 hrs) at a pumping rate below the planned extraction rate (150 gpm) will provide long-term, reliable estimates of yield, aquifer characteristics or impacts. For instance, a short-term single well pumping test cannot be used to estimate aquifer storage or storage coefficients required to assess long-term supply or potential impacts. Additionally, KLIENFELDER 1993 does not provide water quality analytical results. Water quality beneath the planned development has not been characterized for arsenic or other constituents requiring treatment under the current regulations. Is the proposed well compliant with current AWWA standards for quasi-municipal or municipal supply wells? Please provide a more robust groundwater investigation for the planned development which eliminates the uncertainties described by KLIENFELDER 1993 and addresses cumulative impacts to groundwater, surface water or other wells within the developments radius of influence.
5. The current development is a popular venue for large events and concerts. This element was not addressed in the FEIR. These concerts and events would likely increase under the current plan. The SEIR should provide an updated evaluation of noise, traffic, and light pollution within the Mono Basin and National Scenic Area.

In conclusion, it is of popular opinion that the planned development does not consider the impacts to the adjacent communities of Lee Vining, Mono City, or June Lake. We urge the Mono County Community Development Department consider alternatives to the proposed development plan and require the developer provide additional studies to address impacts to water, environmental, socioeconomic and visual resources.

Please contact Tim or Stephanie Banta at the Lake View Lodge located in Lee Vining California (760) 647-6543 should you have any questions regarding this letter or the comments herein.

Sincerely,

Tim Banta – Owner/Operator, Lake View Lodge



Lahontan Regional Water Quality Control Board

November 21, 2016

File: Environmental Doc Review
Mono County

Gerry Le Francois
Mono County Community Development Department
P.O. Box 347
Mammoth Lakes, CA 93546
Email: glefrancois@mono.ca.gov

Comments on the Notice of Preparation of a Subsequent Environmental Impact Report and Specific Plan for the Tioga Inn Project, Mono County, State Clearinghouse Number 1992012113

The California Regional Water Quality Control Board, Lahontan Region (Water Board) staff received the Notice of Preparation (NOP) of Subsequent Environmental Impact Report for the above-referenced project (Project) on October 24, 2016. The NOP, prepared by the Mono County Community Development Department, was submitted in compliance with provisions of the California Environmental Quality Act (CEQA) in order to solicit input on the potential impacts on the environment and ways in which those significant effects are proposed to be avoided or mitigated. The proposed Project is to construct a new hotel, new workforce housing units, upgrades to the existing gas station and restaurant, and additional parking areas including a park-and-ride facility. The existing onsite septic system will be replaced by an onsite wastewater treatment plant to treat wastes before discharge to a designated leach field downgradient of the site.

Water Board staff, acting as a responsible agency, is providing these comments to specify the scope and content of the environmental information germane to our statutory responsibilities pursuant to CEQA Guidelines, California Code of Regulations, title 14, section 15096. We encourage the County to take this opportunity to integrate storm water measures into the Project that support low impact development (LID) and reduce the effects of hydromodification. In addition, the environmental document will need to fully describe all components of the proposed wastewater treatment system and evaluate potential groundwater impacts as a result of onsite disposal practices. Our comments and list of potential permitting requirements are outlined below.

WATER BOARD'S AUTHORITY

All groundwater and surface waters are considered waters of the State. Surface waters include streams, lakes, ponds, and wetlands, and may be ephemeral, intermittent, or perennial. All waters of the State are protected under California law. State law assigns responsibility for protection of the quality of waters of the State in the Lahontan Region to the Lahontan Water Board. Some waters of the State are also waters of the United States. The Federal Clean Water Act (CWA) provides additional protection for those waters of the State that are also waters of the United States. Mono Lake and its tributaries are considered waters of the United States.

AMY L. HORNE, PhD, CHAIR | PATTY Z. KOUYOUMDJIAN, EXECUTIVE OFFICER

2501 Lake Tahoe Blvd., So. Lake Tahoe, CA 96150 | 15095 Amargosa Road, Bldg 2, Ste 210, Victorville CA 92394
e-mail Lahontan@waterboards.ca.gov | website www.waterboards.ca.gov/lahontan

The *Water Quality Control Plan for the Lahontan Region* (Basin Plan) contains policies that the Water Board uses with other laws and regulations to protect the quality of waters of the State within the Lahontan Region. The Basin Plan sets forth water quality standards for surface water and groundwater of the Region, which include designated beneficial uses as well as narrative and numerical objectives which must be maintained or attained to protect those uses. The Basin Plan can be accessed via the Water Board's web site at

http://www.waterboards.ca.gov/lahontan/water_issues/programs/basin_plan/references.shtml.

RECOMMENDED ELEMENTS TO INCLUDE IN THE ENVIRONMENTAL REVIEW

We recommend the following be included as part of the proposed Project and considered in the environmental review.

1. **Low Impact Development Strategies** – The foremost method of reducing impacts to watersheds from development is LID, the goals of which are maintaining a landscape functionally equivalent to predevelopment hydrologic conditions and minimal generation of non-point source pollutants. The principles of LID include: maintaining natural drainage paths and landscape features to slow and filter runoff and maximize groundwater recharge; reducing compacted soil and impervious cover; and managing runoff as close to the source as possible.

Post-construction storm water control measures that are compatible with LID are preferred. Examples include the use of bioretention, soil amendments, pervious pavement, and vegetated infiltration basins, swales, and strips, all of which can effectively treat post-construction storm water runoff, help sustain watershed processes, protect receiving waters, and maintain healthy watersheds. Any particular one of these control measures may not be suitable, effective, or even feasible on every site, but the right combination, in the right places, can successfully achieve these goals. Information regarding LID and sustainable storm water management can be accessed online at http://www.waterboards.ca.gov/water_issues/programs/low_impact_development. We encourage the County to incorporate LID implementation strategies into this Project such as vegetated swales, pervious pavement, and vegetated infiltration basins.

2. **Hydromodification** – Hydromodification is the alteration of the natural flow of water through a landscape (i.e. lining channels, flow diversions, culvert installations, armoring, etc.). Disturbing and compacting soils, changing or removing the vegetation cover, increasing impervious surfaces, and altering drainage patterns limit the natural hydrologic cycle processes of absorption, infiltration, and evapotranspiration, and increases the volume and frequency of runoff and sediment transport. Hydromodification typically results in stream channel instability, water quality degradation, changes in groundwater recharge processes, impacts to aquatic habitats, and disconnecting of a stream channel from its floodplain. Floodplain areas provide natural recharge, attenuate flood flows, provide habitat, and filter pollutants from urban runoff. Floodplain areas also store and release sediment, one of the essential processes to maintain the health of the watershed. Information regarding hydromodification can be accessed online at http://www.waterboards.ca.gov/water_issues/programs/stormwater/hydromodification.shtml. We encourage the County to incorporate mitigation measures that will avoid or minimize the potential for hydromodification as a result of Project implementation.
3. **Water Quality Standards and Thresholds of Significance** – All surface waters and groundwaters have applicable water quality standards, and each water quality standard has two parts, (1) a designated beneficial use and (2) a water quality objective (either numerical or narrative) that must be maintained or attained to protect that beneficial use.

The environmental document will need to define the site-specific water quality standards (beneficial use and water quality objective) that are applicable to both the surface waters and groundwater potentially affected by this Project. It is these standards that should be used when evaluating thresholds of significance for Project impacts in the environmental review.

4. **Beneficial Uses and Water Quality Objectives** – The Project is located within the Mono Hydrologic Unit 601.00 and overlies the Mono Valley Groundwater Basin No. 6-9. The designated beneficial uses of surface waters in the Mono Hydrologic Unit 601.00 and of groundwaters of the Mono Valley Groundwater Basin No. 6-9 are outlined in Chapter 2 of the Basin Plan. Water quality objectives, both numerical and narrative, for these waters, are outlined in Chapter 3 of the Basin Plan. This information is necessary to identify the site-specific water quality standards described in Comment No. 3 above.
5. **Degradation Analysis** – The environmental document should include a Degradation Analysis that analyzes the existing water quality of the groundwater beneath the site and the potential changes to the quality of the groundwaters as a result of implementing the proposed onsite wastewater treatment system. This analysis should be consistent with State Water Board Resolution 68-16, the *Statement of Policy with Respect to Maintaining High Quality of Waters in California* (hereafter the Antidegradation Policy), which requires that disposal of waste into waters of the State be regulated to achieve the highest water quality consistent with the maximum benefit to the people of the State. The quality of some waters is higher than established by adopted policies and that higher quality water shall be maintained to the maximum extent possible. The Antidegradation Policy requires the following:
 - a. Higher quality water will be maintained until it has been demonstrated that any change will be consistent with the maximum benefit to the people of the state, will not unreasonably affect present and anticipated beneficial use of the water, and will not result in water quality less than that prescribed in the policies.
 - b. Any activity that produces a waste and discharges to existing high quality waters will be required to meet waste discharge requirements that will result in the Best Practicable Treatment or Control (BPTC) of the discharge necessary to assure pollution or nuisance will not occur, and the highest water quality consistent with the maximum benefit to the people will be maintained.
6. **Onsite Wastewater Treatment** – The Project plans to construct and operate a domestic wastewater treatment plant. Onsite disposal of treated wastewater must not cause pollution and shall minimize degradation. Denitrification should be included in the plant design to ensure that receiving water pollution from nitrate does not result from wastewater effluent discharges. The environmental document should fully describe the following information.
 - a. Domestic wastewater collection, conveyance, treatment, and disposal means and methods.
 - b. Locations of all associated domestic wastewater systems, appurtenances, and structures.
 - c. Treatment plan design criteria.
 - d. Storage and disposal design criteria.
 - e. Expected wastewater quality.
 - f. Expected wastewater flow (average daily and daily maximum).
 - g. Depth to groundwater and receiving groundwater quality.

- h. Expected receiving groundwater degradation (nature and extent) resulting from the discharge according to State Water Resources Control Board Resolution 68-16. Additional information is available at http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/1968/rs68_016.pdf.
- i. Background receiving groundwater quality and direction of groundwater flow established from a statistically significant data set.
- j. Location and design details for monitoring wells to be installed to monitor groundwater quality.
- k. Lift station locations and design.
- l. Backup power features.
- m. Entity responsible for owning and operating the treatment and related infrastructure.
- n. Intentions, if any, regarding recycled water usage. If recycled water uses are planned, an Engineering Report prepared in accordance with California Code of Regulations, title 22, must be submitted to both the Water Board and State Board Division of Drinking Water for approval. Any recommendations regarding treatment or disposal would be incorporated into waste discharge requirements or water reclamations requirement issued by the Water Board.

The Lahontan Water Board's policy for domestic wastewater treatment, disposal, and reclamation is described in the Basin Plan, which is available online at http://www.waterboards.ca.gov/lahtontan/water_issues/programs/basin_plan/docs/ch4_implementationplans.pdf#page=67.

7. **Jurisdictional Delineation of Surface Waters** – Several streams traverse the site, all of which are considered waters of the State and subject to regulation by the Water Board. A jurisdictional delineation will need to be performed to determine the locations and extent of all surface water resources within the boundaries of the Project, including non-federal waters of the State and federal waters of the United States. A Jurisdictional Delineation Report documenting the results of the delineation would contain essential information for determining what state and federal water quality regulations might be applicable to this Project and should be included as an appendix to the final environmental document.

Prior to construction, the Jurisdictional Delineation Report will need to be submitted to Water Board staff for review and concurrence with respect to presence and extent of non-federal waters of the State on the Project site. We further request that a copy of the Jurisdictional Delineation Report also be provided to the United States Army Corps of Engineers to verify the presence or absence of federal waters on the Project site.

8. **Restoration and Revegetation** – All temporary impacts to water resources and upland areas should be restored (recontoured and revegetated) to match pre-Project conditions. The environmental document should include a mitigation measure that requires a Restoration and Revegetation Monitoring Plan be prepared that includes monitoring for some period of time (usually no less than 3 years), outlines a schedule with performance measures to be met in order for the restoration/revegetation to be deemed successful, and contains adaptive management criteria in the event performance measures are not being met.
9. **Buffer Areas** – The environmental document should include a mitigation measure that requires buffer areas to be identified and exclusion fencing to be used to protect surface water resources outside the Project area and prevent unauthorized vehicles or

equipment from entering or otherwise disturbing surface waters outside the Project. Construction equipment should use existing roadways to the extent feasible.

10. **Vegetation Clearing** – Vegetation clearing should be kept to a minimum. Where feasible, existing vegetation should be mowed so that after construction the vegetation could reestablish more quickly and help mitigate for potential storm water impacts.
11. **Spill Prevention and Response** – The environmental document should include a mitigation measure that requires the preparation and implementation of a comprehensive Spill Prevention and Response Plan. This plan should outline the site-specific monitoring requirements and list the best management practices necessary to prevent hazardous material spills or to contain and cleanup a hazardous material spill, should one occur.

POTENTIAL PERMITTING REQUIREMENTS

A number of activities associated with the proposed Project have the potential to impact waters of the State and, therefore, may require permits issued by either the State Water Resources Control Board (State Water Board) or Lahontan Water Board. The required permits may include one or more of the following.


12. Projects that result in excavation in, discharge of fill to, or otherwise physical alteration of surface waters will require either (1) a CWA, section 401 water quality certification for impacts to federal waters or (2) dredge and fill waste discharge requirements for impacts non-federal waters of the State, both of which are issued by the Lahontan Water Board.
13. Land disturbance of more than 1 acre will require a CWA, section 402(p) storm water permit, including a National Pollutant Discharge Elimination System (NPDES) General Construction Storm Water Permit, Water Quality Order (WQO) 2009-0009-DWQ, obtained from the State Water Board, where federal waters of the United States are affected. The environmental document should identify where waters of the United States are present within the Project area. The Lahontan Water Board may establish individual waste discharge requirements to address storm water impacts to non-federal state only waters. The project- specific Storm Water Pollution Prevention Plan required by the permit must fully identify and describe both construction and post-construction Best Management Practices (BMPs) that will be incorporated into the Project. The environmental document should also fully describe the post-construction BMPs that will be used and show locations of these features.
14. New industrial operations may require coverage under the NPDES General Industrial Storm Water Permit, WQO-2014-0057-DWQ, obtained from the State Water Board, where federal waters of the United States are affected. The Lahontan Water Board may establish individual waste discharge requirements to address storm water impacts to non-federal waters of the State.
15. Disposal from wastewater treatment facilities will likely require coverage under individual waste discharge requirements issued by the Lahontan Water Board or through a Notice of Applicability signed by the Executive Officer covering effluent dischargers under a general order for waste discharge requirements. Information on what information is needed in a report of waste discharge is available on the State Water Board's web site at http://www.waterboards.ca.gov/water_issues/programs/land_disposal/waste_discharge_requirements.shtml.

Depending upon the volume of flow and type of treatment proposed, it is possible that domestic wastewater discharges may be regulated by Mono County Department of Environmental Health Services.

16. Water diversion and/or dewatering activities may be subject to discharge and monitoring requirements under either NPDES General Permit, Limited Threat Discharges to Surface Waters, Board Order R6T-2014-0049, or General Waste Discharge Requirements for Discharges to Land with a Low Threat to Water Quality, WQO-2003-0003, both issued by the Lahontan Water Board. The environmental document should identify any and all proposed diversion or dewatering actions.

Please be advised of the permits that may be required for the proposed Project, as outlined above. The specific Project activities that may trigger these permitting actions should be identified in the appropriate sections of the environmental document. Information regarding these permits, including application forms, can be downloaded from our web site at <http://www.waterboards.ca.gov/lahontan/>. Early consultation with Water Board staff is highly encouraged.

Thank you for the opportunity to comment. If you have any questions, please contact me at (760) 241-7376 (jan.zimmerman@waterboards.ca.gov) or Patrice Copeland, Senior Engineering Geologist, at (760) 241-7404 (patrice.copeland@waterboards.ca.gov). Please send all correspondence regarding this Project to the Water Board's email address at Lahontan@waterboards.ca.gov and include the Project name and State Clearinghouse Number (1992012113) in the subject line.



Jan M. Zimmerman, PG
Engineering Geologist

cc: State Clearinghouse (SCH 1992012113) (state.clearinghouse@opr.ca.gov)
Nick Buckmaster, CA Dept. of Fish and Wildlife (nick.buckmaster@wildlife.ca.gov)
U.S. Army Corps of Engineers, Ventura Office (splregventura@usace.army.mil)
Louis Molina, Mono County DEHS (lmolina@mono.ca.gov)
Jay Cass, Lahontan Water Board (jehiel.cass@waterboards.ca.gov)

**Mono County
Community Development Department**

PO Box 347
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760.924.1800, fax 924.1801
commdev@mono.ca.gov

PO Box 8
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RECEIVED
NOV 21 2016
MONO COUNTY
Community Development

Date: October 27, 2016

**RE: NOTICE OF PREPARATION COMMENTS ON THE TIOGA INN SPECIFIC PLAN UPDATE
AND SUBSEQUENT ENVIRONMENTAL IMPACT REPORT**

Name: Rebecca Watkins
Address: 3rd Mono Lake Ave, Lee Vining, CA
PO Box 267
Phone #: 805-440-7669
Email: RWatkins54@aol.com

Comments:

This project has the potential to affect the small town of Lee Vining in many ways:
① Traffic w/ need to make crosswalks more safe w/ blinking lights
② The number of students in the public schools
③ Parking in Lee Vining
The Mono Basin / Lee Vining water supply needs work & the town should be assured that the "project" will not affect that water supply
Hopefully this project will be as "green" as possible. That employee housing will accommodate "family units" as well as "singles."
Funds to build a "bike path" from the project to Lee Vining would be appreciated.

Please leave this form at the meeting, or it may be submitted by Nov. 21, 2016, as follows:

By email to: glefrancois@mono.ca.gov

By mail to: Gerry LeFrancois, PO Box 347, Mammoth Lakes, CA 93546

*Green
Parking*

Crosswalk Safety

From: [Gerry LeFrancois](#)
To: [Wendy Sugimura](#); [Sandra Bauer](#)
Subject: FW: Comments on SEIR and Specific Plan for Tioga Inn Development
Date: Monday, November 21, 2016 2:38:15 PM

From: Wilma Wheeler [mailto:wilma88bryce@gmail.com]
Sent: Monday, November 21, 2016 2:38 PM
To: Gerry LeFrancois <glefrancois@mono.ca.gov>
Subject: Comments on SEIR and Specific Plan for Tioga Inn Development

Dear Gerry LeFrancois,

Please accept our comments on the proposed development for Tioga Inn.

The proposed development is in an especially sensitive location as it is on the way into Yosemite Park and is high visible in the scenic Mono Basin and Mono Lake vicinity. It is very imperative that that the project not stick out like a "sore thumb" in this scenic area. It is also imperative that it be developed in a way that is environmentally acceptable and be a project that is worthy of its site.

It is essential that this project be a result of wise and thoughtful planning. Require the latest developed products including solar for heating and lighting.

Mono County is still in the midst of a severe drought so economical water use is a critical requirement. Consider requiring water recycling and the use of gray water for landscaping. Water use must be the minimal possible so as not to impact Mono Lake and other critical habitat.

Please consult with and listen to environmental organizations and informed citizens so this project will be one that works well for the community and its residents, as well as visitors,

Thank you for considering our comments.

Wilma and Bryce Wheeler
PO Box 3208
Mammoth Lakes, CA 93546
760 934-3764

From: susan DesBaillets [<mailto:susandes@earthlink.net>]

Sent: Monday, November 21, 2016 2:49 PM

To: Gerry LeFrancois <glefrancois@mono.ca.gov>

Subject: Tioga Inn Comments

Mono County Community Development Department
Attn: Gerry Le Francois
P.O. Box 347
Mammoth Lakes, CA 93546

RE: Comments on NOP, SEIR, and specific plan for the Tioga Inn project

I appreciate the opportunity to comment on the plans for the Tioga Inn project. My concern is the magnitude of this project and how it will impact our community, the environment, and the viewshed. I've been a resident of Mono County since 1971, and the careful planning as well as respect for the nature of this relatively undisturbed area is of great importance to me.

As one descends Tioga Pass there is a largely undisturbed panoramic view of Mono Lake and the surrounding Mono Basin Scenic Area. Plans for a three story hotel do reduce the footprint from the original two story plan, however it will increase the vertical profile interfering with the view. This along with a 200 seat restaurant on the highest point will further overcrowd the view.

Affordable housing for families is needed in this area, yet will the 80 unit work-force housing meet this need? This is a huge increase. Will the housing be single units or apartment style housing? I hope that every effort will be made to support the specific needs of the community.

Water. How will the increase use effect the groundwater aquifers? Presently large lawns are maintained around the existing building. I would encourage some effort towards drought tolerant landscaping using native plants as well as reduced watering of the existing lawns, with gray water.

With the increased number of pedestrian traffic surely to follow such a project, I would encourage an effort towards designing a safe pedestrian corridor between the Mobil site and the town of Lee Vining. Crosswalks and/or some structure for crossing Tioga Pass should be considered.

Lee Vining is a small community and I am concerned that the infrastructure will be severely impacted by the Tioga Inn. It seems that the plans are for an exclusive project and that will have a detrimental impact on the economy of Lee Vining. Will the fire department need to purchase new equipment to extinguishing fires on three story buildings? Will a volunteer fire department be adequate for such an increase in structures?

I have a lot of questions and concerns about the Tioga Inn project—namely that it is a grandiose and deserves careful consideration and analysis. The visual impact is huge as well as the effect on the local economy. I hope you will consider revisiting the scale of this project and working to come up with an alternative scaled down version. Please allow ample time for community input in the planning process.

Sincerely,
Susan DesBaillets

November 21, 2016

Mr. Gerry LeFrancois
And Bauer Planning & Environmental Services, Inc.
Mono County Community Development Department
P.O. Box 347
Mammoth Lakes, CA 93546

Dear Mr. LeFrancois,

I am a Mono Basin resident commenting on the Notice of a Subsequent Environmental Impact Report and Specific Plan for the Tioga Inn Project.

I have two substantive comment subjects with this project, one regarding the scenic considerations of the Mono Basin, and the other regarding the impact of what amounts to a substantial new housing development at the edge of Lee Vining.

Because the new Tioga Inn project proposal involves a 3-story structure and 80 units of additional private, residential housing there is the potential for significant, new scenic impacts. Given that the Tioga Crest and Mono Lake are iconic scenic locations, a full analysis of scenic impacts, including lighting, building colors, possible solar panel placement, and other associated development structures, must be fully considered from multiple vantage points along Highway 120 West, Highway 395, and from Panum Crater, South Tufa, Navy Beach and other potential, frequently-visited day use sights valuable to Mono County visitors. Of particular importance is the vantage point of South Tufa looking west with tufa towers in the foreground and the Sierra Crest beyond. This vantage point currently has little to no discernable human intrusion during day, dusk, and dawn views. This location is among the most visited, treasured, and shared locations in Mono County, and its scenic integrity looms large in the future of tourism and the quality of visitors' experience. The spill-over lighting, direct intrusion of structures, lights, and general distraction on the horizon has potential, negative impacts from the South Tufa area. Currently, South Tufa visitation approaches 300,000 visitors a year as per Mono Lake Tufa State Reserve vehicle monitoring estimates.

The current proposed project of 80 additional housing units strikes me as a significantly new, independent project being inserted as an amendment under the existing specific plan.

Why the 4-fold increase in residential development? The project proponent has publicly stated on October 27, 2016 that these units will be "market rate" and not workforce housing. Eighty units have considerable economic, social, and environmental impacts in the region since they threaten to double the population of adjacent Lee Vining. The long-term housing implications for Mono City, Lee Vining, June Lake, Mammoth Lakes, and even Bridgeport are difficult to ascertain but must be evaluated since these units could potentially be built out of synch or without further motel development. The additional housing has the potential to radically skew market rentals, housing prices, and commuter traffic and habits. Given that the Eastern Sierra is a highly desirable place to live, and these units would be positioned to afford views and access to more affluent long or short-term renters from beyond local workforce needs, it does nothing to solve what is already a difficult and insufficient housing problem in the region. This project may in fact exacerbate the situation where more lower-income individuals/families turn to living seasonally on nearby Southern California Edison and Inyo National

Forest Land in Lee Vining and Lundy Canyon. These seasonal squatters, already a local issue, have impacts of their own, and there is a demonstrated lack of interest and capacity with SCE and the Inyo National Forest to enforce long-term camping and squatting regulations and the related waste, water, and fire-related issues. As we have seen in the history of Mono County, more market housing does not directly solve housing issues, in fact it has the real potential to force the opposite.

This project also brings the potential to double the demands on local Lee Vining Volunteer Fire Department, nearby Mono County EMS resources, and Mono County Sherriff Department, solid waste disposal services, local schools, and social services. Additional funding may come with this project, but scaling up all the aforementioned services in Lee Vining, June Lake, or Bridgeport may not be practical or even realistic.

A rough doubling of the population will also change the demands on other local services and businesses. This project will bring rapid growth to Lee Vining and will also impact traffic, parking, and pedestrian use along adjacent Highway 120 West, Highway 395, and nearby Utility Road, and local US Forest Service roads. Analysis and mitigation should address these demands.

It would be difficult to argue that the character and nature of the Lee Vining Gateway community and nearby Eastern Sierra would not change significantly. Further, the last 24 years of development history and increased tourism in the region has created the potential for more volatile changes making much of the original specific plan difficult to reckon in light of the additional and substantial specific plan amendment. There is merit to treating the 80 units of housing as a separate, independent project.

I urge you at the very least to implement the Mono Basin Community Plan and Mono County General Plan to evaluate all new changes.

Thank you for the opportunity to comment.

Sincerely,

Bartshe Miller
PO Box 327
Lee Vining, CA 93541
760.648.3044

From: Claire Skinner [<mailto:claire.skinner@thomasriggs.net>]

Sent: Monday, November 21, 2016 4:15 PM

To: Gerry LeFrancois <glefrancois@mono.ca.gov>

Subject: Mobil Mart expansion

Dear Gerry LaFrancois,

I am writing in regards to the specific plan for the proposed Tioga Inn project in Lee Vining, California, which as currently proposed would entail building a 3-story/120 bedroom hotel, staff housing with 80 bedrooms, new parking lots, and expansion of the current restaurant and gas station at the current Mobil site. This site is right at the base of the road to Yosemite and the entrance to the Mono Basin.

I worked in the Mono Basin for three summers and Bishop for two summers, though I currently am located in Tucson. I visit the Eastern Sierra on vacation every year. I care deeply about the Mono Basin and preserving its cultural, scenic, and economic values. This area serves as the gateway to Yosemite National Park and the Mono Lake National Forest Scenic Area, and its unique beauty is experienced by thousands of international and domestic tourists annually. I am writing to encourage you to only let the proposed Tioga Inn development occur if they meet the highest possible standards for green building and low visual impacts, and develop in a way that is responsible in its population and cultural impact on our community.

The community of Lee Vining needs affordable housing, but the proposed development of 80 units would increase the population of Lee Vining by 54%! This is conservatively assuming a 1.5 person occupancy per unit (120 people total). Lee Vining's population was 222 people in 2010 (U.S. Census, 2010). Adding 120 more people would increase the population of the entire Mono Basin by 30%, as Mono City and Lee Vining combined totaled 394 people in 2010 (U.S. Census, 2010).

Adding this many people to the Mono Basin would have a major impact on our schools and other community services. Drawing hundreds of people to a self-contained resort outside of town may negatively impact businesses in town. More residents, along with a 120 room hotel, would alter our quality of life, for example by increasing traffic. The turn from Highway 120 to 395 at the Mobil is already dangerous and this project would increase the traffic by hundreds of cars a day. I encourage you to cap the number of residences at 40, which would represent a more reasonable, though still large, 22% increase in Lee Vining's population and 15% increase for the whole Mono Basin. I reiterate that affordable housing is needed, but not 80 units. At the least I recommend further study of how many units are actually needed and what impact they would have on the community, i.e. how much housing currently exists in Lee Vining to accommodate laborers at the new hotel?

A development of this size will also be resource intensive. This project may not be terribly large by the standards of urbanized places, but it will dramatically increase the amount of energy and water consumed in the Mono Basin. I urge you to minimize this impact by requiring the building meet the highest standards for green building and low visual impact. There is currently a movement underway to designate the Mono Basin a climate-friendly community (see 350.org Mono Basin chapter; <https://www.facebook.com/350MONO/>) that sets an example for the world of how we can adapt to and prevent climate change. Making sure this development project meets the highest possible standards for sustainability will be a significant step in realizing the plan to make the Mono Basin a world-wide example for climate-change resilience.

Therefore I urge you to only allow the Tioga Inn development if it requires:

1. Enough solar installation and energy saving design elements to be a net zero energy user, and platinum LEED certified as well as exceeding the requirements of Title 24 of the State energy code.
2. A cutting-edge, gray water recycling and black water dispersal system

3. Native, drought-tolerant landscaping
4. Outside lighting should also be muted and pointed downwards to preserve our night skies.
5. Two or three apartment style building for staff housing, which would be much more energy and land-use efficient than the currently proposed 80 small cabins. These apartments should also include passive solar, good southern sun exposure, and gray and black water systems to make them as efficient as possible.

These reasonable requirements will substantially minimize the negative impacts on the environment and community, in this very special place beloved by locals and thousands of people worldwide. Our actions now signal to our local communities and the world how we will proceed into a future in which we are resilient to climate change, and respectful of local communities and the environment.

Sincerely,
Claire Skinner
Tucson, Arizona



MONO LAKE COMMITTEE

P.O. Box 29
Hwy 395 at Third Street
Lee Vining, CA 93541

Phone (760) 647-6595
Fax (760) 647-6377

Board of Directors

Chair:
Sally Gaines

Martha Davis
Vireo Gaines Schiller
David Kanner
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Gina Radieve
Tom Soto
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Doug Virtue
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Directors Emeriti

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Executive Director

Geoffrey McQuilkin

Southern California Office

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Los Angeles, CA
90025-3634

On the Internet

monolake.org
monobasinresearch.org

November 21, 2016

Mr. Gerry LeFrancois
And Bauer Planning & Environmental Services, Inc.
Mono County Community Development Department
P.O. Box 347
Mammoth Lakes, CA 93546

Subject: Comments on the Notice of Preparation of a Subsequent Environmental Impact Report and Specific Plan for the Tioga Inn Project

Dear Mr. LeFrancois:

The Mono Lake Committee (MLC) is writing to provide comments on the scope and content of environmental information that will be reflected in the forthcoming Subsequent Environmental Impact Report (SEIR) for the Tioga Inn Project.

The MLC is a non-profit citizen's group dedicated to protecting and restoring the Mono Basin ecosystem, educating the public about Mono Lake and the impacts on the environment of excessive water use, and promoting cooperative solutions that protect Mono Lake and meet real water needs without transferring environmental problems to other areas. Supported by 16,000 members, the MLC has been active in the Mono Basin since 1978.

The Tioga Inn Specific Plan and Final Environmental Impact Report were finalized and approved in May 1993, however the California Environmental Quality Act (CEQA) requires Mono County Community Development Department (the County) to prepare a SEIR "when warranted by changed project circumstance, the availability of new information, potential for new environmental effects, and potential for new mitigation measures and/or project alternatives to reduce significant effects." The County has explained that the primary trigger for a SEIR is that the project proponent, Dennis Domaille, is proposing new additions to the project that were not included in the 1993 Specific Plan. MLC believes that current scoping analysis should include evaluating not only the new proposed land uses but also certain components of the entire project.

Water supply, water quality, and waste water management

The SEIR must analyze water supply sources and the impacts to Lee Vining Creek and spring/aquifer recharge below the project property. This analysis and groundwater testing should be done during all seasons and projections should be made into the future and take into consideration continuing—or more severe—drought conditions. The previous technical reports that supported the 1993 Specific Plan were lacking some analyses recommended by the Kleinfelder report, and are now outdated. The pump test will need to be redone and supplemented with a geologic analysis. The County should consider doing the geologic and pump test analysis together, which is not commonly done, but is

the best way to understand the aquifer, especially in complex situations; the presence of the Mono Lake Fault makes this a complex situation. Assumptions for pump test calculations are ideal and rarely seen on the ground, and a geologic analysis is an important check on those assumptions. The validity of each assumption must be disclosed and discussed, including whether the well has fully recovered from pumping prior to the test, whether the test is drawing water from another source, whether the aquifer is confined, etc.

Specific quantity details should be provided for expected water pumping, greywater disposal, and septic disposal, and should include maximum, minimum, and average amounts on a monthly basis. Comparison to current usage rates for the existing business and residential units should be included.

Water quality testing should be done in conjunction with an evaluation of water supply to ensure that a stable source for the planned development is there now and into the future. Lee Vining is already experiencing water quality and supply impacts and has been pursuing a secondary source of quality water to meet needs of residents and visitors—especially when fire suppression crews are stationed in Lee Vining and the town's usage doubles—and to meet mandatory State requirements for a back-up water supply source.

The project proponent has stated a commitment to incorporating a greywater system to supplement a septic tank and leach field system. At the Scoping Meeting in October in Lee Vining, Mr. Domaille explained that the greywater system would provide water to the landscaping that he has planned for the hotel and restaurant grounds. The County should analyze the actual water needs and requirements of the proposed landscaping (see comments related to type of landscaping below) and compare that to the amount of greywater produced by the hotel, restaurants, and current and proposed housing units. If native landscaping is done, MLC believes there may be excess water available after vegetation needs (especially in the winter months) and where that water will go must be addressed. Will a septic tank also be necessary? Vegetation on adjacent parcels to the project should not receive an abnormal amount of water as that would be detrimental. Greywater systems have many specific requirements including that they need to be subsurface with no visible water above ground. How will this be accomplished with the landscaping plan? A call for a detailed landscaping plan should be required as part of the SEIR.

The Lahontan Regional Water Quality Control Board should be contacted for scoping comments to ensure their agency requirements are incorporated early in the process. With a significant amount of additional paving presumably required for the hotel, restaurants, and additional housing units, runoff issues will need to be addressed and planned for to reduce impacts. Potential mitigation measures should be considered and evaluated as part of the SEIR.

Scenic qualities of the Mono Basin

The Mono Basin has long been valued for the expansive vistas and unique open-space landscape of the Sierra escarpment, Mono Lake, and the western edge of the Great Basin. These scenic qualities are recognized and treasured by residents and visitors alike and have resulted in specific protections including the Mono Basin National Forest Scenic Area (the first designated Scenic Area in the nation) and specific guiding language in both the Mono Basin Community Plan and the Mono County General Plan.

The proposed project site is adjacent to the Scenic Area boundary (just across the highway) and while not directly affected by the Scenic Area Management Plan's specific guidelines and prescriptions, they are worth noting given the proximity. The project will be potentially visible from Scenic Area lands that are a prime destination of Mono Basin visitors and the SEIR should evaluate the project's visibility, both in daytime and at night due to lighting, and consider possible mitigations from the following key visitor locations: 1) Mono Basin National Forest Scenic Area Visitor Center, 2) Old Marina, 3) South Tufa, and

4) the Mono Lake Tufa State Natural Reserve boardwalk at Mono Lake County Park. While these sites are distant from the project, current conditions provide for expansive scenic views and changes from this condition would be significant and should be evaluated for mitigation. Visual impacts from Lee Vining Canyon, Lee Vining, and Mono City should also be analyzed. Visual simulations should be a major component of the draft SEIR so that the true visual impacts can be represented to the public. Simulations should include nighttime photos that capture the impacts from increased lighting. The project should also be analyzed for its conformance to the Mono County Night Sky ordinance.

The project is immediately adjacent to State Route 120 that leads to the east entrance of Yosemite National Park. Both Highway 395 and State Route 120 (outside of Yosemite) are currently being considered for Scenic Byway designation. This Federal Highway Administration designation recognizes roads for one or more of six qualities: archeological, cultural, historic, natural, recreational, and scenic. This project is located at the junction of Highway 395 and 120 and therefore within a future Scenic Byway corridor, if designated. Proactive steps throughout the development process should reflect this potential designation.

Two major project elements should be analyzed for visual impacts. First, the change from a two-story hotel to three stories. Second, and less discussed, is the housing complex, which is located in a potentially highly-visible area and is less clearly defined in terms of height and size.

Design components that the developer chooses to use for the hotel and/or the housing could cause additional significant impacts. These include the color of structures, roofing materials used, anything that is reflective, and the amount and type of lighting used (even downward lighting will “glow” in the night sky). Because the proponent plans to lease or sell a large portion of the project to a hotel developer, a stringent design review process should be required. This process should include an additional public comment period and approval by the Mono County Planning Commission and the Board of Supervisors.

Natural environment

The proposed project is at the lower end of Lee Vining Canyon and as close as 750 feet to Lee Vining Creek. Lee Vining Canyon is rich in a variety of wildlife including deer, bear, coyote, and mountain lion. Increasing the amount of people in this area will need to be studied for impacts to resident and migratory wildlife populations. Studies done for the 1993 Specific Plan need to be updated as many wildlife patterns have changed in response to drought and climate change. If the hotel operates year-round as planned, impacts to animal populations during winter months will also need to be studied. The creek corridor is a natural corridor for many of these animals and the potential to displace them needs to be studied.

It appears that the proposed plan eliminates the deer herd open space migration route required in the 1993 plan. New mitigation will need to be analyzed and developed in coordination with the California Department of Fish & Wildlife. Reducing the current development footprint should be analyzed as an option.

The effects of the project on the natural landscape of Lee Vining Canyon also include how recreational use and the visitor experience will change and be affected. Coordination with the Inyo National Forest will be necessary.

Lee Vining Canyon is a place valued for its scenic beauty and natural, wild habitat. Impacts to Lee Vining Canyon should be analyzed and they include: impacts to current recreational use carrying capacities; impacts to resident and migratory wildlife; and impacts to the current visitor experience of solitude. Coordination with both Yosemite National Park and Inyo National Forest should occur.

Landscaping analysis

The SEIR should analyze and compare various landscaping options for their overall effect on the project. Options range from exclusively using native plants and trees so that the area blends in with the natural landscape to incorporating non-native grasses and shrubs to appeal to visitors and non-native trees to shield the structures and provide another type of aesthetic. There are pros and cons to each and the degree of landscaping also directly ties into the greywater system issues described above.

Growth impacts

The size and capacity of this project will easily double the current population of Lee Vining. Additional studies need to analyze the effects on current businesses and the economic stability of Lee Vining.

The project is proposing to change the amount and type of housing from 10 workforce housing units to 80 non-workforce housing units. This is a huge shift from the 1993 Specific Plan which states that the residential area will “consist of five, two-bedroom one-story duplexes” and that the “Mono County Housing Element requires that development of this type provide opportunities for employee housing.” At the October Scoping meeting, the proponent explained that the 80 proposed units would not be “workforce housing” and that he would charge fair market value for the units. New housing in a gateway community to Yosemite could attract long-term renters who do not intend to reside at the site but instead use the unit for Yosemite access, vacations, family events, etc. The housing could also potentially be used for short-term and nightly rentals such as Airbnb and VRBO. This could cause actual project employees to search for housing in already-at-capacity adjacent housing locations such as Lee Vining, Mono City, and June Lake. The project could help to alleviate or could exacerbate housing shortages in the region, and so the impacts of the change from dedicated workforce housing to market rental units needs to be studied and analyzed. It appears as though, with this shift from 10 workforce housing units to 80 market-rate housing units, that the proponent is using the project to create a housing subdivision outside of Lee Vining. It should be noted that with the finalization of the Tuolumne River Plan, Yosemite National Park does not need local employee housing for Tuolumne staff as was once being explored.

Increasing the population of Lee Vining—in terms of both residents and visitors—will put a strain on Mono County and public services, such as Lee Vining Fire Department, Mono County Paramedics, Mono County Sheriff Department, and local schools. The Lee Vining Fire Department is currently staffed with volunteers. Could this continue under the new project? Do volunteers, who leave their own jobs and businesses when calls come in, have the capacity to handle an increased load of medical and emergency calls? This should be considered and, if not, then the cost of a paid fire department would need to be analyzed. Also, Lee Vining Fire Department has expressed concerns that their equipment cannot reach a three-story building. If new equipment was purchased, then it is likely a new fire station would need to be built to house the new, larger vehicles. New training requirements for volunteers to operate such equipment could be substantial. All of these impacts need to be studied and various alternatives analyzed, including limiting the hotel to two stories while maintaining the current footprint.

Project impacts will also include impacts to the town of Lee Vining. Additional visitors and workforce staff will exacerbate existing parking problems. Increased traffic could result in the need for a stoplight at the busy intersection of Highways 395 and 120. Crossing Highway 395 as a pedestrian in town is already dangerous and is something the community has been trying to resolve for several years—increased traffic from the project would exacerbate this problem.

Connectivity from the project site to Lee Vining will need to be addressed from an infrastructure, safety, and economic perspective. Parking and traffic impacts could be mitigated through construction of pedestrian and bicycle linkages between the site and Lee Vining, and these should be studied in the SEIR.

Mitigation measures should include the construction of new infrastructure measures, such as overcrossings and trails, to enable safe pedestrian mobility.

Climate change

The draft SEIR should update all appropriate sections of the Specific Plan related to federal, state, and local climate change development requirements including, but not limited to, appropriate water conservation measures and greenhouse gas emissions. The proponent stated that the hotel and housing units would have wood-burning fireplaces. If used as a primary heating source this amount of additional woodstove smoke could have a significant impact on current air quality in the local area, especially in winter when there is often a cold air inversion that prevents the smoke from rising, keeping it closer to ground levels.

During the design review process, which should be a public process and occur before final project approval, conservation measures can be outlined in greater detail. Implementing a greywater system, including solar panels, locating structures to take advantage of passive solar, installing low-flow toilets, low-flow showerheads, and calculating the water requirements and developing a plan for swimming pool wastewater will all need to be evaluated in greater detail and included in the draft SEIR.

The proponent should consider pursuing a hotel developer that would build a LEED Certified project. Given the location of the project, this would likely be an attractive marketing approach and likely address many of the concerns related to the scope of this project.

Compliance with the Mono Basin Community Plan

The Mono Basin Community Plan, finalized in 2012 after years of community meetings and discussions, should be used to guide all aspects of the draft SEIR process. The Mono Basin Community Plan “is a community-based planning effort intended to guide future land-use, development, and quality-of-life decisions. The purpose of the plan is to inform decision makers at the community and local government levels, as well as other agencies, businesses and entities operating in the Mono Basin, about the needs and aspirations of the community.”

Specific relevant points include:

Issues/Opportunities/Constraints (p. 15)

1. Residents express conflicting sentiments about additional growth. The concept of a sustainable, successful economy is supported, but the fear is that communities will need to become too big or “citified” to achieve this, sacrificing the rural characteristics and healthy natural environment valued by residents. The challenge is to appropriately balance economic development goals with the desired rural community characteristics and protection of the natural, scenic, historical and recreational values of the area. Growth does not necessarily mean becoming bigger; it could also mean improving what already exists within the current development footprint.

4. Workforce housing opportunities, both to rent and buy, are needed to sustain the existing community and enable people to live where they work.

10. The physical layout of Lee Vining’s Main Street area, where a five-lane highway under the authority of Caltrans bisects the corridor, creates challenges for establishing a vibrant, walkable commercial area, ensuring safe and convenient pedestrian crossings, and creating physical connectivity between the east and west sides of the highway.

Goal 1: Maintain the spectacular natural values of the Mono Basin and rural, small-town character of communities by managing growth, ensuring high-quality aesthetics, and providing for community development needs to enhance the quality of life for residents. (p.17)

Objective A: Provide for the orderly growth of Lee Vining in a manner that retains the small-town character by directing future development to occur in and adjacent to Lee Vining. (p.17)

Policy 1: Prioritize infill and rehabilitation of the existing built environment over the addition of private property.

Objective C: Encourage building types and architectural design compatible with the scenic and natural attributes of the Mono Basin. (p.18)

Policy 1: Maintain a clear edge between developed areas and open space by ensuring future development outside existing communities is compatible with the scenic and natural attributes of the area.

Policy 2: Support design practices that protect scenic vistas, energy efficiency, and “green” building practices.

Action 2.1: Encourage the siting and design of buildings to preserve scenic vistas.

Action 2.2: Designate public view corridors that visually connect the community to the natural environment and establish development standards to avoid impacts.

Action 2.3: Explore potential incentives related to energy efficiency and “green” building practices.

Policy 3: Preserve the dark night sky of the Mono Basin.

Action 3.1: Require compliance with and enforce Dark Sky Regulations.

Policy 4: Support improving the visual appearance of Lee Vining.

Action 4.1: Use Mono County Design Guidelines to promote architecture, site planning, and uses compatible with the surrounding visual and scenic environment within the communities of Lee Vining and Mono City.

Objective D: Maintain, protect and enhance the natural, historical and recreational attributes of the Mono Basin. (p.19)

Policy 3: Support recreational activities and the ability to use and enjoy the land while also protecting the natural environment.

Action 3.3: Ensure new development does not impede, and preferentially enhances, existing recreation access and activities.

Policy 6: Work with government and private property owners to create recreational trail segments connecting population centers with attractions and recreation access points.

Action 6.1: Identify desired trail segments that are supported by the community, and implement trail development.

Action 6.2: Identify and consider impacts to historic lifestyles and existing uses of any potential trail, and consult with the Kutzadika Tribe in particular.

Objective E: Promote well-planned and functional community uses that retain small-town character and increase quality of life. (p.21)

Policy 1: Increase the housing supply available to the workforce, including rental units.

Policy 6: Provide safe and convenient pedestrian and biking facilities, working with Caltrans when applicable, to reduce vehicular traffic, increase local livability, and encourage visitors to explore town.

Action 6.1: Prioritize pedestrian safety facilities and improvements on Highway 395 over other facility improvements and as consistent with goals and policies in the Circulation Element of the General Plan, with an emphasis on the Livable Communities section, and Objectives A and D in the Mono Basin Policies. (See Appendix A.)

Action 6.2: Emphasize safe travel for pedestrians to community and activity centers, such as schools, parks, library, museums and visitor centers.

Action 6.4: Initiate community discussions to consider pedestrian and street lighting in appropriate locations for safety, connectivity, and comfort and ensure compliance with Dark Sky Regulations.

Action 6.5: Pursue the Livable Communities goals and policies in the Circulation Element of the General Plan.

Objective F: Provide appropriate public infrastructure and service capability expansion to support development, public safety, and quality of life. (p.24)

Policy 1: Future development should coincide with infrastructure and service capability expansion.

Action 1.1: Require development projects to obtain “will-serve” letters from applicable service agencies.

Policy 2: Support improvements to local service infrastructure, such as water, sewer, telecommunications, and electricity, that is compatible with the small-town character, aesthetic values, and the health and safety of the community.

Action 2.1: Inventory local infrastructure needs and provide support to service providers as appropriate.

Action 2.2: Require utility line upgrades and replacements to be undergrounded subject to the findings and analysis required for new utility lines in Chapter 11 – Utilities of the Land Use Element.

Action 2.3: Where feasible, require local utility providers to underground, relocate or visually screen power lines and other facilities in areas of high visual quality.

Policy 3: Provide for adequate emergency services, facilities, and access, and support emergency providers.

Compliance with the Mono County General Plan

When the Specific Plan was approved in 1993 there were different General Plan requirements. As part of the process going forward, both the Specific Plan and new project components need to be updated under the new General Plan requirements. A chart or table might be helpful to show the necessary changes.

Conclusion

Thank you for the opportunity to comment. MLC looks forward to working with Mono County and the proponent to ensure that revisions to the 1993 Specific Plan are in accordance with all state, federal, and local regulatory guidelines and requirements. MLC will also work to ensure that the final plan reflects recent changes in both the natural environment of the area and the needs of local residents and visitors.

Please contact me at (760) 647-6595 or lisa@monolake.org if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Lisa Cutting". The signature is fluid and cursive, with the first name "Lisa" and last name "Cutting" clearly distinguishable.

Lisa Cutting
Eastern Sierra Policy Director

November 21, 2016

To: Mono County Community Development Department – Gerry LaFrancois

Comments on Specific Plan for Tioga Inn Project in Lee Vining, Oct. 27, 2016

Dear Mr. LaFrancois,

I am writing to provide comments on the scope and content of environmental information for the forthcoming Subsequent Environmental Impact Report (SEIR) for the Tioga Inn Project.

I have lived in the Eastern Sierra (Lee Vining, June Lake, and Mammoth Lakes) for 11 years, and have worked full-time in Lee Vining that whole time, as I continue to do now. I care deeply about the Mono Basin and preserving its cultural, scenic, and community values. I am writing to encourage you to only let the proposed Tioga Inn development occur if it meets the highest possible standards for green building, low visual impacts, and wise water use, and to require it to develop in a way that is responsible in its population, housing, and cultural impact on the Lee Vining community.

The SEIR must analyze water supply sources and the impacts to Lee Vining Creek and spring/aquifer recharge below the project property, in all seasons. Projections into the future about water supply, quality, and impacts should take into consideration a continuing drought or a subsequent, more severe drought. The SEIR should also take into account the town of Lee Vining's water source and search for a secondary source of water.

The SEIR should analyze the potential visual impacts of the proposed project, both in the daytime and at night for lighting, with visual simulations as a major component of the draft SEIR. In particular, the change from a two-story hotel to three stories should be analyzed, as well as the housing complex, which is located in a potentially highly-visible area and is less clearly defined in terms of height and size. In addition, a stringent design review process should be required, with an additional public comment period and approval by the Mono County Planning Commission and the Board of Supervisors.

The project is proposing to change the amount and type of housing from ten workforce housing units to 80 non-workforce housing units. This is a huge shift from the 1993 Specific Plan, and would exacerbate the lack of affordable and workforce housing that plagues the Eastern Sierra, and Lee Vining in particular. Market-rate housing would likely attract second homeowners and long-term renters who do not intend to live in the area, leaving their homes empty for much of the year. In addition, short-term and nightly rentals could proliferate. The SEIR should study and analyze the impacts of the change from dedicated workforce housing to market rental units.

Increasing the population of Lee Vining—in terms of both residents and visitors—will put a strain on Mono County and public services, such as Lee Vining Fire Department, Mono County Paramedics, the Mono County Sheriff Department, and local schools. It will also increase existing parking problems in Lee Vining and increase traffic along Highway 395, thereby increasing the danger to pedestrians attempting to cross the highway. The SEIR should take into account these impacts.

The Tioga Inn project is the first one of such size and scope since the Mono Basin Community Plan was finalized in 2012, and it should be used to guide all aspects of the draft SEIR process. The project should also be updated to comply with the most updated Mono County General Plan.

Thank you for the opportunity to comment.

Sincerely,

Elin Ljung
Mammoth Lakes, CA

Mono County Community Development Department

PO Box 347
Mammoth Lakes, CA 93546
760.924.1800, fax 924.1801
commdev@mono.ca.gov

RECEIVED

NOV 21 2016

MONO COUNTY
Community Development

PO Box 8
Bridgeport, CA 93517
760.932.5420, fax 932.5431
www.monocounty.ca.gov

Date: October 27, 2016

**RE: NOTICE OF PREPARATION COMMENTS ON THE TIOGA INN SPECIFIC PLAN UPDATE
AND SUBSEQUENT ENVIRONMENTAL IMPACT REPORT**

Name:

Anonymous

Address:

Phone #:

Email:

Comments:

- 1) The viewshed to protect as the most important is the one coming down off Tioga Pass on Hwy 120 with Mono Lake in the background
- 2) The affordable / workforce housing component must carry a permanent restriction that prohibits these units from being used as transient rentals (less than 30 days)
- 3) No height variance from existing standards / codes

Please leave this form at the meeting, or it may be submitted by Nov. 21, 2016, as follows:

By email to: gfrancois@mono.ca.gov

By mail to: Gerry LeFrancois, PO Box 347, Mammoth Lakes, CA 93546

From: Scott Burns

Sent: Monday, November 21, 2016 9:56 AM

To: Gerry LeFrancois <glefrancois@mono.ca.gov>; Wendy Sugimura <wsugimura@mono.ca.gov>

Subject: Anonymous Oral Comment - Tioga

FYI:

Requests that PC and BOS conduct site visit during project consideration

Concern with number of housing units – density concerns due to traffic and deer use patterns

**Mono County
Community Development Department**

PO Box 347
Mammoth Lakes, CA 93546
760.924.1800, fax 924.1801
commdev@mono.ca.gov

PO Box 8
Bridgeport, CA 93517
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www.monocounty.ca.gov

RECEIVED
NOV 21 2016
MONO COUNTY
Community Development

Date: October 27, 2016

RE: **NOTICE OF PREPARATION COMMENTS ON THE TIOGA INN SPECIFIC PLAN UPDATE
AND SUBSEQUENT ENVIRONMENTAL IMPACT REPORT**

Name: Bill Jansen
Address: 618 East Mono Lake Dr - Leavenworth 93541
Phone #: 805 570 2919
Email: jansen5@cox.net

Comments:

Please involve and consider community in services, aesthetics, etc. of design + running of this major development. There will be major impacts with regard to traffic, etc. mitigation of such is important

1. Swimming Pool - spa/gym facilities should be available to community members (like Double Eagle in June Lake and other Resorts)

2. Restaurants, other facilities should also serve community.

Please leave this form at the meeting, or it may be submitted by Nov. 21, 2016, as follows:

By email to: gfrancois@mono.ca.gov

By mail to: Gerry LeFrancois, PO Box 347, Mammoth Lakes, CA 93546

APPENDIX B

**2012 Director Review 12-007
Tioga Inn Kitchen Expansion**

Mono County Community Development Department

P.O. Box 347
Mammoth Lakes, CA 93546
(760) 924-1800, fax 924-1801
commdev@mono.ca.gov

Planning Division

P.O. Box 8
Bridgeport, CA 93517
(760) 932-5420, fax 932-5431
www.monocounty.ca.gov

NOTICE OF DECISION DIRECTOR REVIEW 12-007/Tioga Inn Kitchen Expansion

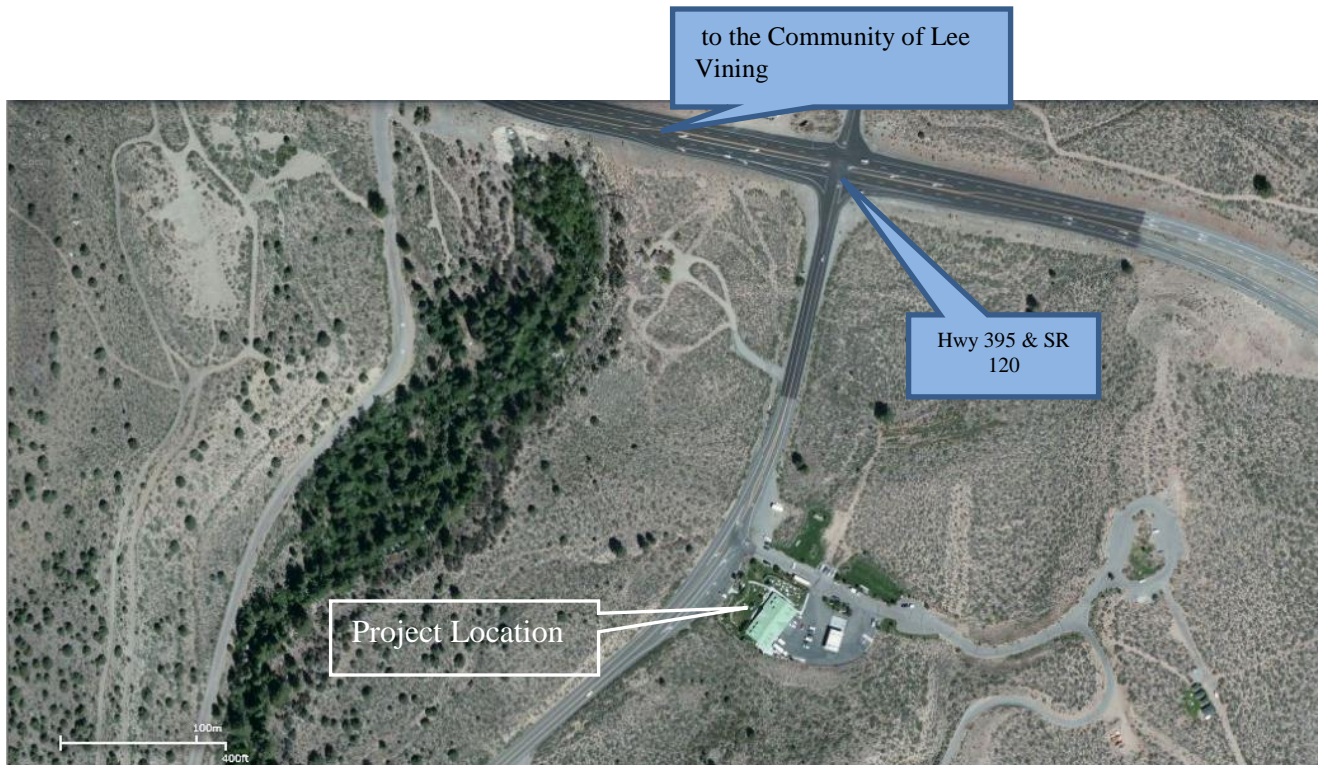
APPLICANT: Dennis Domaille, Tioga Gas Mart

SUBJECT PROPERTY: APN 021-080-014, 22 Vista Point Drive, Lee Vining, CA

PROPOSAL FOR: A 316 square feet kitchen expansion at the Tioga Gas Mart. The property is part of the Tioga Inn Specific Plan.

Pursuant to the Tioga Inn Specific Plan and Mono County General Plan Section 31.010, and based upon the following findings, you are hereby notified that Director Review 12-007 has been:

_____ Granted as requested.
_____ **XX** _____ Granted subject to the attached Conditions of Approval.
_____ Denied.



BACKGROUND

Director Review permit 12-007 would permit the expansion of the kitchen by 316 square feet. The Specific Plan allows for a hotel, full service restaurant, a residential area, and a convenience store and gas station. The Tioga Inn Specific Plan was approved in 1993 and amended in 1995 and 1997. The 1997 Specific Plan amendment permitted a 1,500 square foot apartment on the convenience store and gas station parcel, approved a master sign program, a lighting plan, permitted a public restroom/shower/laundry facility on the Hotel parcel, and clarified that any future restaurant is to be constructed on the flat area of restaurant parcel.

The existing convenience store and gas station has had various remodels. These additions include a pizza oven in 1997, the addition of restrooms (one of which is available during non-business hours), storage areas and laundry facilities in 1998 and a kitchen expansion in 2000.

The Specific Plan convenience store and gas station land use designation allows for:

- A retail store and fuel purchase facility not exceeding 4,800 square feet of gross floor area, and an apartment not to exceed 1,500 square feet, for a total building footprint of 6,300 square feet,
- A maximum of two fuel islands with four multi-grade dispensing stations per island for a total of eight pumping stations,
- Picnic area sited in conjunction with the scenic turn-out,
- Public restrooms,
- Parking areas, including spaces for recreational vehicles, vehicles towing trailers, and tour busses,
- Appurtenant service (not including vehicle service or repair) and delivery bays, storage areas, publicly accessible air supply, vehicle water supply, enclosed trash receptacle area,
- Underground fuel tanks, and
- Other uses that are similar in nature, typically associated with the primary land use, and equal to or less in intensity – subject to individual review and approval by the Planning Director.

The proposed project is to expand the current kitchen area by 316 square feet. Attachment 1 shows the current floor plan of the convenience store and the proposed 316 square feet of new kitchen area.

DIRECTOR REVIEW FINDINGS

Under Tioga Inn Specific Plan, and Mono County General Plan, Chapter and Section 31.030, the Community Development Department Director may issue a Director Review permit after making all of the following findings. The Director has made the following findings concerning DR12-007:

1. *All applicable provisions of the Mono County General Plan and Tioga Inn Specific Plan are complied with, and the site of the proposed use is adequate in size and shape to accommodate the use and to accommodate all yards, walls and fences, parking, loading, landscaping and other required features because:*

The subject property is approximately 2.35 acres in size, adequate to accommodate the 316 square feet of kitchen expansion. The property's Specific Plan land use designation allows for: "Other uses that are similar in nature, typically associated with the primary land use, and equal to or less in intensity – subject to individual review and approval by the Planning Director."

The proposed 316 square feet kitchen expansion will provide additional services on the convenience store / gas station parcel. Due to the lack of a hotel or full service restaurant on the property, this limited kitchen expansion is permitted by the Planning Director, subject to this Directors Review, as permitted in the Specific Plan. No other commercial or retail space expansion will be permitted on the convenience store gas station parcel without a revision to the Tioga Inn Specific Plan.

The proposed addition meets the Specific Plan height limit of 20', is located with the building envelope established in the Specific Plan (Figure 7), and meets the minimum parking requirements of 10 standard vehicle spaces, two bus or recreational vehicle spaces, and two spaces for vehicles towing trailers.

2. *The site for the proposed use relates to streets and highways adequate in width and type to carry the quantity and kind of traffic generated by the proposed use, because:*

The proposed project is located on Vista Point Drive with access to State Route 120 (Tioga Pass). The proposed kitchen addition will not create impacts to surrounding streets or to Highway 120. The project has existing encroachment permits with Caltrans District 9.

3. *The proposed use will not be detrimental to the public welfare or injurious to property or improvements in the area in which the property is located, because:*

The Specific Plan allows for a hotel, full service restaurant, a residential area, and a convenience store and gas station. The only two uses on the project site at this time are the convenience store / gas station and the residential units. The hotel and full service restaurant have never been constructed. The proposed 316 square foot kitchen expansion will provide additional services on the convenience store / gas station parcel. Due to the lack of a full service restaurant on the project site, this limited expansion will not be detrimental to the public welfare, and/or injurious to property or improvements in the project area.

4. *The proposed use is consistent with the map and text of the Mono County General Plan and Tioga Inn Specific Plan, because:*

The Tioga Inn Specific Plan designates this parcel as Convenience Store / Gas Station which provides for a retail store and fuel purchase facility, an apartment, two fuel islands with four multi-grade dispensing stations per island for a total of eight pumping stations, a picnic area sited in conjunction with the scenic turn-out, public restrooms, and parking areas, including spaces for recreational vehicles, vehicles towing trailers, and tour busses.

Mono County Land Use Element, Chapter 36 Specific Plans:

General Plan Section 36.60 Specific Plan Amendment states that amendments to a specific plan can be handled through the Director Review process if no change in density results and no change in conditions are necessary. See Attachment 1 Ground Floor Plan that shows existing uses and the proposed kitchen expansion. With DR 2012-007, the expansion of 316 square feet to the kitchen does not change the density of the project or change conditions.

This Specific Plan was adopted in 1993 and as of this date, only the Residential and Convenience Store/Gas Station uses have been developed. In consideration of this and the fact that the Hotel and other Restaurant uses are undeveloped, the increase in footprint of the Convenience Store/Gas Station from 6,300 permitted square feet to 6,835 square feet (includes the 316 sf kitchen expansion) is considered minor and allowed within the specific plan area.

5. *Improvements as indicated on the development plan are consistent with all adopted standards and policies as set forth in the Land Development Regulations, this General Plan and the Tioga Inn Specific Plan, because:*

The project is consistent with the Mono Basin Area Plan because it conforms to the policies encouraging infill development within or adjacent Lee Vining.

Mono County Land Use Element, Mono Basin Area Plan:

Objective A: Direct future development to occur in and adjacent to Lee Vining.

Objective D, Policy 3: Focus commercial development within or adjacent to Lee Vining.

The project is consistent with the Tioga Inn Specific Plan because the project is consistent with the Convenience Store / Gas Station parcel and the permitted uses allowed on this parcel. See finding 4. above.

6. *The project is exempt from CEQA, because:*

a) It qualifies for a Class 1 Categorical Exemption. Class 1 exemptions would allow for: (e) additions to existing structures provided that the addition will not result in an increase of more than 50 percent of the floor area of the structures before the addition, or 2,500 square feet whichever is less.

b) In addition, an Environmental Impact Report was certified as a part of the Tioga Inn Specific Plan approval in 1993.

CONDITIONS OF APPROVAL

DR12-007/Domaille is issued with the following conditions:


1. Project shall comply with the requirements of the Building Division and Environmental Health.
2. All exterior lighting shall be shielded and directed downward to complying with Chapter 23, Dark Sky Regulations and the Tioga Inn Specific Plan.
3. The roof and exterior construction shall match the existing building store and roof colors as shown in Attachment 2
4. No other commercial or retail space expansion will be permitted on the convenience store gas station parcel without a revision to the Tioga Inn Specific Plan.
5. Termination. A Director Review shall terminate and all rights granted therein shall lapse, and the property affected thereby shall be subject to all the provisions and regulations applicable to the land use designation in which such property is classified at the time of such abandonment, when any of the following occur:
 - A. There is a failure to commence the exercise of such rights, as determined by the Director, within one (1) year from the date of approval thereof. Exercise of rights shall mean substantial construction or physical alteration of property in reliance with the terms of the Director Review.
 - B. There is discontinuance for a continuous period of one (1) year, as determined by the Director, of the exercise of the rights granted.
 - C. No extension is granted as provided in Section 31.080.
6. Extension. If there is a failure to exercise the rights of the Director Review within one (1) year of the date of approval, the applicant may apply for an extension for an additional one (1) year. Any request for extension shall be filed at least sixty (60) days prior to the date of expiration and shall be accompanied by the appropriate fee. Upon receipt of the request for extension, the Planning Division shall review the application to determine the extent of review necessary. Conditions of approval for the Director Review may be modified or expanded, including revision of the proposal, if deemed necessary. The Planning Division may also deny the request for extension. Exception to this provision is permitted for those Director Reviews approved concurrently with a tentative parcel or tract map; in those cases the approval period(s) shall be the same as for the tentative map.
7. Revocation. The Planning Commission may revoke the rights granted by a Director Review and the property affected thereby shall be subject to all of the provisions and regulations of the Land Use Designations and Land Development Regulations applicable as of the effective date of revocation. Such

revocation shall include the failure to comply with any condition contained in the Director Review or the violation by the owner or tenant of any provision pertaining to the premises for which such Director Review was granted. Before revocation of any permit, the Commission shall hold a hearing thereon after giving written notice thereof to the permittee at least ten (10) days in advance of such hearing. The decision of the Commission may be appealed to the Board of Supervisors in accordance with Chapter 47, Appeals, and shall be accompanied by an appropriate filing fee.

This Director Review Permit shall become effective ten (10) days following the issuance of the Director's decision. This decision may be appealed within ten (10) days by filing a written notice of appeal with the Secretary of the Planning Commission. If an appeal is filed, the permit will not be issued until the appeal is considered and a decision is rendered by the Planning Commission.

PREPARED BY: Gerry Le Francois, Principal Planner

DATE OF DECISION: July 2, 2012

SIGNED: 
Scott Burns, Community Development Director

Attachments:

1. Ground Floor Plan – shows existing and proposed square footages
2. Building Elevation and Model Images

APPENDIX C

**1991 GeoSoils, Inc.
Geologic Investigation**

PRELIMINARY GEOLOGIC INVESTIGATION
83±-ACRE PARCEL, TENTATIVE PARCEL MAP NO. 34
LEE VINING AREA, MONO COUNTY, CALIFORNIA

FOR

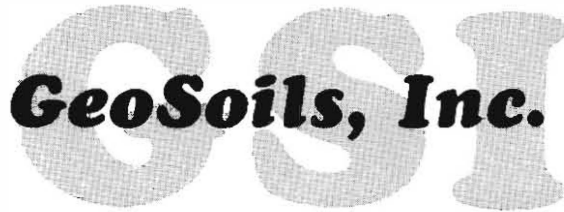
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APRIL 4, 1991

W. O. 431-A-RC



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April 4, 1991
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Subject: Preliminary Geologic Investigation, 83±-Acre Parcel,
Tentative Parcel Map No. 34, Lee Vining Area, Mono
County, California

Gentlemen:

In accordance with your request and authorization, this report presents the results of our preliminary geologic investigation on the subject property. The primary purpose of this study was to evaluate the presence of previously-mapped faults within the Alquist-Priolo special studies zone. The secondary purpose of this study was to evaluate the onsite geologic conditions and their effects on the proposed site development from a geologic viewpoint. At the time of our study, the actual location of the proposed improvements was not known.

EXECUTIVE SUMMARY

As indicated above, the purpose of this study was to satisfy the provisions of the Alquist-Priolo special studies zone act, as well as provide a geologic evaluation of the site. Based on our study, the proposed improvements are suitable for their intended use, from a geologic viewpoint.

Active faulting was not encountered during our study. In addition, the site and the region as a whole is subject to strong seismic shaking, as well as the effects of volcanic processes. Mitigation of these conditions should include adherence to the latest edition of the Uniform Building Code.

In summary, adverse geologic features that would preclude the feasibility of development as proposed were not encountered. The recommendations presented in this report should be incorporated into the planning, design, earthwork, and construction considerations for the project.

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SCOPE OF SERVICES

The scope of our services has included the following:

1. Review of readily available geologic data for the area (Appendix), including stereoscopic aerial photographs, and photolineament analysis and faulting evaluation.
2. Geologic and geomorphic site reconnaissance.
3. Subsurface exploration consisting of the excavation by backhoe of two overlapping fault locating and lineament evaluation trenches.
4. Geologic analysis of the data collected.
5. Preparation of this report.

SITE DESCRIPTION

The site is a roughly rectangular-shaped parcel consisting of approximately 83 acres in the Lee Vining area of Mono County, California (see the Site Location Map, Figure 1). The site is bounded to the north, east, west, and south by essentially natural and undeveloped property. The subject property is transected by U.S. Highway 395 diagonally along the eastern to northern property margins, and also diagonally by State Highway 120 along the western and northern property margins. Cuts and fills associated with those roadways also exist onsite. Continental telephone lines and Southern California Edison Company power lines also transect the eastern and northern property margins. An Alquist-Priolo special studies zone exists on the approximately western third of the property.

The majority of the site, with the exception of some dirt access roads and those areas mentioned above, is in an essentially natural condition. The site is characterized by a northeasterly descending flank and ridge of a hillside that has been locally terraced and incised with drainages. Slopes within this hillside area range from nearly flat to locally as steep as 1:1 (horizontal to vertical). The property flattens in a northerly direction near the north-central portion of the site to an overall gradient of about 13:1 (horizontal to vertical) and to nearly flat in the northeasterly margin of the site. Overall relief across the site ranges from a high of about 6978 feet MSL to a low of about 6699 feet MSL. Vegetation is sparse to moderate, and consists of native brush with very few trees.

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PROPOSED DEVELOPMENT

As indicated previously, at the time of our investigation, the proposed locations and types of structures were not known. Subsequently, we were provided with plans that indicate that currently a 120-unit hotel and restaurant is proposed near the northwesterly to central area of the property, southeasterly of State Highway 120. Associated appurtenant structures including a pool and spa, as well as associated interior roadways and parking, are also proposed. In addition, a single-family residence is also proposed in the future in the southwesterly portion of the property.

FIELD STUDIES

Field studies conducted during our geologic evaluation of the property consisted of the following:

1. Geologic and geomorphic reconnaissance and mapping.
2. Excavation of two overlapping exploratory backhoe trenches to evaluate the near-surface soil and geologic conditions with respect to faulting. The trenches totaled about 1,500 feet and were about 10 to 15 feet deep.

The trenches were logged by a geologist from Sierra Geotechnical Services, Inc., and briefly viewed by the undersigned. The locations of the trenches are presented on Plate 1. Logs of the trenches are presented on Plates 2 through 6.

GEOLOGICAL SUMMARY

Regional Geologic Setting

The subject property is located at the transition of two prominent natural geomorphic provinces in California known as the "Sierra Nevada" and "Basin and Range." These provinces have long and active geologic histories. The Basin and Range province is generally characterized by narrow, fault-bounded, northerly-trending mountain ranges separated by irregular-shaped, alluvium-covered valleys. The Sierra Nevada is generally a north-northwesterly trending, singular, asymmetric, tilted fault-block of great magnitude, which has broken free on the east along the Sierra Nevada frontal fault system. Some geologists consider the Sierra Nevada the highest and grandest of the Basin and Ranges mountains.

In general, the bedrock of the majority of the mountains in the site vicinity consists of Triassic to Cretaceous-age plutons

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(bodies of crystalline igneous rocks) and overlying roof pendants (a remnant of sedimentary or metamorphic rock that is intruded by the plutonic rock) of Paleozoic to Triassic-age. Relatively thin sedimentary and volcanic deposits of Tertiary and Quaternary age discontinuously overly and/or intrude the bedrock, respectively, probably along fractures that are a result of faulting along the Sierra Nevada frontal fault system and a magma chamber at depth. These tectonic and volcanic processes remain active through the present. For convenience, a geologic time scale is provided as Table I (after Norris & Webb 1990, USGS 1979, and CDMG 1977) below.

TABLE I
GEOLOGIC TIME SCALE

EON	ERA	PERIOD	EPOCH	YEARS (MILLIONS) AGO AT OPENING OF
PHANEROZOIC	CENOZOIC	Quaternary	Recent (Historic Record - 200 years)	
			Holocene	
			Pleistocene	0.011
		Tertiary		1.8
			Pliocene	5
			Miocene	23.5
			Oligocene	39
			Eocene	53.5
			Paleocene	65
	MEZOZOIC	Cretaceous		144
		Jurassic		208
		Triassic		245
	PALEOZOIC	Permian		286
		Carboniferous Systems		320
				360
		Devonian		408
		Silurian		438
		Ordovician		505
		Cambrian		570
		Ediacarian		700
PROTEROZOIC				2,500
ARCHEAN				3,800
ORIGIN OF EARTH				4,600

PRE-CAMBRIAN

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During Quaternary time, glaciation has resulted in wide, U-shaped valleys, and upon glacial retreat, lateral and terminal moraine deposits, which have sometimes served as alpine lake confinements. Glacial deposits and fluvial deposits derived from glacial meltwaters have filled portions of the valleys and descend and coalesce from the mountainous areas. Geomorphic processes, together with Quaternary volcanism and faulting, have generated the present-day landforms.

A regional geologic map is provided as Figure 2. The regional geologic map indicates that the site is underlain by Quaternary till of the Tahoe Glaciation, and Quaternary alluvium. Faults within the till have been mapped on the property (Kistler, 1966; CDMG, 1985.) The absolute age of the Tahoe till has been reported as potentially as young as 9,800 years old to as old as 65,000 years old, with most studies indicating the older age as most probable.

Lineament Analysis

In order to identify possible unmapped faults and to evaluate topographic expressions of published fault traces, a lineament analysis was performed. Stereoscopic aerial photographs at a scale of approximately 1:24,000 and 1:2,400 were utilized in the lineament analysis.

Lineaments were classified as strong, moderate or weak. A strong lineament is a well-defined feature that can be continuously traced from several hundred feet to a few thousand feet. A moderate lineament is less well defined, somewhat discontinuous, and can be traced for only a few hundred feet. A weak lineament is discontinuous, poorly defined, and can be traced for a few hundred feet or less.

A weakly- to moderately-developed lineament transected the site in a northwesterly direction paralleling the faults previously mapped onsite (see Plate 1). The lineament was field checked during our reconnaissance mapping to evaluate possible origin. This lineament, as well as previously mapped onsite faults, was intercepted by our trenches.

SITE GEOLOGIC UNITS

The geologic units observed on the subject property consisted of manmade fill, colluvium (topsoil), fluvial-glacial deposits, and alluvium. Mappable units are shown on Plate 1 and are described as follows:

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Fill (not mapped)

Manmade fill was observed during our field study on the subject property associated with the previously-mentioned highways, as well as the dirt roads that transect the site. These fill materials are considered potentially compressible in their existing state and unsuitable for the support of additional fill loadings or settlement-sensitive structures. In the absence of documentation of the methods of compaction, they will require complete removal and recompaction, if settlement-sensitive improvements are planned in those areas. These materials will typically have engineering properties similar to the parental units from which they are derived.

Colluvium (not mapped)

Quaternary colluvium (topsoil) was observed on the site in both trenches. It is generally 1 to 2 feet thick; however, locally it ranges up to 10 feet thick, and should underlie other portions of the site. The observed colluvial soils are weathered fluvial-glacial deposits. The colluvium logged in our trenches was light to medium to dark grayish brown, fine- to medium-grained, to fine- to coarse-grained sands, with minor amounts of silt and very fine-grained sand, and locally abundant pebbles and cobbles. Evidence of a calcic or argillic horizon was not observed. The materials were damp to moist and loose and contained abundant rootlets. Because of their potential compressibility, the colluvial soils are unsuitable for support of structures and/or settlement-sensitive improvements, and will require removal and recompaction. These soils typically have a low to medium expansion potential. Based on the lack of a calcic or argillic horizon, this unit is judged to be a minimum of Holocene to recent in age.

Fluvial-Glacial Deposits (Map Symbol - Qfg)

Quaternary fluvial-glacial deposits were encountered in our trenches and underlie the majority of the site. These materials are deposits derived from glaciation and glacial meltwaters and were generally various shades of gray, brown, and rust brown and were dry to wet. Lithologies generally ranged from fine-grained sands, and fine- to coarse-grained sands to sandy to gravelly conglomerate, with some silty sands and silts. In areas, the upper 1 to 2 feet of the fluvial-glacial deposits were loose and porous and may be locally-derived colluvium. The fluvial-glacial deposits at depths lower than about 3 to 4 feet were medium dense. Owing to their potential compressibility, the near-surface fluvial-glacial materials are unsuitable for support of structures and/or settlement-sensitive improvements. Removal and recompaction of the near-surface fluvial-glacial deposits will be necessary. These

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soils typically have a low to medium expansion potential. Since this unit is likely a result of a significant climate change, and since the last major climate change occurred during the Pleistocene to Holocene transition, this unit is judged to have a minimum relative age range of Pre-Holocene to Holocene, or about 15,000 to, perhaps, as young as 7,000 years old. This unit may be older than pre-Holocene; however, for conservatism the previously mentioned range is deemed appropriate.

Alluvium (Map Symbol - Qal)

Although not encountered during our field investigation, Quaternary alluvial deposits were observed along the extreme easterly margin of the property. These sediments likely consist of the products of weathering and erosion of parental rocks from the site vicinity as well as locally derived and undifferentiated effusive volcanic and lacustrine deposits. These materials were not evaluated, as the currently proposed development is not planned in this area. Based on the available data, as well as geomorphic and stratigraphic relationships, this unit is judged to be of Pleistocene to Recent in age, with the younger deposits occurring near the surface. Offsite, deposition is still occurring within this unit (i.e., Mono Lake).

GEOLOGIC STRUCTURE

The fluvial-glacial deposits on the site are generally medium to thickly bedded and are generally flat lying, and exhibit cross-bedding, channeling, and lenticular bedding typical of such materials. However, cross-bedded lenses dipped as steeply as 21 degrees. Although not encountered, the alluvial deposits are anticipated to be essentially flat-lying, and are not expected to be exposed during site development. Faulting and vulcanism are discussed later in this report.

FAULTING AND REGIONAL SEISMICITY

The site is situated in an area of active as well as potentially active faults. Major fault zones that could have a significant affect on the site should they experience activity would include the following:

<u>Fault Zone</u>	<u>Distance From Site (miles)</u>
Mono Valley	0.3
Parker Lake	5
Hartley Springs	6
Un-named Faults in Long Valley	17
Owens Valley	35
West Walker	44

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The relationship of the site location to the major mapped faults is indicated on Figure 3. Other significant faults have been mapped in the region. The nearest known active fault is the Mono Valley fault, which may be considered part of the Sierra Nevada frontal fault system. The pattern of faulting within this area is wide and complex, with numerous north to northwesterly branching and subsidiary faults, and is believed to have developed largely through extensional deformation and associated normal faulting. The Sierra Nevada Frontal fault zone is believed to have been formed in this manner. Volcanic processes and, to a lesser degree, tectonic processes are believed responsible for the east-west trending faults, as well as some of the minor north-northwesterly trending faults. This is discussed further later in this report.

The "design fault" for the project site is the Mono Valley fault, which is thought to be related to the Basin and Range fault system. Accordingly, this fault has the potential for a maximum credible earthquake of 8.0 M and a maximum probable earthquake of 6.5 M. Peak horizontal ground accelerations from a maximum credible event could exceed 1.0 g, and a maximum probable event may reach 0.75 g.

The repeatable high acceleration (RHA), which is taken to be approximately 65 percent of the peak acceleration for sites less than 20+ miles from the epicenter (Ploessel & Slosson, 1974), is also used for design criteria. The estimated horizontal design criteria for repeatable acceleration, therefore, may be about 0.49 g. A relatively newly-recognized phenomenon, observed during the 1989 Loma Prieta earthquake, is "earthquake focussing," and may also influence ground motion. However, as discussed below, a subsurface fault has been mapped at the site. Buried topography as a result of this fault may also occur at depth, below the site. Accordingly, we recommend that the full range of values for acceleration, 0.49 g, 0.75 g, and 1.0 g, should be considered for seismic design. The site period should be on the order of 0.35 seconds, and the duration of strong shaking may range from about 18 to 34 seconds. Recurrence intervals for large earthquakes in the Basin and Range province is anticipated to be on the order of 100,000 years (verbal communication, Shlemon, 1990).

As indicated previously, an area of the westerly portion of the site lies within an Alquist-Priolo special studies zone. The state has mapped a fault in this area (see Figure 1). In addition, Kistler (1966) has also mapped a fault on the property (see Figure 2). These faults were parallel to the photolineament noted during our aerial-photograph review. The previously-mapped faults and photolineament were intercepted by our fault-finding trenches. Evidence for Holocene faulting (i.e., the geomorphic alignment of topographic saddles along the postulated fault traces; complete

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stratigraphic continuity [no truncation or offset] of bedding; or stepped regional geomorphology) was not observed. Accordingly, the present-day landform configuration on the property is most likely a result of geomorphic processes. Based on our study, we judge that the previously mapped faults and photolineament are not related to Holocene faulting.

Numerous earthquakes have occurred in California. Many of these are historical, but lack adequate records. Documentation is available, however, for various earthquakes that have occurred in California since 1912 with magnitudes greater than 6.0 on the Richter Scale.

Ground accelerations at the site are similar to the eastern Sierra Nevada region as a whole. As indicated previously, a maximum probable earthquake of 6.5 M. on the Mono Valley fault may generate repeatable horizontal ground acceleration on the order of 0.49 g. Table II summarizes the results of statistical analysis of earthquake data with respect to a 50-year life span.

TABLE II
(after Housner, 1970)

<u>Acceleration of Gravity</u>	<u>Probability of One Occurrence Per 100 Years</u>
0.05	95%
0.10	88%
0.15	64%
0.20	40%
0.25	22%
0.35	4%

During a 50-year span, a structure on the site may possibly be subjected to an earthquake of Richter magnitude of 6.5. Horizontal acceleration induced by an earthquake may affect earth structures and/or embankments.

Ground lurching or shallow ground rupture due to shaking could occur within the site, as well as most of the Mono Basin and Mono Lake area, from an earthquake either originating on the Mono Valley fault or on other nearby faults. Such lurching could possibly cause cracking of paved areas and limited damage to structures.

Earthquake-induced slope stability problems may also occur within the site. These instability problems (e.g., landslides) would most likely occur where unsupported bedding planes exist or where the earth materials are highly weathered. This is discussed further

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below. Experience has shown that wood-frame structures designed in accordance with the most recent edition of the Uniform Building Code tend to best resist earthquake effects.

MASS WASTING

Mass wasting refers to the various processes by which earth materials are moved downslope in response to the force of gravity. Examples of these processes include slope creep, and surficial failures. Creep is the lowest form of mass wasting, and generally involves the outer 5 to 10 feet of the slope surface. During heavy precipitation, creep-affected materials may become saturated, resulting in a more rapid form of downslope movement (i.e., landslides and/or surficial failures).

Indications of deep-seated landsliding, significant slope creep or surficial failures on the site were not observed during our review of stereoscopic photographs of the area (USDA, 1977, Triad Engineering, 1984b) or during our site reconnaissance. The potential for seismically induced landsliding is considered low. The potential for earth flows on the site is moderate, particularly in the areas of colluvium-filled swales. Possible mitigation measures are discussed later in this report.

GROUND WATER

Ground water was not observed during our investigation. In addition, seeps, springs, or other indications of a high regional ground water level were not noted on the subject property during the time of our field investigation. It is our understanding that a well drilled since our field investigation began encountered the regional water level at an elevation of about 6360 feet MSL, below the elevation of Mono Lake (about 6380 feet MSL). However, seepage may occur locally (due to heavy precipitation or irrigation) in areas where fill soils overlie relatively impermeable sediments or soils. Such soils or sediments may be encountered in the materials that exist onsite.

LIQUEFACTION POTENTIAL

Liquefaction is a phenomenon in which cyclic stresses produced by earthquake-induced ground motion create excess pore pressures in cohesionless (sandy) soils. These soils may thereby acquire a high degree of mobility that can lead to lateral movement and sliding, consolidation and settlement of loose sediments, sand boils, and other damaging deformations. This phenomenon occurs only below the water table; however, after liquefaction has developed, it can

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propagate upward into overlying, non-saturated soil as excess pore water escapes.

Liquefaction potential is related to numerous factors and the following conditions must exist for liquefaction to occur: 1) sediments must be relatively young in age and not have developed large amount of cementation; 2) sediments must consist mainly of fine-grained cohesionless sands; 3) the sediments must have low relative density; 4) free ground water must be present in the sediments; and 5) the site must experience seismic events of a magnitude large enough to induce straining of soil particles. At the subject site, discontinuous zones with four of these conditions exist: 1) the sediments consist of uncemented relatively young, sediments; 2) they have relatively low to moderate density; 3) they are sandy; and 4) it is anticipated that significant seismic events will occur that are capable of shaking the site.

One of the primary factors controlling the potential for liquefaction is the depth to ground water. Liquefaction susceptibility generally decreases with depth of the ground water table for two reasons: 1) the deeper the water table, the greater is the normal effective stress acting on saturated sediments at any given depth, and liquefaction susceptibility decreases with increased normal effective stress; 2) age, cementation, and relative density of sediments generally increase with depth. Thus, as the depth to the water table increases and as the saturated sediments become older, more cemented, have higher relative density, and confining normal stresses increase, the less likely they are to liquefy during an earthquake. Typically, liquefaction has a relatively low potential where ground water is greater than 30 feet deep and virtually unknown below 50 feet. Due to the depth of the regional ground water table, liquefaction potential should be considered low to nil in the site area, under the present conditions.

Should the water table rise to within 30 to 50 feet from the surface or should a perched water condition develop as a result of permeable materials overlying impermeable materials, liquefaction may occur. Due to the overall relative permeability and nature of the discontinuous bedding within the onsite sediments and soils, this is considered unlikely.

VOLCANIC DEVELOPMENTAL CONSIDERATIONS

As discussed, the site is also located in an area of active vulcanism. The last known eruption within this region occurred at Mono Lake around 1890. Volcanic areas that have erupted within the last 2000 years and that could have a significant affect on the

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site, should they experience renewed activity, include the following:

<u>Volcanic Source</u>	<u>Distance from Site (miles)</u>
Mono Lake area	4.4 to 5.6
Long Valley/Mammoth Lakes area	14.5 to 22.7

The relationship of the site location to these recently active volcanic areas, as well as other Quaternary volcanic sites, is also shown on the Regional Fault Map, Figure 3.

Based on the available data, an eruptive episode in the Mono Basin-Long Valley area may occur as follows:

Stage 1 - Earthquakes along the Sierra Nevada fault system that open fissures or lessen the horizontal confining pressure along faults reaching the magma chamber at depth.

Stage 2 - Viscous siliceous magma rises towards the surface along these weakened fractures; at the same time ground water may leak downward.

Stage 3 - When contact is made, a steam explosion displaces pre-existing volcanic and lacustrine (lake) sediments forming a crater.

Stage 4 - If magma continues to rise, eruptions continue, changing in character from phreatic (steam) to phreatomagmatic and eventually magmatic with the formation of a dome.

The time lag from precursory earthquakes to eruption would likely be on the order of 6 months to as much as 10 years (Kilbourne, R. T., et al, 1980). The type of eruptions and their effects include ash falls, pyroclastic flows, pyroclastic surges, lava domes and flows, floods and mud flows, and volcanic gasses. These are briefly summarized below:

Ash falls - Volcanic ash and larger fragments are ejected upward above a volcanic vent by gaseous explosive eruptions. Large hot rock fragments can extend as much as 6 miles or so from the source vent. The effects of ash are greatest where it is thickest near the volcanic source, and decrease with distance.

Pyroclastic Flows - Pyroclastic flows are relatively high density masses of hot, dry rock fragments mixed with hot

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gasses; the flows move like fluids, along the ground surface to great distances at a high speed, outward from the vent.

Pyroclastic Surges - Pyroclastic surges are relatively low-density, cloud-like mixtures of rock particles and gasses that move at high speed outward from volcanic vents.

Lava Domes and Flows - Lava domes are flows resulting from the relatively quiet eruption of molten rock that piles up over a volcanic vent, or flows away as a molten stream, typically along topographic lows, to as much as 30 miles from the source.

Floods and Mudflows - Eruptions at vents in areas covered with snow may cause hot mudflows as hot rock debris mixes with snowmelt, or floods that may become mudflow as they incorporate rock debris.

Volcanic Gasses - Volcanic gasses are emitted without rock material from small vents called fumaroles, and they also generally accompany molten or solid rock fragments expelled during eruptions. Volcanic gasses are controlled by wind direction and generally consist of steam, accompanied by carbon dioxide and compounds of sulfur and ammonia.

Due to the sites topographic setting and location with respect to the known recently-active volcanic areas, as well as those volcanic areas of Quaternary-age, the site is subject to the effects of eruption of pyroclastic flows and clouds of hot ash and pyroclastic surges, and to a lesser extent lava flows and domes, and to an even lesser extent mud flows and floods (Miller, C. D. and others, 1980). Mitigation of these hazards is generally impractical; and thus, if such an event were to occur, evacuation of personnel in accordance with state and local guidelines should be performed. Structures, however, would likely be damaged. This should be considered during project planning and design. It is our opinion, however, that the most likely volcanic hazard to potentially impact the site would be ash falls, due to the site's elevation and distance to known volcanic sources. Accordingly, the potential for ash falls at the site should not be any greater than nearby and already-developed properties.

SUBSIDENCE

Our review of readily available data did not indicate that the site specific area is currently subsiding as a result of down-faulting along bordering fault zones, ground water withdrawal, or hydrocompaction. The site, however, lies in a region that has a

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potential for collapse and subsidence (i.e., Long Valley-Mono Craters) where volcanic sources exist. However the scope of this potential for affecting the subject site is beyond the scope of this current study.

In general, areal subsidence generally occurs at the transition condition between materials of substantially different engineering properties as a result of geologic processes. Thus, the only potential for this condition exists between the fluvial-glacial deposits and alluvium. Based on the available data, bedrock underlies the fluvial-glacial deposits and alluvium at depth; therefore, this potential is generally considered low, but increases to moderate along the extreme easterly margin of the site near Highway 395. Our review of available stereoscopic aerial photographs (USDA, 1977, Triad Engineering, 1984b) showed no features generally associated with areal subsidence (e.g., radially-directed drainages flowing into a depression(s), linearity of depressions associated with mountain fronts, or ground fissures).

Ground fissures are generally associated with excessive ground water withdrawal and associated subsidence, or regional neotectonics -- that is, tectonic movement along faults active in Miocene, Pliocene, Pleistocene, and Holocene time. Our study indicates that excessive ground water withdrawal at the site is not occurring at this time, and active faults do not transect the property; however, older buried inactive faults may exist at depth. Portions of Lee Vining are believed to have similar geologic conditions as those onsite. Accordingly, the potential for areal subsidence or ground fissures should not be any greater at the site than for nearby and already-developed properties.

Two other geologic constraints are also pertinent to site development, and these are (1) adverse geologic structures, and (2) seismically induced landsliding. Owing to the relatively granular nature of the onsite materials anticipated to be encountered during grading and the lack of adverse geologic structures (based on the available data), the potential for seismically-induced landsliding or adverse geologic structures is low, but may not be entirely precluded. This should be further evaluated during grading, if significant cuts are proposed.

CONCLUSIONS AND RECOMMENDATIONS

Based on our review of available data, field exploration, and our geologic analyses, it is our opinion that the project site is suited for the proposed use from a geologic viewpoint. The primary geologic developmental considerations affecting the site are the effects of seismic shaking and volcanic processes. This should be

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considered during project planning and design. The recommendations presented in this report should be incorporated into the planning, design, earthwork, and construction phases.

General

1. The recommendations presented below should be reviewed and revised, if necessary, by the project engineering geologist when an approved grading or site plan becomes available.
2. Geotechnical engineering and compaction testing services should be provided during grading to aid the contractor in removing unsuitable soils and in his effort to compact the fill. Geologic inspections should be performed during and cut slope excavation to further evaluate the presence of adverse geologic structures, if significant cuts are proposed. Based on the exposed conditions, supplemental recommendations for mitigation may be warranted.
3. Grading should conform to chapter 70 of the latest edition of the Uniform Building Code, as well as local ordinances.
4. Shallow ground water was not encountered during this study. Ground water, however, may vary with the seasons or other factors and may be encountered locally. Subdrain systems are recommended for all proposed canyon fill areas on a preliminary basis.
5. If settlement-sensitive improvements are proposed within the zone of influence of our exploratory trenches, or if the exploratory trenches exist uphill within a zone of influence that may impact proposed structures, mitigative measures, such as removal and recompaction, debris/impact walls, etc, should be provided by the soils engineer or design civil engineer, if warranted.

Debris Flow Mitigation

In consideration of the potential for prolonged rainfall, possible brush fires and vegetation denudation, we recommend that the project's civil engineer consider using debris/desilting/retention basins and/or rip-rap or other mitigative devices in those areas where canyon or significant hillside gully areas intersect the proposed development. If structures are not proposed in those areas, then this would not be warranted from a geologic perspective; however, this should be considered for personnel safety by the design civil engineer.

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Fault Setback Zones

Structural setbacks are not warranted for the site based on the available data. Undetected, potentially active faults may exist within the property outside of the area investigated. However, based on the available data, these would not meet the "sufficiently active" or "well defined" criteria of the Alquist-Priolo special studies zone act. As potentially active faults may exist or new faults possibly occur in unpredictable locations, it is impractical to zone entire mountain front areas for setbacks, based on the physical nature of soil and sedimentary materials and the above criteria. Although unlikely, it should be noted, however, that due to the project area's location in a zone of known active faulting, it is possible that removals and/or grading may expose fault traces that may warrant further study and/or structural setbacks. This should be considered during the planning and construction stages of the project.

INVESTIGATION LIMITATIONS

The materials encountered on the project site are believed representative of the total area; however, soils materials may vary in characteristics between test excavations.

Inasmuch as our investigation is based upon our review of available data, the site materials observed, and geologic analyses, the conclusions and recommendations are professional opinions. It is possible that variations in the subsurface conditions could exist beyond the points explored in this investigation. Also changes in ground water conditions could occur at some time in the near future due to variations in temperature, regional precipitation, and other factors.

These opinions have been derived in accordance with current standards of practice, and no warranty is expressed or implied. This report is subject to review by the controlling authorities.

Mr. Dennis Domaille
Lee Vining Area, Mono County

April 4, 1991
W.O. 431-A-RC
Page 17

We sincerely appreciate this opportunity to be of service. If you have any questions pertaining to this report, please contact us at (714) 677-9651.

Respectfully submitted,

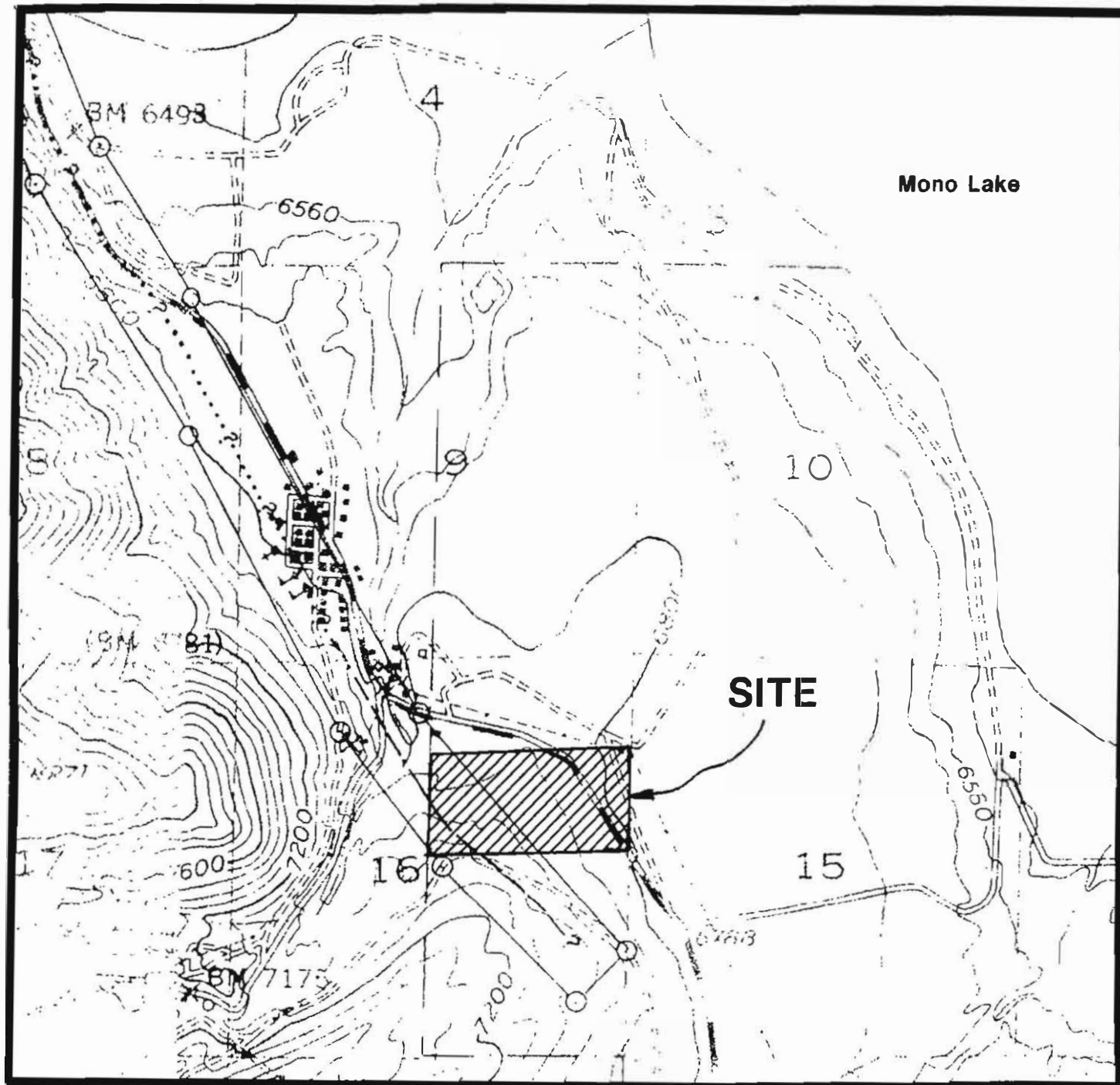
GeoSoils, Inc.

John P. Franklin
John P. Franklin
Engineering Geologist, CEG 1340




Enclosures: Figure 1 - Site Location Map
Figure 2 - Regional Geologic Map
Figure 3 - Regional Fault Map
Appendix - References
Plate 1 - Geologic Map
Plates 2 to 6 - Trench Logs

Distribution: (2) Addressee
(5) Sierra Geotechnical Services, Inc.
Attention: Mr. Tom Platz

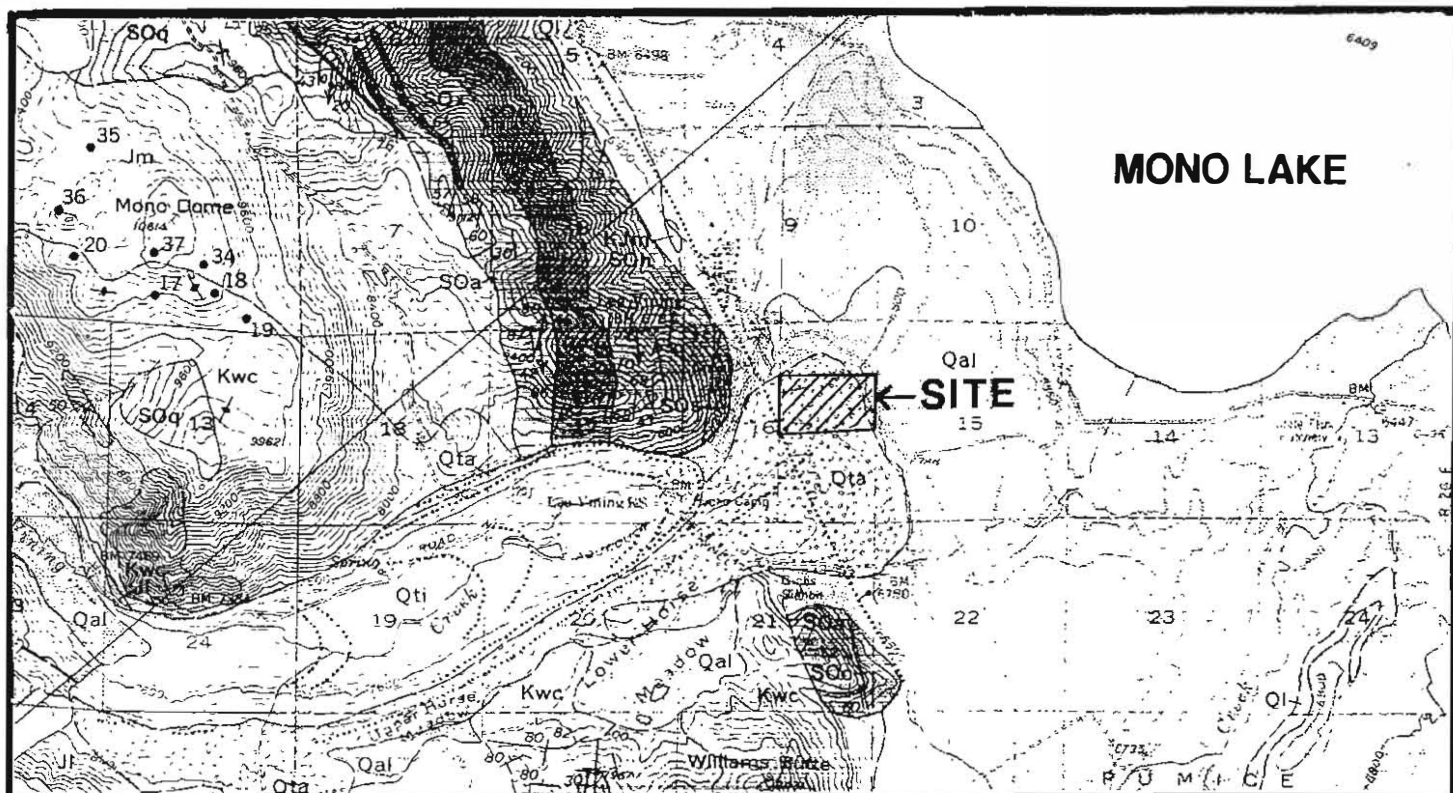


BASE MAP: CDMG, State of California Special Studies Zone, 7 1/2 Minute, NE 1/4 Mono Craters Quadrangle and NW 1/4 Mono Craters Quadrangle, California 1985



0 2000 4000

 Scale Feet

	W.O. 431-A-RC
<p style="text-align: center;">SITE LOCATION MAP</p> <p style="text-align: right;">Figure 1</p>	



LEGEND

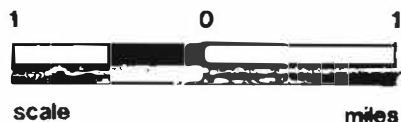
- Qal Quaternary alluvium and pumice
- Ql Quaternary lake beds Qti Quaternary till of the Tioga Glaciation
(dotted lines show moraine crest)
- Qta Quaternary till of the Tahoe Glaciations
(dotted lines show moraine crests)
- Kwc Cretaceous Wheeler Crest quartz monzonite
- Kjm Jurassic/Cretaceous Quartz monzonite of Mono Lake
- Jm Jurassic granodiorite of Mono Dome Jl Jurassic quartz monzonite
of Lee Vining Canyon
(pattern indicates outcrop zones)

METAMORPHOSED SEDIMENTARY ROCKS OF THE LOG CABIN MINE ROOF PENDANT

- SOq Silurian/Ordovician biotite-bearing quartzite
- SOa/SOx Silurian/Ordovician older sedimentary rocks
(SOa, andalusite hornfels, quartzofeldspathic hornfels with
thin carbonaceous marbles; SOx, crossbedded calcareous
quartzite)
- SOc Silurian/Ordovician marble, calc-silicate hornfels
and quartzite
- SOh Silurian/Ordovician quartzofeldspathic hornfels
- SOs Silurian/Ordovician marble and calc-silicate hornfels

GEOLOGIC SYMBOLS

- Geologic contact dashed where approximately located;
dotted where concealed
- Fault, bar and ball on downthrown block; dashed where
approximately located; dotted where concealed
- Trend and plunge of lineation
- Bedding
- Rock sample locality
- Vertical foliation



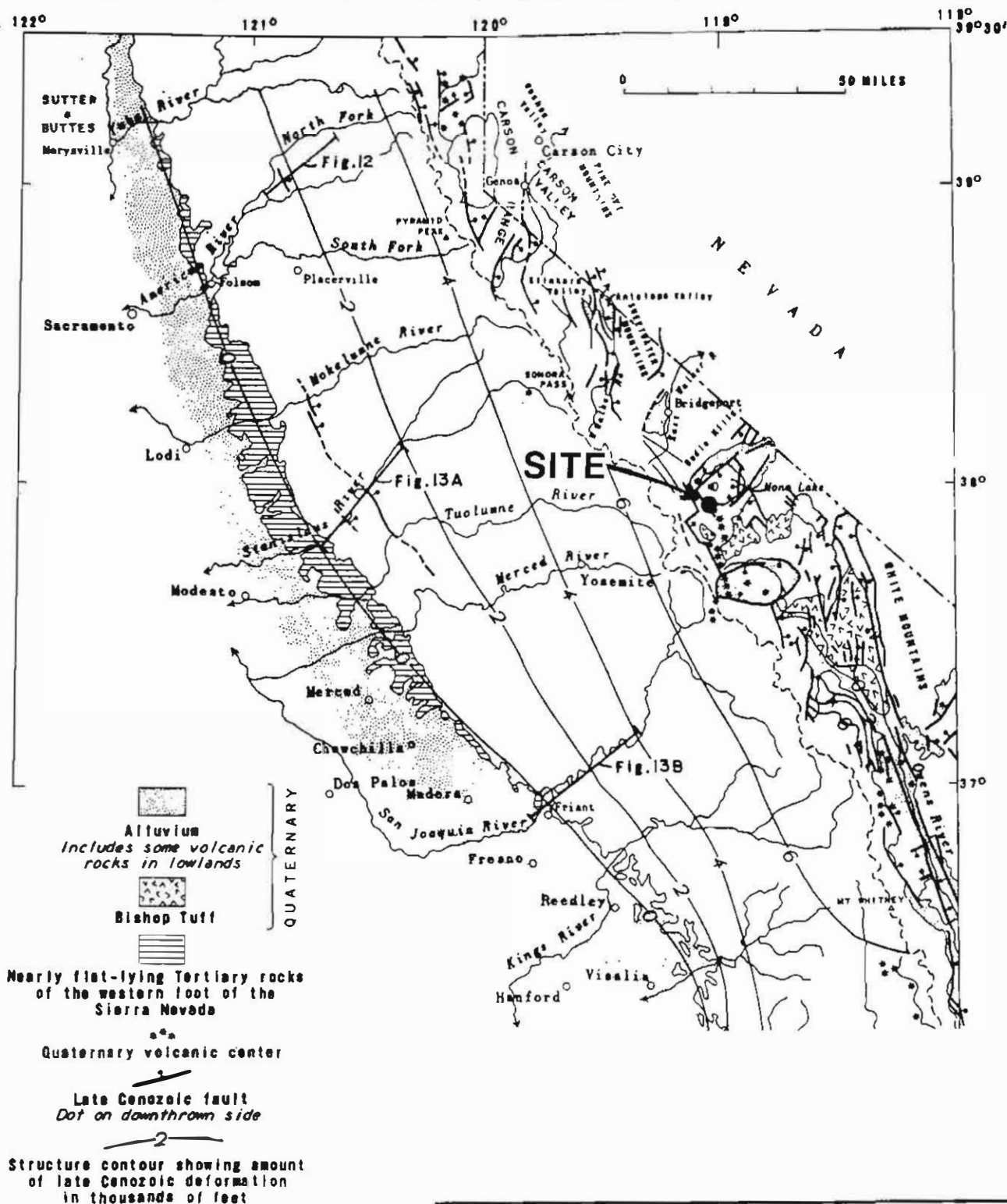
W.O.

391-A-RC

BASE MAP: Geologic Quadrangle Map, Mono
Craters Quadrangle, California,
1966, by Ronald W. Kistler:
USGS GQ-462.

REGIONAL GEOLOGIC MAP

Figure 2



GOS Inc.

W.O.

431-A-RC

REGIONAL FAULT MAP

(From Bateman and Wahrhaftig, 1966)

Figure 3

APPENDIX

REFERENCES

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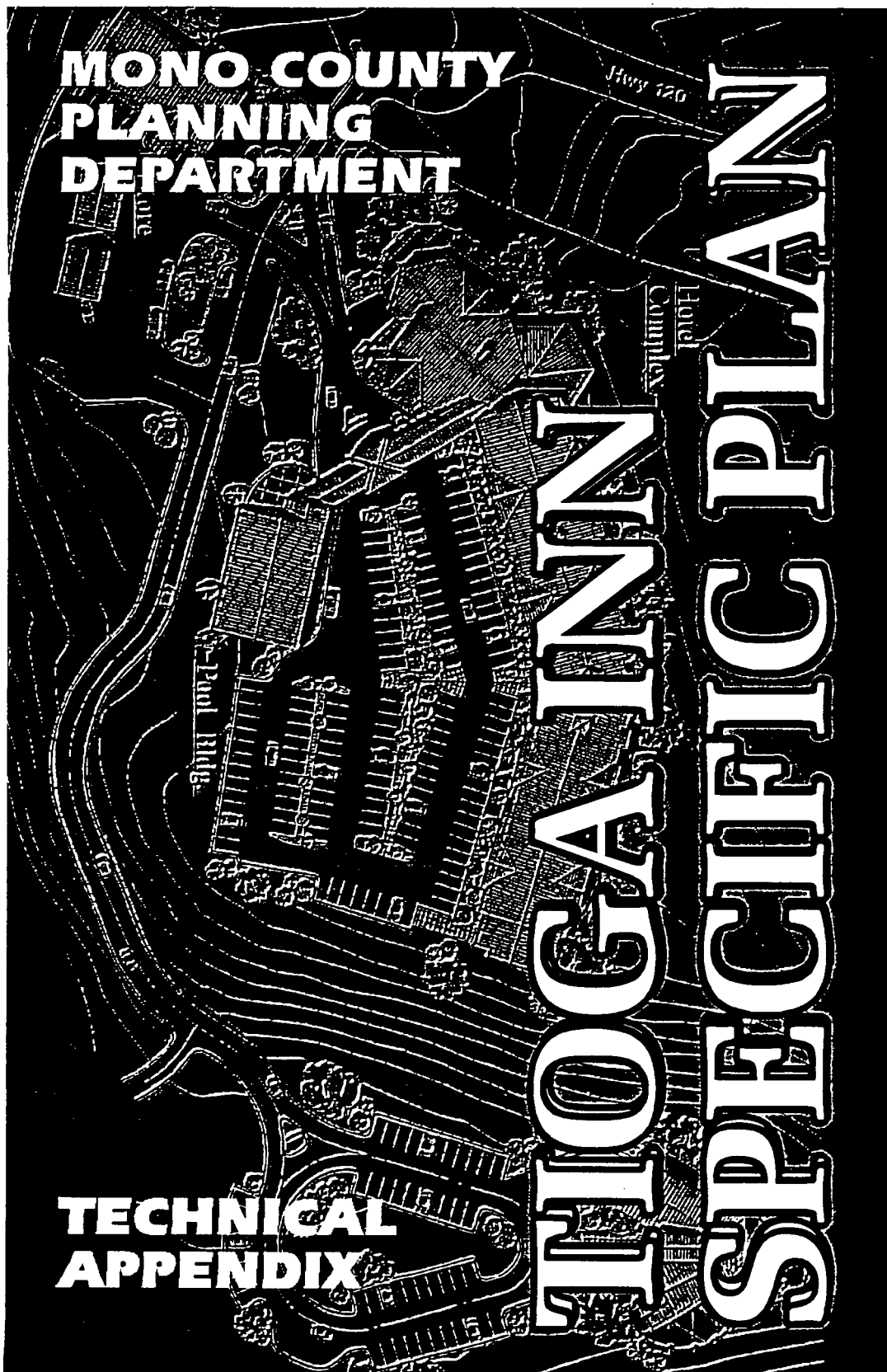
APPENDIX D

**1992 Groundwater Assessment and GeoSoils Peer Review
By Kleinfelder**

**MONO COUNTY
PLANNING
DEPARTMENT**

**TECHNICAL
APPENDIX**

**THIOGA INN
SPECIFIC PLAN**



GEOTECHNICAL/ HYDROLOGICAL REPORT

Report 1

August 21, 1992
File: 30-2091-01.001

Mono County Planning Department
HCR 79 Box 221
Mammoth Lakes, CA 93546

Attention: Mr. Scott Burns

SUBJECT: Modified Phase I Groundwater Resources Assessment and Review of a Fault Investigation Report for the Tioga Inn Specific Plan, Lee Vining, California

Dear Mr. Burns:

This letter report presents a summary of our hydrogeologic assessment and a review of Geo Soils, Inc.'s fault investigation report for the subject Tioga Inn Specific Plan, in Lee Vining, California.

BACKGROUND

The proposed Tioga Inn project is located along Highway 395, just south of Highway 120 in Lee Vining (see Plate 1, Appendix A). At completion, the project will consist of a 120 room full service hotel, a restaurant, a gas station/mini mart, and 10 units of residential housing. There is an existing well, extending to a total depth of 580 feet, located near the east portion of the site. A short pump test conducted on the well by the drillers immediately after installation (1984) indicates it will produce approximately 150 gallons per minute (gpm). However, the well has been idle since it was constructed.

In May 1992, the Mono County Planning Department (MCPD), as part of its review of the project, requested Kleinfelder conduct an assessment of the potential impact of pumping groundwater from an existing well at the site for use in the proposed development. Specifically, they requested we focus on the preliminary groundwater characteristics of the aquifer, potential impacts from pumping, and potential impacts to water resources from project activities based on available information.

The MCPD also requested we review a preliminary geologic investigation to evaluate the potential hazard of surface fault rupture at the site, prepared by Geo Soils, Inc. of Marietta, California.

WORK PERFORMED

Review Pertinent Geologic Literature. We reviewed pertinent references on the geology attendant to the Lee Vining area and specific to the project area prior to initiating the aquifer pump test and reviewing the fault investigation report by Geo Soils, Inc. These references include professional papers and maps that address geologic and hydrogeologic conditions in the Mono Lake region. We list the references reviewed for this project at the end of the report.

Aquifer Pump Test. Proper testing of a well typically involves conducting two aquifer tests; a continuous pumping test and a step-drawdown test. The extended aquifer pumping test provides information necessary to estimate the hydraulic conductivity and storativity. This information assists in estimating the long-term yield of the well and potential interference between the subject well and nearby wells, springs, etc. The step-drawdown test provides information on the dynamic (pumping) water levels (DWL's) at various pumping rates for developing pump design criteria.

We recommended combining the two tests into one extended step-drawdown test to obtain as much information as possible, given the time and budget constraints of this project.

On June 24 and 25, 1992, Kleinfelder and Mr. Dennis Domaille (property owner) conducted an extended step-drawdown test on the well. The test consisted of three steps, with each step having a successively higher pumping rate than the preceding step. We ran the first two steps for approximately two hours each and the third step for approximately 21.7 hours. The pumping rates employed for the steps were about 38, 91, and 132.5 gpm, respectively. We also recorded well recovery data for approximately 27.2 hours. The DWL's and recovery water levels were measured with a pressure transducer placed in a 1.25-inch inside diameter slave well installed inside the well, and recorded on a Hermit 2000^R data logger manufactured by In-Situ, Inc.

GEOLOGIC SETTING

The project site is located at the base of the eastern slope of the Sierra Nevada Mountain Range at Lee Vining Creek and west of Mono Lake. This is a transition area between two major geologic provinces, the Sierra Nevada geologic province to the west, and the Basin and Range geologic province to the east. The Sierra Nevada is predominantly composed of granitic plutonic rocks of Mesozoic age. These rocks constitute the Sierra Nevada batholith, which is a nearly monolithic block tilted westward by uplift along a fault system at its eastern limit. Paleozoic to Triassic age metamorphic rocks that were intruded by the plutonic rock are common as roof pendants along the crest and eastern slope of the Sierra Nevada Mountains. Cenozoic volcanic rocks are also prominent along the central portion of the eastern Sierra Nevada. The crest of the Sierra Nevada Mountain Range is located only a few miles west of the site.

The Basin and Range geologic province consists of northwest trending fault-block mountain ranges, separated from intervening basins by high angle normal faults of great displacement. This province includes eastern Nevada, western Utah, a part of Oregon, Idaho, California, and Arizona. The mountain ranges in western Nevada are primarily made up of Mesozoic or Early Tertiary intrusive and Tertiary volcanic rocks. The intervening basins consist of deep accumulations of Early Cenozoic to Quaternary age deposits.

The Mono Basin is characterized by Quaternary age volcanic activity that has resulted in lava flow, ash and cinder deposits over much of the area. Numerous volcanic cinder cones and plugs occur within a few miles of the project site.

The mountains west of the site were subjected to repeated Pleistocene age glaciations. This glacial activity produced in glacial till and outwash deposits along the eastern Sierra. Previously higher water levels in Mono Lake resulted in alluvial deposits and wave cut terraces around Mono Lake. The project site is predominantly underlain by Tahoe age glacial till. Quaternary age alluvium underlies part of the eastern portion of the site.

FINDINGS AND DISCUSSION

Hydrogeologic Conditions

The static water level (SWL) measured approximately 339 feet below ground surface before the start of the test. Total drawdown at the end of the test (25.7 hours) was about 17.6 feet. The well recovered to about 0.3 feet of the original SWL within 13.8 hours after terminating the pumping phase of the test.

The specific capacity for the well ranged from approximately 11.1 gallons per minute per foot (gpm/ft) at 38 gpm to 7.5 gpm/ft at 132.5 gpm. Using the test data, we calculated drawdowns, specific capacities, and well efficiencies for several pumping rates. In general, the calculated well efficiencies vary between 55.8% at 125 gpm to 28.3% at 400 gpm. These low efficiencies are not unusual considering the type of perforated casing (Mill Slot) installed in the well. Appendix B contains the step-drawdown calculations for this test.

We used the recovery data to assess the hydrogeologic characteristics of the aquifer penetrated by the well. Usually, the recovery data is more reliable and accurate because there is no potential electrical interference or turbulent flow from pumping. In addition, conducting the pumping phase in steps essentially renders the drawdown data useless in terms of estimating the hydrogeologic characteristics of the well.

To calculate the average transmissivity (T) using the recovery data, we used a variation of the Jacob straight-line method (Driscoll, 1989). The T is the rate at which the aquifer can transmit water through a unit width of an aquifer under a unit hydraulic gradient. We were not able to calculate storativity because of the lack of monitoring wells for this test.

The method of using recovery data involves plotting on semilog paper the residual drawdowns versus a ratio of time since the pump test began divided by the time since pumping stopped. We began collecting recovery data within 5 seconds after turning the pump off. In this time, the well recovered approximately 8.7 feet. In addition, the pump was turned on for about 15 minutes towards the end of the recovery phase. We do not believe the rapid initial recovery or the brief pumping period adversely affects the data.

The recovery plot usually gives a relatively straight line, from which we can calculate T. The plot from this well indicates there is a recharge boundary encountered near the end of the recovery period, therefore, we calculated T values before and after the recharge boundary using the formula and assumptions as shown below:

$$T = \frac{264Q}{ds'}$$

Where: T = transmissivity (gpd/ft)
Q = pumping rate (gpm)
ds' = recovery per log cycle of time (ft)

Assumptions:

Before Boundary

Q = 132.5 gpm
ds' = 2.25 ft

After Boundary

Q = 132.5 gpm
ds' = 1.10 ft

For additional assumptions refer to Driscoll (1989).

Then, the T of the aquifer(s) before boundary is approximately 15,600 gpd/ft. The T after the boundary condition increases to about 31,800 gpd/ft. These T values are probably typical of high yielding unconfined aquifers in this area (see Appendix B for the recovery data).

We calculated the potential sustained yield of the well by taking 67% of the saturated thickness times the specific capacity. In other words, at 67% of the total potential drawdown, the well will produce 90% of its maximum yield (Driscoll, 1989). Although the subject well does not completely penetrate the unconfined aquifer, we believe this method gives a reasonable estimate of the sustained yield.

This well has 200 feet of perforations. Although the SWL is about 41 feet higher than the perforated interval, we must use that portion of the well open to the aquifer. Using this saturated thickness, we calculated the sustained yield as follows:

$$\text{Sustained Yield} = (\text{saturated thickness} \times 0.67) \times \text{specific capacity}$$

Where: Saturated thickness = 200 feet
 Specific capacity @ 400 gpm = 3.95

Thus, the sustained yield for this well is approximately 530 gpm. We used the calculated specific capacity for a pumping rate of 400 gpm because the specific capacity will decrease as the pumping rate increases. This will give a more accurate calculated sustained yield.

Based on the calculations above, we believe the yield of this well is capable of exceeding 400 gpm. However, additional testing of this well in the form of an extended aquifer test with one or more monitoring wells, and quality analysis will be necessary before pumping at this rate. We understand the maximum production will be only about 150 gpm. The recovery data indicates that recharge into the well is quick, as is evidenced by the relatively high T for the aquifer. Actually, the aquifer probably has a much higher T than those calculated because we did not account for the inefficiency of the well. As discussed above, the well is not very efficient. Water level measurements taken from a more efficient well would likely have resulted in a much higher T value which would probably be nearer the actual T of the aquifer.

Because of the highly transmissive nature of the aquifer, and the presence of an apparent recharge boundary in the vicinity of the well, we believe there will be minimal impacts to the groundwater in terms of quantity or quality. The withdrawal of the quantity of water required for this project will likewise be minimal.

The nearest surface water source is the generally north trending Lee Vining Creek, located about 2,800 feet northwest of the site. Based on the topography in the area, the apparent groundwater flow direction is to the east-northeast. Considering this, and the depth of the aquifer below ground surface, it is highly unlikely that the well will draw water from surface water sources. Rather, surface waters percolating into the subsurface, in addition to eastward groundwater flow from the Sierra Nevada, will serve to recharge the aquifer.

Fault Investigation Report

The following presents the results of our review of a geologic investigation report entitled "Preliminary Geologic Investigation, 83± -acre Parcel, Tentative Parcel Map No. 34, Lee Vining Area, Mono County, California." The purpose of this report was to evaluate the hazard of primary surface rupture at the subject site. We did not assess other potential geologic hazards at the site. The subject report was prepared by Geo Soils, Inc. of Marietta, California, for Mr. Dennis Domaille of Mammoth Lake, California.

The purpose of our review was to evaluate the adequacy of the subject geologic report in terms of potential hazard of surface fault rupture at the site. Our review was based on Kleinfelder's previous experience in the site area and the "Guidelines for Evaluating the Hazard of Surface Fault Rupture" presented in Appendix C of California Division of Mines and Geology (CDMG) Special Publication 42: "Fault-Rupture Hazard Zones in California," by E. W. Hart, (1990).

As discussed above, the subject site is located near the town of Lee Vining in Mono County, California. The Mono Lake fault was previously inferred by others to trend across the site. Consequently, the State of California required a geologic study of the fault under the Alquist-Priolo Special Studies Zones Act of 1972. An Alquist-Priolo Special Studies Zone was designated along the Mono Lake fault in 1985 and is shown on the NE1/4 Mono Craters, California 7.5 Minute Quadrangle Map. The Mono Lake fault was included in a regional evaluation of faults by Associate Geologist William A. Bryant with the CDMG. The results of this regional evaluation are contained in the CDMG Fault Evaluation Report FER-155, "Faults in Bridgeport Valley and Western Mono Basin, Mono County," by Bryant (1984).

Discussion The scope of services performed by Geo Soils included:

- Review of geologic literature and photolineament analysis of available aerial photographs;
- Site reconnaissance by a geologist;
- Subsurface exploration consisting of about 1,500 feet of trenches excavated 10 to 15 feet below existing grade;
- Geologic analysis of the data collected; and
- Preparation of the subject report.

The report contains a description of the proposed development, methods of study, regional geologic setting, and several plates. In addition, the report was signed by a registered geologist in the State of California.

The scope of services performed by Geo Soils is in general accordance with the CDMG guidelines and similar to the scope of other geologic studies for similar projects at the time the study was performed. In addition, the subsurface exploration performed for the project was relatively extensive. However, Geo Soils did not review CDMG FER-155 and other recent literature referenced in FER-155 pertaining specifically to faulting in the site area. CDMG FER-155 presents evidence of active fault displacement near the project site with locations of fault-related features shown on a regional fault map.

The Geo Soils report does not state specific conclusions concerning the location and existence (or absence) of hazardous faults on or adjacent to the site, or the relative potential for future surface displacement. The likelihood of future ground rupture may be stated in semiquantitative terms such as low, moderate, or high, or in terms of slip rates estimated for specific fault segments.

In summary, based on our knowledge of the planned development and guidelines given by the State of California, the scope of services performed by Geo Soils, Inc. for the subject geologic study was reasonably adequate to evaluate potential fault rupture at the subject site. However, a key reference (CDMG FER-155) for the Mono Lake fault was not stated in the references reviewed by Geo Soils for their study. In addition, the subject report does not state conclusions concerning the existence or absence of hazardous faults on the subject site, or the relative potential for future surface displacement.

CONCLUSIONS

We have based the following conclusions on the data collected during this investigation. These conclusions are subject to the limitations stated in this report, and may change if additional information becomes available. The following is a summary of our conclusions:

Aquifer Test:

- The results of the extended pump test indicate the well can produce a sustained yield of approximately 530 gpm. The results also indicate there is a recharge boundary encountered near the end of the test. The calculated T before and after the boundary is approximately 15,600 gpd/ft and 31,800 gpd/ft, respectively.
- Pumping groundwater at the proposed rate of no greater than 150 gpm should have minimal impact on the quantity and quality of the groundwater or on surface waters in the area.

Fault Investigation Report Review:

- The subject geologic study by Geo Soils, Inc. was reasonably adequate to evaluate potential fault rupture at the site. However, a key reference (CDMG FER-155) was apparently not reviewed for the study.
- The subject report does not state conclusions concerning the existence or absence of faults on the site, or relative potential for future surface displacement.

RECOMMENDATIONS

Based on our findings and conclusions above, we recommend the following:

- Request Geo Soils, Inc. review the CDMG Fault Evaluation Report FER-155; and
- Request Geo Soils, Inc. modify their report to include their review of FER-155 and state their conclusions regarding the existence or absence of faulting on the site.

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LIMITATIONS

The services provided under this contract, as described in this report, include professional opinions and judgments based on the data collected and analyzed. We performed these services according to currently accepted engineering geology practices for water resources and geotechnical engineering in Northern California. We base this report on information derived from the following:

- Data from selected available literature;
- Extended step-drawdown aquifer test;
- Copy of the Fault Investigation Report by Geo Soils, Inc.; and
- Our knowledge of and experience in the local area.

We consider the information contained in this report to be valid for a period of one year from the date of the report. This report does not provide a warranty as to variable subsurface conditions which may actually exist. Do not assume this report applies outside the specific project area. In addition, one should recognize that definition and evaluation of geologic and hydrogeologic conditions is a difficult and inexact art. Geologists and hydrogeologists must occasionally make general judgments leading to conclusions with incomplete knowledge of the geologic history, subsurface conditions, and hydraulic characteristics present. To reduce the inherent risk associated with evaluating water resources, the client should request that the geologists and hydrogeologists use more extensive studies including subsurface exploration.

If the client wishes to reduce the uncertainty beyond the level associated with this study, Kleinfelder should be notified for additional consultation.

Very truly yours,

KLEINFELDER, INC.

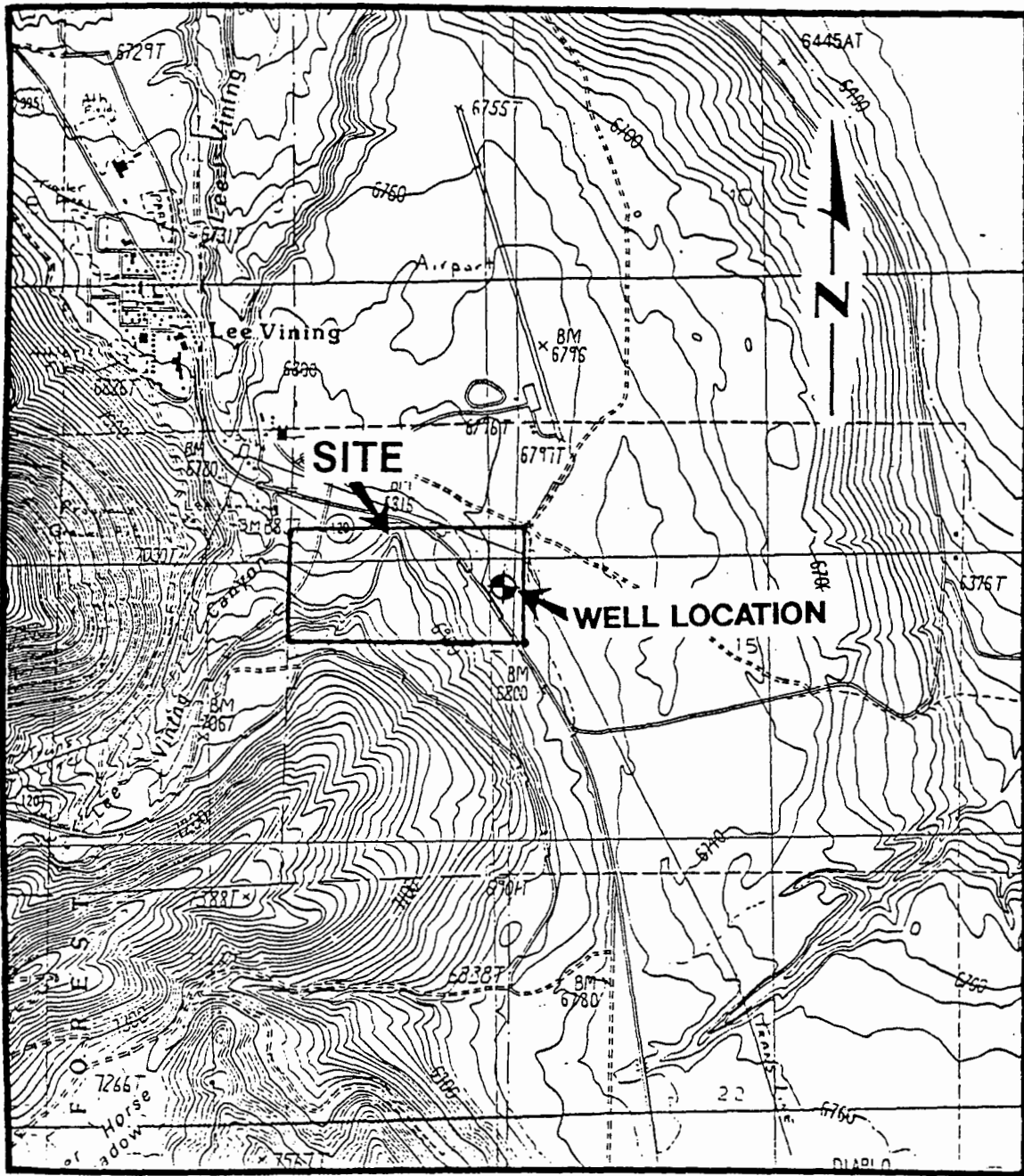
Michael W. Fies

Michael W. Fies
Project Geologist

Ray H. Davis
Ray H. Davis, P.E., C.E.G.
Principal



MWF:RHD:jhs



SCALE 1:24 000



CALIF

**BASE MAP: U.S.G.S., 1986, TOPOGRAPHIC MAP OF LEE VINING
7.5 - MINUTE QUADRANGLE, CALIFORNIA**

QUADRANGLE LOCATION



KLEINFELDER

SITE WELL LOCATION MAP

TIOGA INN

PLATE

1

PROJECT NO. 30-2091-01.001

LEE VINING

CALIFORNIA

STEP-DRAWDOWN TEST CALCULATIONS

PROJECT NO: 30-2091-01 001 DATE OF TEST: June 24-25, 1992
 JOB NAME: Tioqa Inn
 TEST LOCATION: Approx. 200 Ft. E. of Hwy 395, 2000 ft. S. of Junction with Hwy.120
 WELL NO: 1 STATIC WATER LEVEL: $\begin{matrix} + & 340 \\ - & 339 \end{matrix}$ TOC @ HRS
 CALCULATED BY: M.W. Fies GL

EXPLANATION OF SYMBOLS

Q = well discharge (gpm) B = Formation loss (s/Q) (from graph)
 s = total drawdown (ft) C = Well loss (s/Q²) (from graph)
 Δs = drawdown at end of step (ft) E = Aquifer Efficiency

EQUATIONS:

Specific drawdown: s/Q (ft/gpm)
 Specific capacity: Q/s (gpm/ft)
 Calculated drawdown: $s_c = BQ + CQ^2$ (ft)
 Aquifer Efficiency: $E = 1/[1 + (C/B)Q]$ (%)

Step	Pump Rate Q (gpm)	Step-Drawdown Δs (ft)	Total Drawdown s (ft)	Specific Drawdown s/Q (ft/gpm)	Specific Capacity Q/s (gpm/ft)
1	38	3.411	3.411	0.0898	11.14
2	91	6.697	10.108	0.1111	9.00
3	132.5	7.502	17.610	0.1329	7.52

Calculated Drawdown, Specific Capacity, Well Efficiency

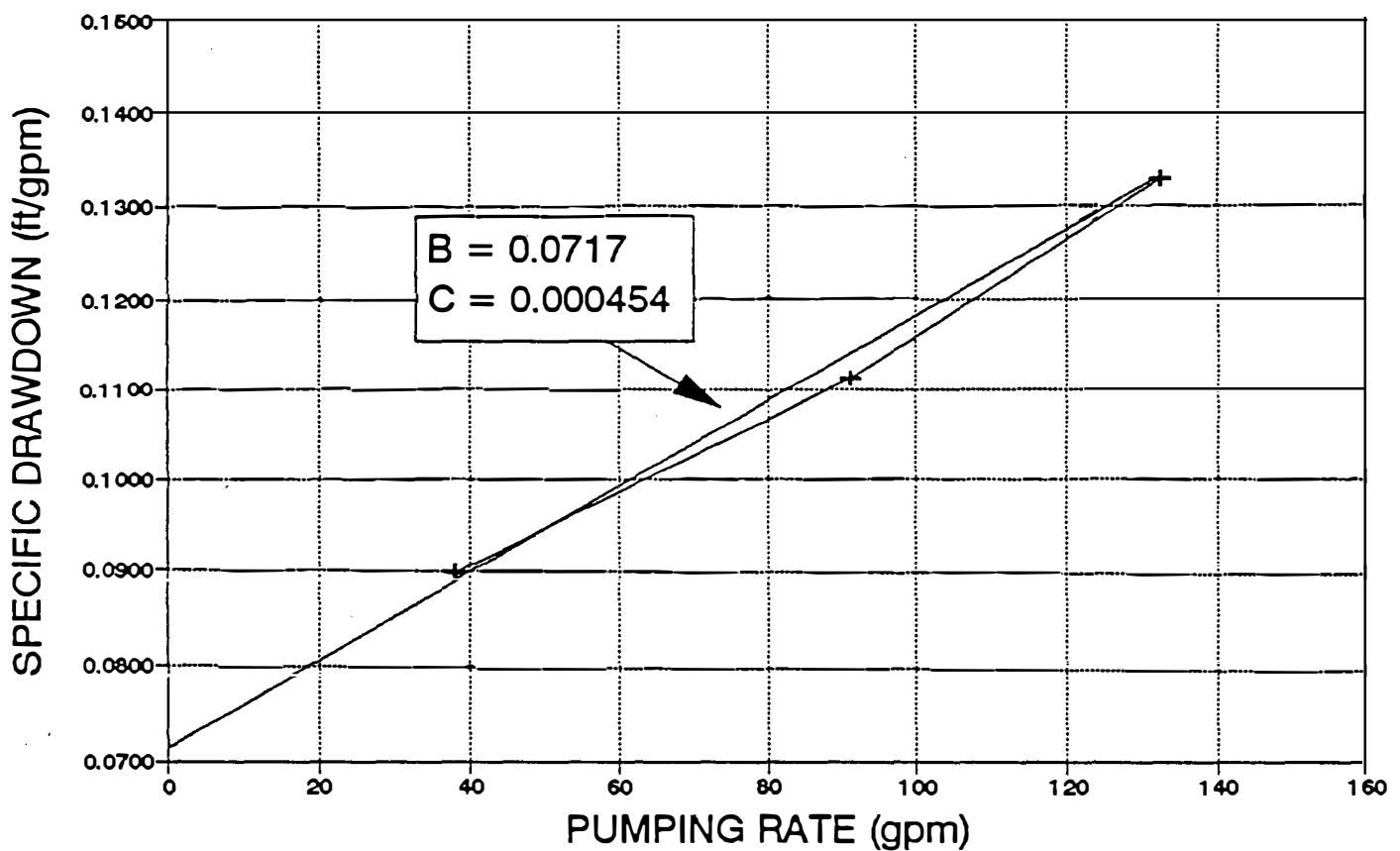
Pump Rate Q (gpm)	Formation Loss BQ (ft)	Well Loss CQ^2 (ft)	Calculated Drawdown s_c (ft)	Calculated Specific Capacity Q/s_c (gpm/ft)	Well Efficiency E (%)
125	8.96	7.09	16.05	7.79	55.8
150	10.76	10.22	20.98	7.15	51.3
200	14.34	18.16	32.50	6.15	44.1
300	21.51	40.86	62.37	4.81	34.5
400	28.68	72.64	101.32	3.95	28.3

From graph: B = 0.0717 s/Q

C = 0.000454 s/Q²

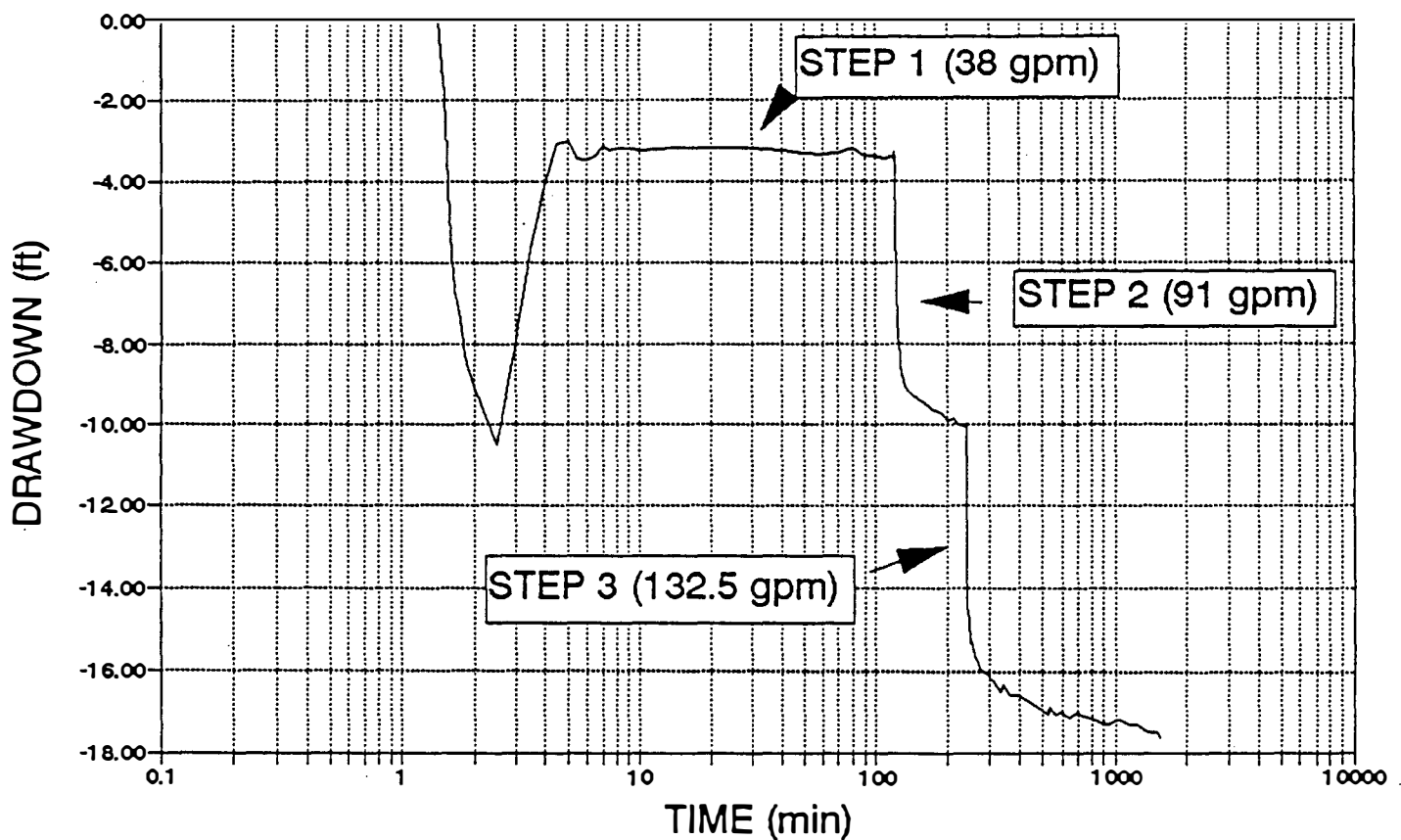
TIOGA INN WELL #1

Specific Drawdown/Discharge



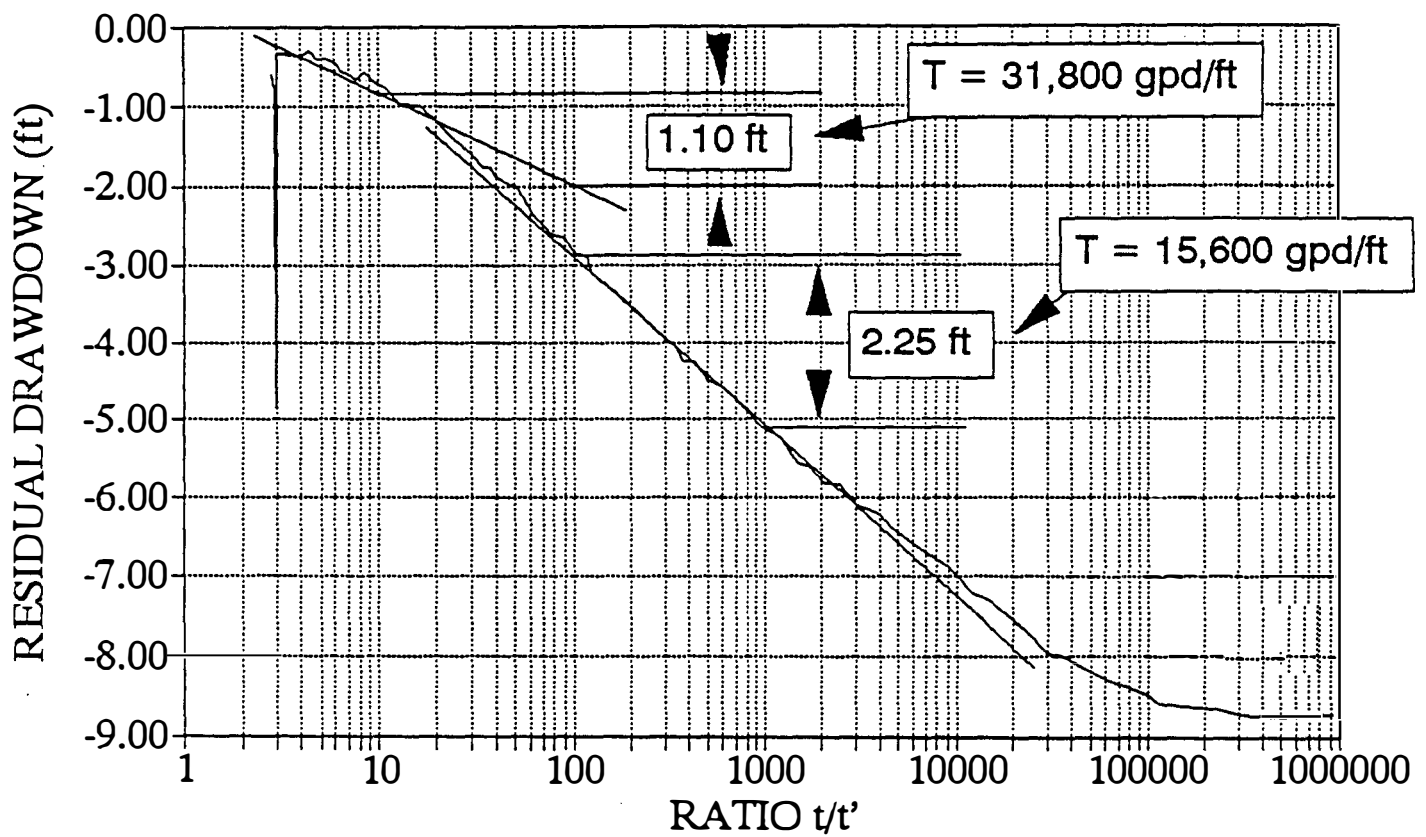
TIOGA INN WELL #1

Extended Step-Drawdown Aquifer Test



TIOGA INN Well #1

Step 4 (Recovery)



**VISUAL
IMPACT
ANALYSIS**

Report 2

DRAFT
VISUAL IMPACT ASSESSMENT
FOR
THE TIOGA INN SPECIFIC PLAN EIR
LEE VINING, CALIFORNIA

Prepared for:

MONO COUNTY

November 1992

Prepared by:

CERTIFIED/EARTH METRICS
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S12046B

EXISTING SETTING

Visual Setting. Mono County offers some of the most diverse terrain features and scenic resources to be found in any area of the country. The proposed project site is situated in the Mono Basin at the intersection of U.S. Highway 395 (US 395) and State Route 120 (SR 120). The site borders the federally designated Mono Basin National Forest Scenic Area, a nationally recognized visual resource. The basin's visual resources include Mono Lake and a diverse spectrum of dramatic landforms such as tufa towers, glacial moraines, and young volcanic features. Within a 20 mile radius of the site a number of visually significant resources attract the area's many visitors, including Yosemite National Park, Inyo National Forest, June Lake, Mammoth Lakes, Topaz Lake, and Devil's Postpile National Monument.

The proposed project site lies on the outskirts of Lee Vining, a small, rustic community. Many different architectural styles can be found in Lee Vining from trailer parks to "alpine lodge" and old west styles. Lee Vining marks the southern gateway to the famous Bodie Ghost Town, an authentic old western gold mining town.

The project site consists of a gently sloping grade trending north to south with a ridgeline running through the center, forming two upper "plateaus" (see Plates A and B). The site's varied terrain is vegetated with a dense cover of sagebrush, whitethorn and other low lying shrubs, as well as a sparse covering of Jeffrey and Pinion pines. The site's barren, chaparral landscape is characteristic of the Mono Basin environment.

View Opportunities. View opportunities are those views available from the project site. The project site affords scenic vistas to Mono Lake, Paoha Island, and Mono Basin to the north (see Plate C); Williams Butte and the Ansel Adams Wilderness to the south (see Plate D); and Crater Mountain to the east. View opportunities are more dramatic from the site's upper elevations due to increased elevation of the viewer's vantage point.

View Corridors. A view corridor is a vantage point which offers aesthetically pleasing views or panoramas to a substantial number of people. The major view corridors of consideration in the impact analysis of the proposed project are the views from SR 120 looking north to Mono Lake and Mono Basin (SR 120 - Mono Basin corridor), and the views from the intersection of SR 120 and US 395 looking south up Tioga Pass (SR 395 - Tioga Pass corridor). The SR 120 - Mono Lake corridor is significant in that it marks an important first view to Mono Lake for motorists travelling down Tioga Pass. There is currently a scenic turnout with an interpretive information kiosk on SR 120 adjacent to the project site (see Plate E). The US 395 - Tioga Pass corridor is significant in that it marks the intersection of two highways which experience a high volume of vehicle traffic, and offers aesthetically pleasing views to the dramatic peaks of the eastern Sierra (see Plate F).

Other view corridors which would be potentially impacted by the proposed project are views from the community of Lee Vining, and views from across Mono Basin (Black Point, Mono County Park, lower Lee Vining Canyon). Views to the project site from these vantage points are illustrated in Plates G, H, I and J. Due to the relative distance of the project site to any development, the project site would not be readily perceptible from this vantage point.

Scenic Highways Management. There are no official State of California designated scenic highways in the vicinity of the project site. The section of SR 120 that runs adjacent to the project site is one of several highway segments for which the State has completed Scenic Highway Reports, indicating possible future consideration for official state scenic highway designation.

In a mandate to manage the County's scenic resources, Mono County adopted a Scenic Highways Element in 1981. Mono County has designated the road segments of US 395 and SR 120 running adjacent to the project as part of the Mono County Scenic Highway system. These road segments are managed through the goals, policies and implementation measures of the Scenic Highways Element. Most of the goals, policies and implementation measures of this element have been reworked and incorporated into the Conservation/Open Space Element of the Mono County General Plan Update which is currently in draft form. The county has applied to the state for an extension to the time period required to certify the Draft General Plan. Therefore, the state has required that all projects currently under consideration be subject to the policies of the Draft General Plan Update.

The Scenic Highways Element (1981) and Draft General Plan define a "Scenic Highway" as:

Any freeway, highway, road, street, boulevard, or other public right-of-way which traverses an area of unusual scenic quality and has been designated as a scenic Highway by the County Board of Supervisors and/or the State of California.

Similarly, these planning documents define a "Scenic Highway Corridor" as:

The area of land generally adjacent to (within 1000 feet) and visible from the highway, which requires protective measures to insure perpetuation of its scenic qualities. Scenic Highway Routes consist of both the public right-of-way and the scenic corridor.

The following goals, objectives, policies and actions of the Conservation/Open Space Element of the Draft Mono County General Plan are particularly relevant to the proposed project (see Appendix A for a complete list of visual resource policies and the existing Scenic Highways Element):

GOAL. Protect and enhance the visual resources and landscapes of Mono County.

OBJECTIVE A. Maintain and enhance visual resources in the county.

Policy 3: Preserve the visual identity of areas outside communities.

Action 3.1, Action 3.2, Action 3.4

Policy 4: Protect significant scenic areas by maintaining land in those areas in public ownership.

Action 4.2, Action 4.3, Action 4.4, Action 4.5

OBJECTIVE B. Maintain a countywide system of state and county designated scenic highways.

OBJECTIVE C. Ensure that development is visually compatible with the surrounding community and/or natural environment.

Policy 1: Future development projects shall avoid potential significant visual impacts or mitigate impacts to a level of non-significance, unless a statement of overriding considerations is made through the EIR process.

Action 1.1

Policy 2: Future development shall be sited and designed to be in scale and compatible with the surrounding community and/or natural environment.

Action 2.1, Action 2.2, Action 2.3, Action 2.4, Action 2.5, Action 2.9, Action 3.1, Action 3.2, Action 3.3

Policy 4: Promote revegetation and reforestation programs along county roads, including designated scenic highways.

Action 4.1

Policy 5. Minimize the visual impact of signs within designated scenic highway corridors.

Action 5.1, Action 5.3

OBJECTIVE D. Heighten awareness of Mono County's unique visual environment.

Policy 1: Tourist facilities should be located to take advantage of scenic views.

Action 1.1, Action 1.2

Policy 2: Provide roadside improvements for designated county and state scenic highways.

SR 120 up Lee Vining Canyon has been designated as a National Scenic Byway. This program designates highways that traverse scenic areas in public lands. These roads highlight an area's special scenic and recreational values and further serve to increase public awareness of those lands and resources. The byways further highlight a variety of resources, management opportunities, and activities. The U.S. Forest Service is currently in the process of developing an interpretive program for the SR 120 scenic byway.

Mono Basin National Forest Scenic Area. The proposed project site is adjacent to the Mono Basin National Forest Scenic Area (scenic area). The Inyo National Forest and U.S. Department of Agriculture have developed a Comprehensive Management Plan for the scenic area which manages the area's natural resources. Although the project site is not within the scenic area's boundaries, development of the site may affect views to and from the scenic area. It would therefore be beneficial for the proposed project to conform with the scenic area's standards and management prescriptions. Areas adjacent to the project site that are within the scenic area boundary and along SR 120 and US 395 are mostly within the designated "Developed Recreation Zone." This designation is designed to "maintain existing developments and provide for new services and/or facilities in support of visitor use needs." The following

standards, guidelines, and management prescriptions of the scenic area Comprehensive Management Plan are particularly relevant to the proposed project:

Scenic Area Standards and Guidelines:

- Do not allow new overhead lines outside of existing utility corridors, which are visible from sensitivity level 1 roads and trails. Sensitivity level 1 observation points include U.S. 395, and Highways 120, 167; Lundy Canyon Road; Cemetery Road (from 395 to County Park); the visitor center; and South Tufa, Panum Crater, Navy Beach, Old Marina, County Park, and Black Point visitor sites.

Management Prescriptions:

- Developed Recreation Zone - Manage vegetative setting in and adjacent to the zone to meet the Visual Quality Objectives (VQO) of retention within the foreground zone.
- Strive to meet the VQO of retention but do not exceed partial retention standards for all facilities and developments as seen from sensitivity level 1 travel routes or occupancy sites. For distances greater than 1.2 mile from the viewing location, meet retention standard.
- Plant and maintain vegetation at developed sites to provide screening and a natural appearing setting. Favor native species, but historically introduced species and cultivated equivalents of native species may be used.
- Facilities should borrow shape, color, and texture from the natural setting.

National Forest Visual Management System. The project site is adjacent to lands managed by the U.S. Forest Service. The Visual Management System (VMS) is applied to all management activities on National Forest Lands. The system establishes VQOs which are based on a combination of variety class and sensitivity level. The variety class is determined by classifying the landscape into one of three different degrees of variety: Distinctive, Common, or Minimal. The sensitivity level is determined by measuring viewers' concerns for visual quality and assigning a level of sensitivity: Level 1, highest sensitivity; Level 2, average sensitivity; and Level 3, lowest sensitivity. Based on these classifications, the land is assigned VQOs, describing the level of acceptable alteration of the natural environment. The objectives are as follows:

- Preservation. Allows only ecological changes on the land. The only management impact allowed is very low visual impact recreation facilities.
- Retention. Allows management activities which repeat form, line and color already found in the natural landscape.
- Partial Retention. Allows management activities to repeat the form, line, and color of the natural landscape; other changes can be made provided the visual impact is dominated by the natural landscape.

- Modification. Management activities may visually dominate the natural characteristics of the environment. The management activities must borrow from the natural characteristics of the environment.
- Maximum Modification. Management activities of vegetative and landform alterations may dominate the natural characteristics of the environment.

Although the project site itself would not be subject the VMS, it should be noted that Forest Service lands may be subjected to changes in classification or visual quality upon completion of the proposed project.

IMPACTS

Standard of Significance. Based on CEQA Guidelines, the adverse visual impacts of a project will only be significant if they would have a "substantial, demonstrative negative visual or aesthetic impact." This determination is based on several criteria including observer position, views, view corridors, existing and proposed screening, backdrop, the characteristics and building materials of the proposed development, and the existing visual character of the surrounding area. As the determination of significance is often a subjective judgement, heavy emphasis is placed on the goals and policies of the Mono County General Plan and the Scenic Highways Element in the interpretation of impacts. The County has further defined its standard of significance in the Conservation/Open Space Element (see Visual Resources objective C, policy 1, action 1.1):

Examples of a substantial demonstrable negative aesthetic effect include:

- 1) Reflective materials
- 2) Excessive height and/or bulk
- 3) Standardized designs which are utilized to promote specific commercial activities and which are not in harmony with the community atmosphere
- 4) Architectural designs and features which are incongruous to the community or area and/or which significantly detract from the natural attractiveness of the community or its surroundings.

Visual Character. The proposed project would transform the existing natural landscape into a multi-use development (see Plate K). In considering whether the proposed project could be considered to have a "demonstrable negative effect," the project can be evaluated by the standards of the Conservation/Open space element (objective C, policy 1, action 1.1. See "Standard of Significance" above).

REFLECTIVE MATERIALS. A complete list of proposed building materials was not provided as part of the application for the proposed project. Contact with the project applicant indicated that glare resistant glass and roofing materials would be used in project construction. Use of building materials which would cause excessive amounts of light and glare is identified as a potentially significant impact.

EXCESSIVE HEIGHT AND/OR BULK. The proposed hotel would not exceed the roof elevations of 30 feet from finished floor elevations. Preliminary hotel designs, with gabled roofs, wood beams, and stone columns would break up the northern facade of the hotel, thereby minimizing the perception of a "bulky" design. Similarly the restaurant, service station/mini-mart, and

housing portions of the proposed project would not exceed 30 feet in height or be considered to have excessive bulk. No significant aesthetic impact would be expected relating to excessive height and bulk if the proposed project design were implemented.

STANDARDIZED DESIGNS. Although the hotel and restaurant portions of the proposed project call for similar basic design and building materials, it would not be considered a "standardized" design which promotes certain commercial activity. The proposed alpine style architecture would blend with the environment and be congruous with other structures in Lee Vining. As no standardized, commercialized designs are proposed, no significant aesthetic impacts would be expected.

ARCHITECTURAL DESIGNS. As stated above, the proposed architectural design and use of natural and naturally colored building materials (ie. stone walls, wood beams, green roof, etc.) would increase blending with the existing surrounding natural terrain. The proposed project design would not cause significant aesthetic impacts relating to its architectural design.

As no detailed landscape plans have been drawn for the proposed project, visual screening for the proposed project remains to be defined. Landscape vegetation and other visual buffers are of vital importance to provide an adequate transition from the manmade environment to the natural environment. Landscape designs have the potential to temper manmade features on site and minimize their visual prominence. As cited in the Conservation/Open Space Element of the Draft Mono County General Plan, buildings must blend with the natural environment. Inadequate designs would reduce natural blending and cause potentially significant visual and aesthetic impacts.

The type and design of the proposed signage at the project site have not been included as part of the project application. Signs which do not blend with the natural environment or cause excessive light and glare would not be compatible with the stated goals, policies, and actions of the Conservation/Open Space Element, or the Mono County Sign Ordinance. Improper sign design is identified as a potentially significant impact.

The type and design of nighttime lighting on the project site has not been defined as part of the project application. lighting fixtures and configurations which project excessive light and glare to its surroundings would be inconsistent with Objective C, policy 1, Action 2.1 h of the Conservation/Open Space element which calls for lighting to be shielded and direct. This is identified as a potentially significant impact.

View Opportunities. The proposed project would allow privately owned land to become available for public use. Due to the richness of the view opportunities present on the project site, aesthetically pleasing views would become available to a larger number of people. Views would be particularly pleasing from the proposed restaurant due to its elevated position on the site. Enhanced public access to view opportunities can be considered a beneficial impact.

View Corridors. The proposed project would cause existing unobstructed view corridors to become partially obstructed. As the photo simulations in Plate H demonstrate, the foreground views of the US 395 - Tioga Pass corridor would be

disrupted from its existing natural setting. Distant views to the peaks surrounding Tioga Pass (occluded in photo by cloud cover) would not be disrupted by the proposed project. Similarly, foreground views from the SR 120 - Mono Basin corridor could potentially be partially obstructed by the proposed project. The proposed building siting would minimize obstruction of views of Mono Lake because adequate setback of the hotel portion of the project is planned. The mini-mart is also set back sufficiently to avoid obstruction of Mono Basin views from this corridor (see Plate L). With the proposed project siting and height and bulk, no significant impacts relating to obstruction of view corridors are anticipated.

Visually prominent areas of the proposed project site in relation to significant view corridors are identified in Figure 1. The proposed service station/mini-mart and western side of the hotel would be visually prominent because of their proximity to SR 120. The proposed restaurant and parking area would also be visually prominent because of their elevated position on the project site. The restaurant would "daylight" above the existing ridgeline and be prominent from both US 395 and SR 120. The northern-most portion of the proposed housing would be visible from US 395, though not as prominent as the restaurant due to proposed setbacks from the ridgetop. Without adequate landscape buffering and use of naturally colored building materials, the proposed structures in these areas would potentially be visually intrusive. This is identified as a significant environmental impact.

Scenic Highways Management. The proposed project site is within the Mono County designated 1000 foot scenic corridor of both SR 120 and US 395. As discussed in "Visual Character" and "View Corridors" above, the proposed project is generally compatible with the Conservation/Open Space Element of the Draft Mono County General Plan. Where potentially significant and significant impacts have been identified, the identified mitigation measures would be required in order to mitigate impacts to less-than-significant levels.

The main entrance of the project is proposed to be at the location of an existing scenic turnout along SR 120 (see Plate E). The elimination of a scenic turnout would be in conflict with Objective D, Policy 1, Action 1.1 which calls for the construction of such turnouts. This is identified as a significant environmental impact which can be mitigated as recommended below.

Mono Basin National Forest Scenic Area. The proposed project would be generally compatible with the management prescriptions and guidelines of the Mono Basin National Forest Scenic Area. As the project site is adjacent to areas along SR 120 and US 395 that are within the "Developed Recreation Zone," the proposed land use would be compatible with stated Management Prescriptions of the area. Any potential impacts resulting from inadequate landscaping designs or blending with the natural environment are discussed above in "Visual Character" and "View Corridors." No other significant impacts are identified relating to project inconsistency with the Mono Basin National Forest Scenic Area.

National Forest Visual Management System. The proposed project would be visually compatible with the surrounding National Forest lands, provided that adequate building material blending and landscape designs are employed at the site (see "Visual Character" and "View Corridors" above). No significant

impacts relating to project inconsistency with the Forest Service's VMS are identified.

MITIGATION MEASURES

Unless otherwise noted, the following mitigation measures would mitigate significant and potentially significant impacts to less-than-significant levels:

Visual Character

- The project applicant should fully comply with all pertinent objectives, policies, actions of the Draft Conservation/Open Space Element of the Mono County General Plan (draft May 1992).
- Only glare resistant glass and building materials should be used in the construction of the proposed project. Prior to project approval, the applicant should submit a detailed list of proposed building materials and colors to the Mono County Planning Department. The planning director should approve building material list prior to project approval.
- Nighttime lighting should be designed with low mounting heights, shielded and direct. Nighttime lighting should be minimized to that necessary for safety and security.
- The project applicant should submit to the Mono County Planning Department a detailed landscape plan which specifies design, location, and species of vegetation. Existing trees on the project site should be maintained on site and incorporated into landscape plans. As required by County policy, landscape plans should be submitted and approved prior to issue of use permits.

View Corridors

- In developing the landscape plan, the applicant should take the visually prominent areas identified in Figure 1 into special consideration. In these identified areas, mature, native, drought resistant species should be planted in a manner which maximizes visual screening quality. Landscape berms should be employed in the restaurant parking area and on the ridgeline where homes are proposed.

Scenic Highways Management.

- If necessary, the existing Scenic Turnout and Kiosk near the proposed entrance of the project site should be moved at the developer's expense to a location agreed upon by the Mono County Planning Department and U.S. Forest Service.

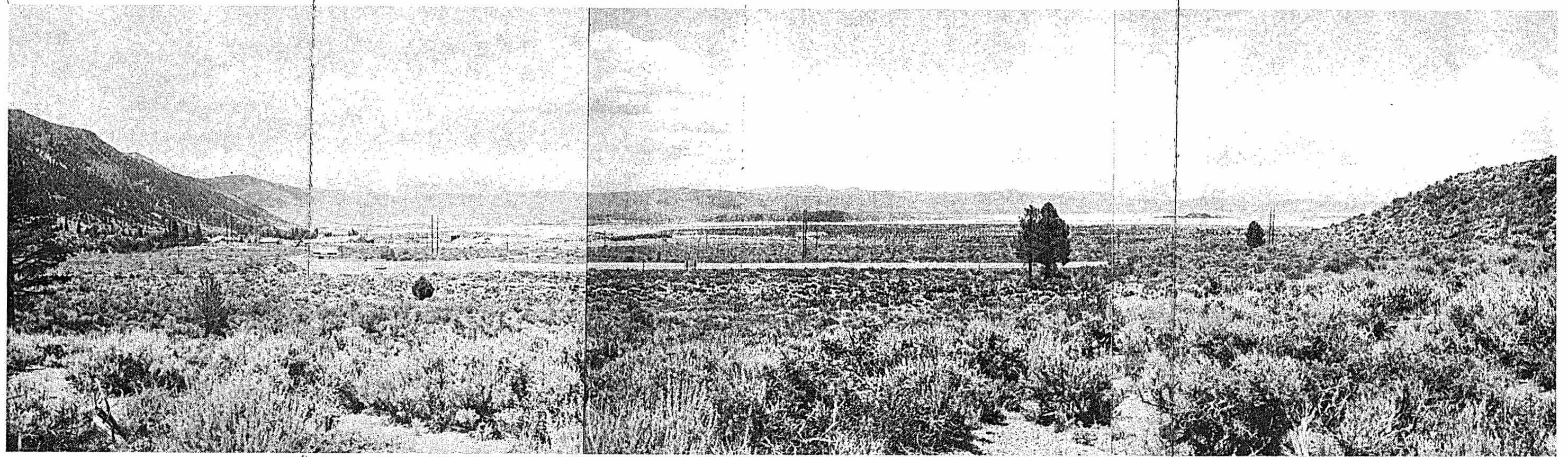


Plate A: View from center of project site looking north showing site characteristics.

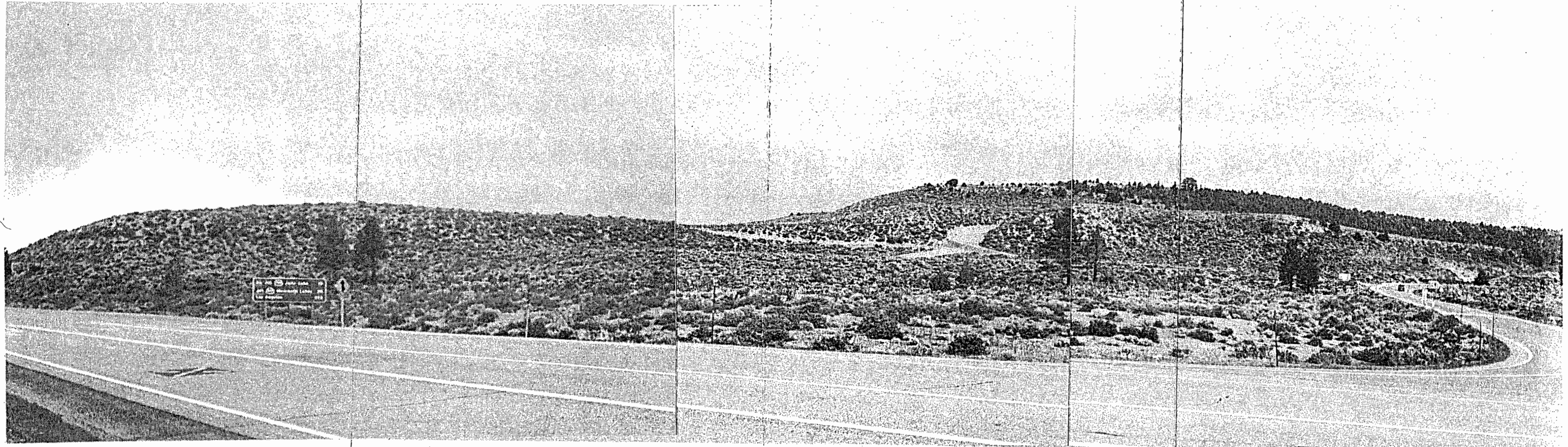


Plate B: View from north side of U.S. 395
at junction with S.R. 120 looking
south across project site.

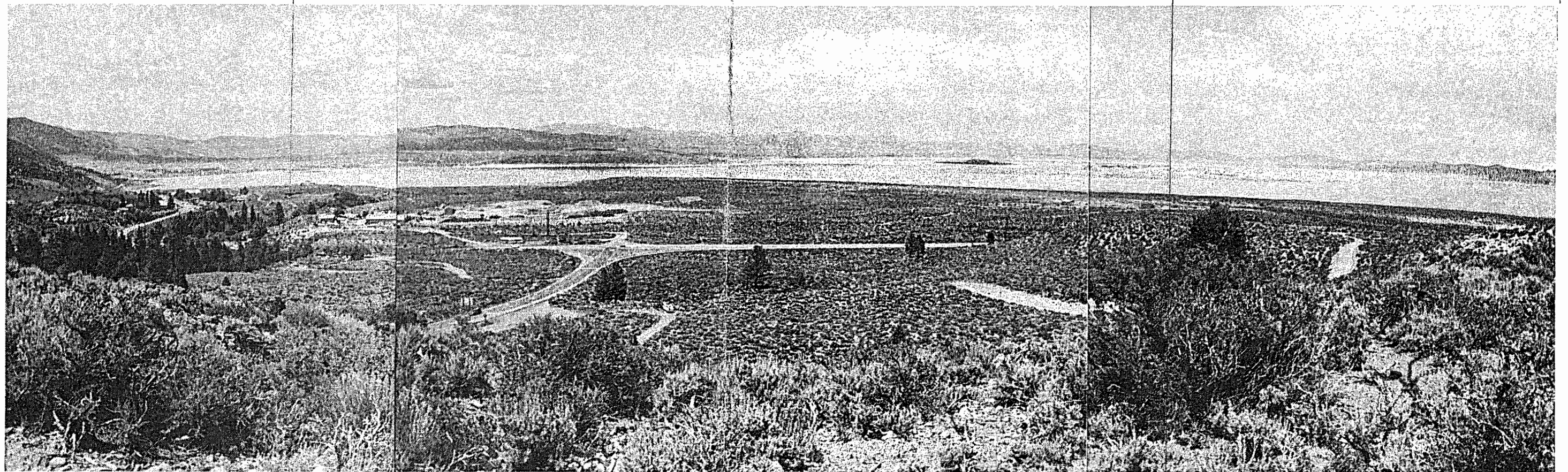


Plate C: View from upper plateau of project site looking north, showing panorama of Mono Basin and project site in foreground.



Plate D: View from upper plateau of project site looking south up
Tioga Pass.

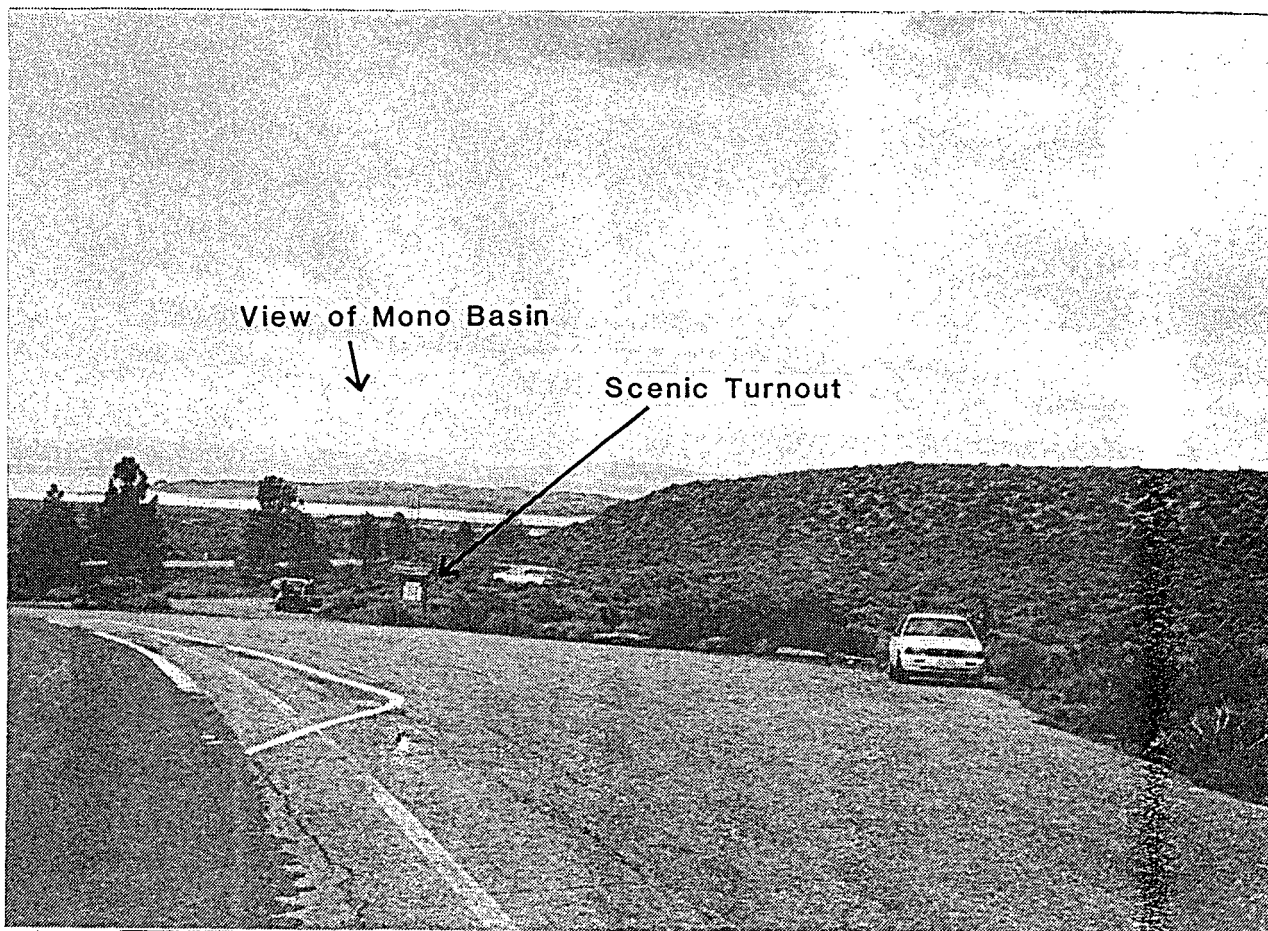


Plate E: View from S.R. 120 on western side of project site looking north showing scenic turnout and the S.R. 120-Mono Basin view corridor.

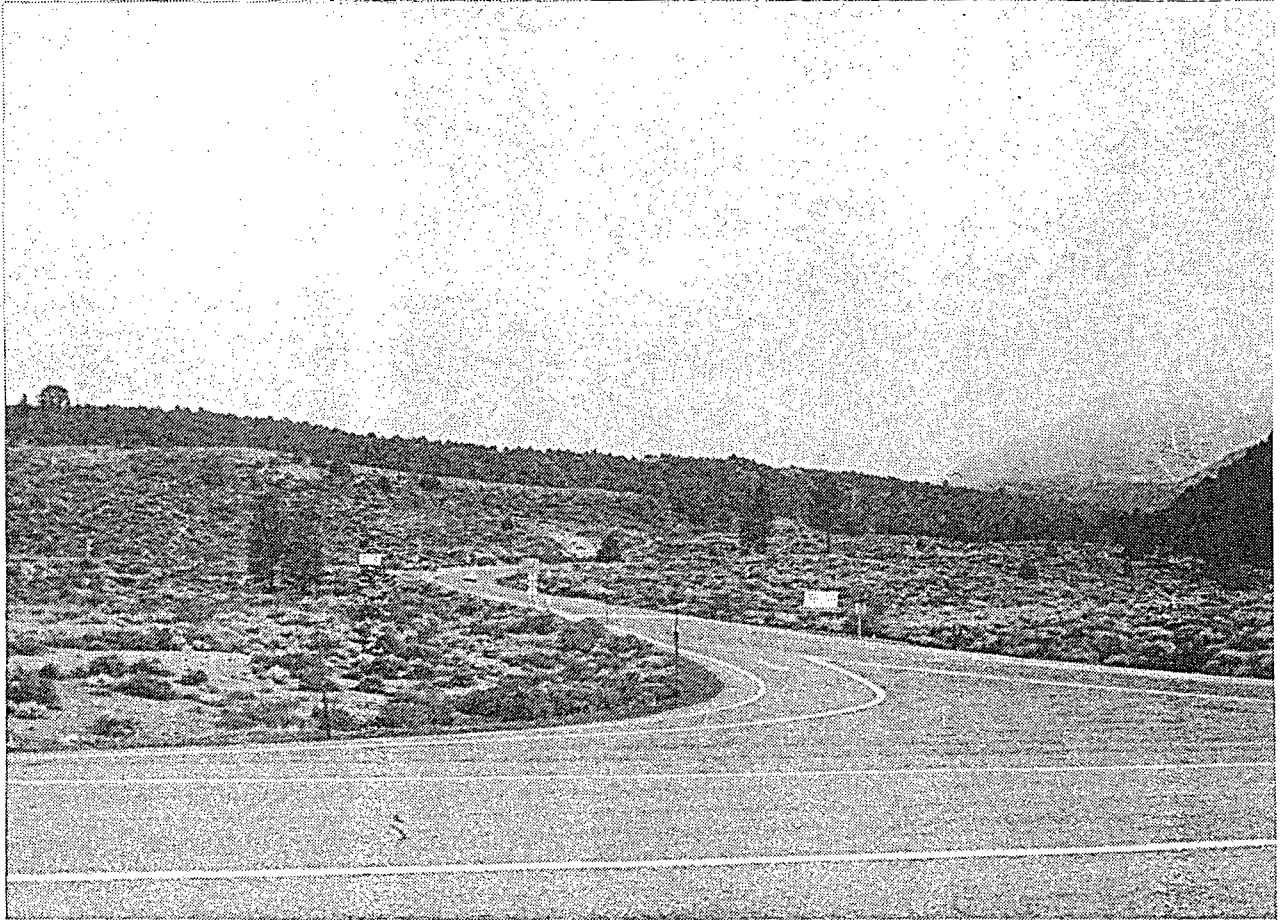


Plate F: View from north side of U.S. 395 looking south showing the U.S. 395-Tioga Pass view corridor.

Note: Distant view occluded by clouds.

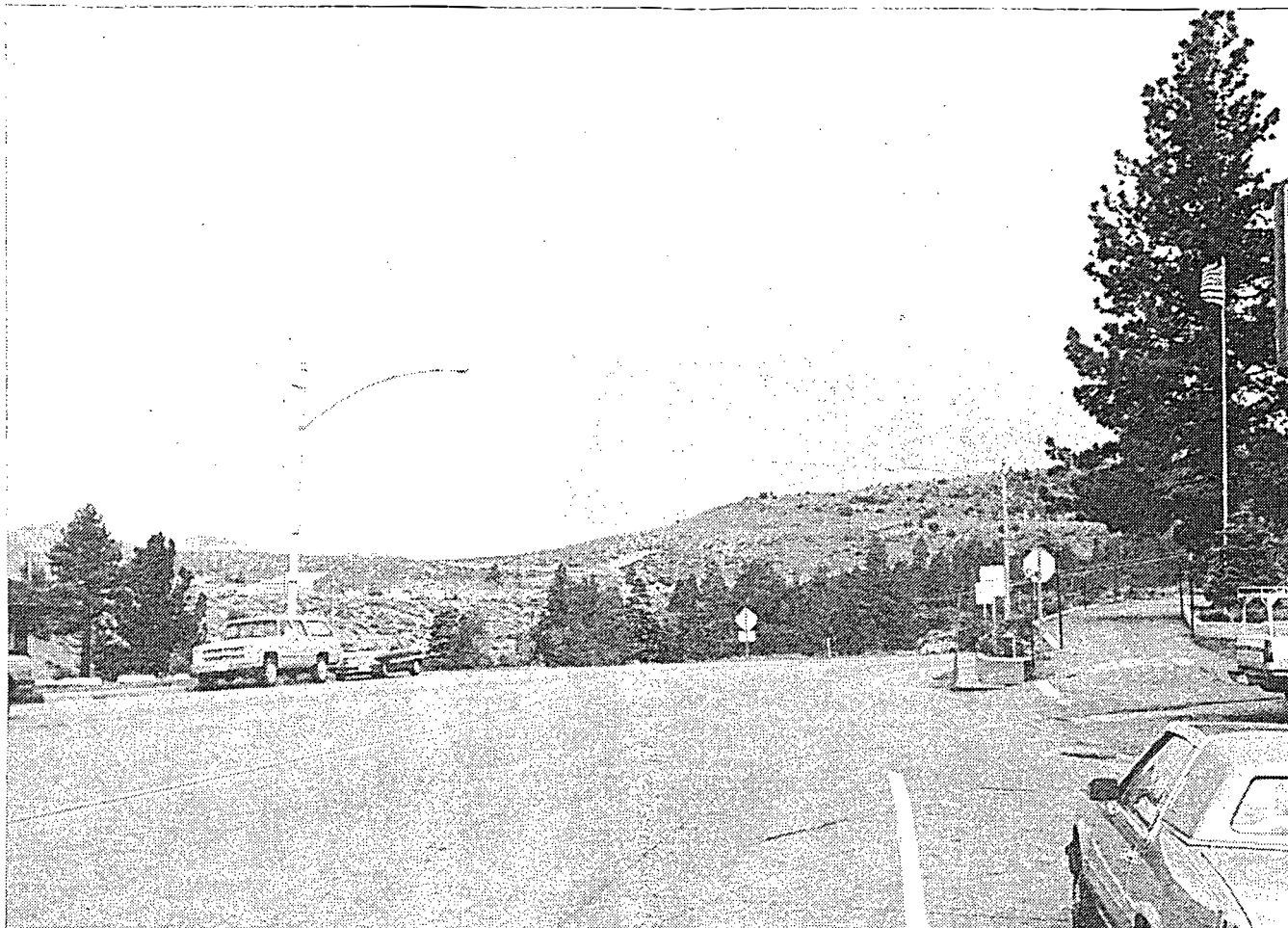


Plate G: View from State Route 395 in Lee Vining, looking southeast towards the project site.



Plate H: View from Black Point looking south towards the project site.



Plate I: View from county park looking south towards the project site.

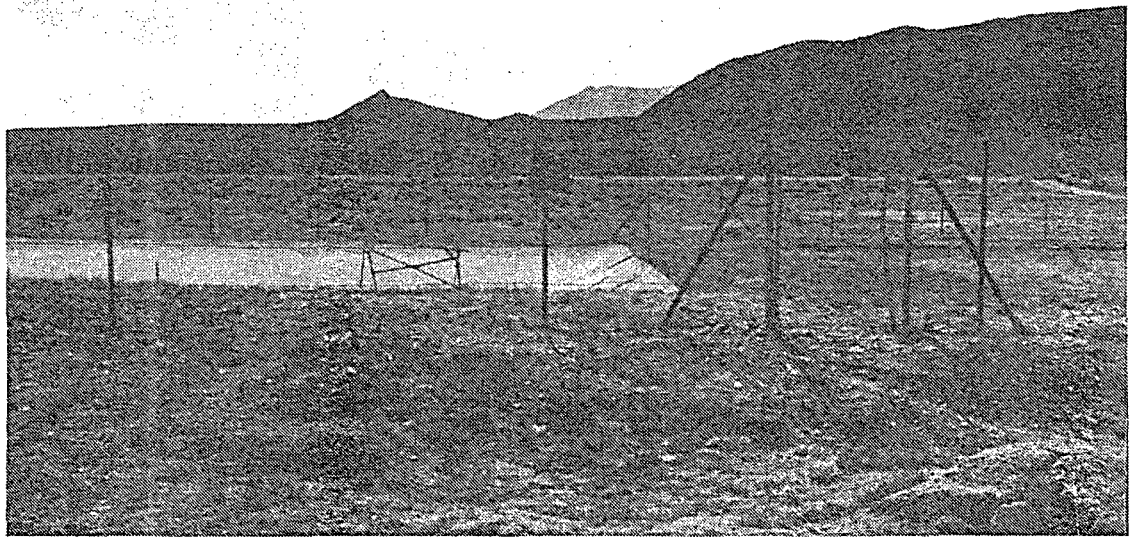


Plate J: View from bottom of Lee Vining Canyon at Mono Lake looking south towards the project site.

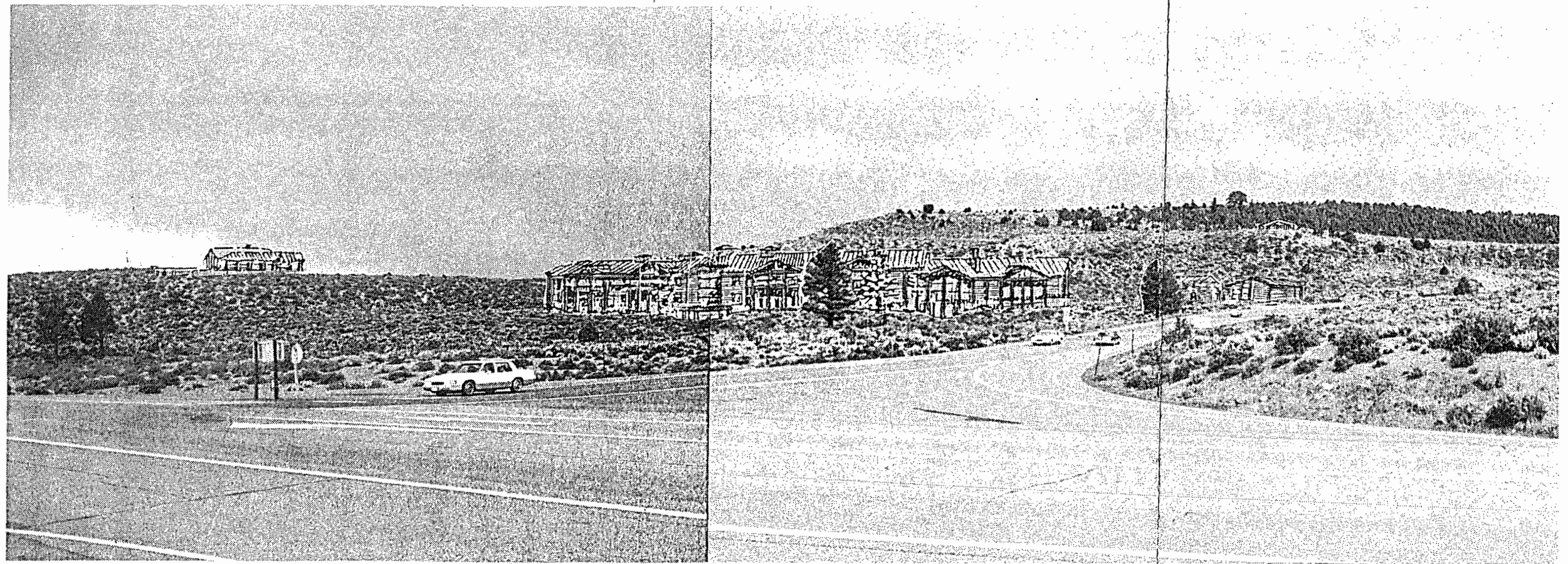


Plate K: Photosimulation of proposed project from north side of U.S. 395 at junction with S.R. 120 looking southeast.

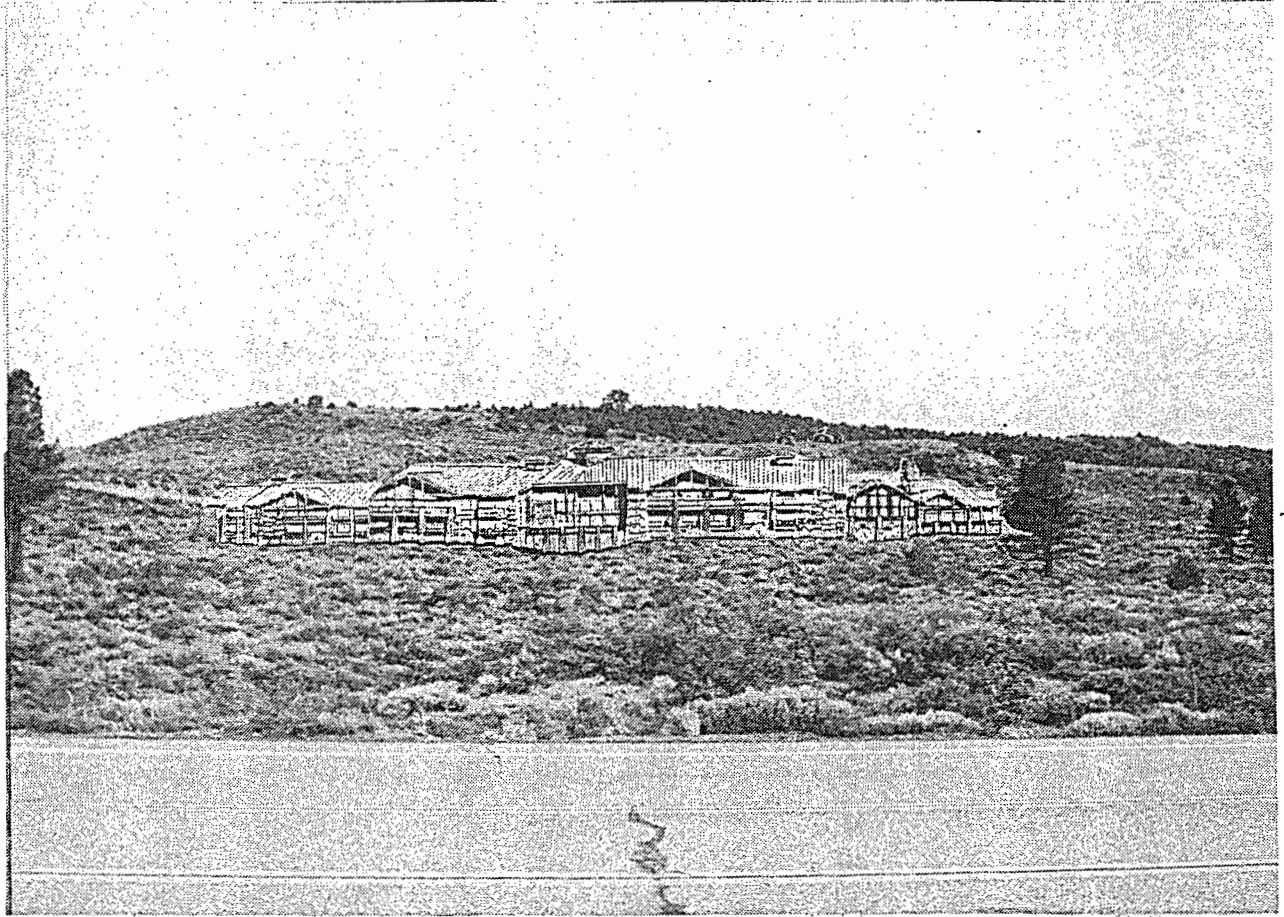


Plate L: Photosimulation of proposed project from north side of U.S. 395 looking south at the U.S. 395-Tioga Pass view corridor.

Note: Distant view occluded by clouds.

**WILDLIFE and
BOTANICAL
REPORT**

Report 3

TIOGA INN
VEGETATION AND WILDLIFE ASSESSMENT STUDY
FINAL REPORT
June 1992

Prepared for:
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I. INTRODUCTION

The proposal to develop the Tioga Inn near Lee Vining, California, has raised concerns with respect to potential deleterious impacts on local wildlife, especially migratory Rocky Mountain mule deer (Odocoileus hemionus) which use the project area and vicinity. A brief evaluation of biological resources on the proposed project area was conducted by a private consultant on October 28, 1984 (White 1984). This assessment was considered by the California Department of Fish and Game (CDFG) and other agencies to be lacking information on site-specific mule deer use of the area. In addition, it did not address potential significant impacts of the proposed development on mule deer and other biological resources. In response to recognized concerns and in order to initiate the environmental review process pursuant to the California Environmental Quality Act (CEQA), the Mono County Planning Department (MCPD) contracted the present investigator to allow an assessment of the importance of the area to deer and other wildlife.

Deer which use the project area and vicinity are from the Casa Diablo herd, a migratory mule deer herd consisting of approximately 1,500 animals that winters at lower elevations near Benton, California, some 35 airline miles east of the Project Area (Figure 1). The herd summers primarily on the east slope of the Sierra Nevada, from Mammoth Lakes, north to Lundy Canyon. From January 1986-December 1988, an intensive ecological

investigation of the Casa Diablo deer herd was conducted by the present investigator under contract with CDFG (Taylor 1988a). This investigation revealed that approximately 26% of all deer which winter near Benton, migrate west to summer range located within and adjacent to the Lee Vining Canyon area.

A review of Laudenslayer Jr. et al. (1991) revealed that no federal or state-listed or candidate rare, threatened or endangered amphibians, reptiles, birds, or mammals are expected to occur within the Project Area. However, the Project Area is potential habitat for several "Special Animals" which refers to all vertebrate and invertebrate taxa of concern to the California Department of Fish and Game Natural Diversity Data Base (NDDB), regardless of their legal or protection status (CDFG 1988). "Special Animals" which are known within the vicinity of the Project Area include:

- 1) American Badger (Taxidea taxus)
Status: CDFG species of special concern
- 2) Western White-tailed Hare (Lepus townsendii townsendii)
Status: CDFG species of special concern
- 3) Golden eagle (Aquila chrysaetos)
Status: CDFG species of special concern, California "fully protected" species, no federal status
- 4) Prairie falcon (Falco mexicanus)
Status: CDFG species of special concern, no federal status
- 5) American Peregrine Falcon (Falco peregrinus anatum)
Status: California-listed Endangered Species, Federal listed Endangered species, California Fully Protected species.

A review of the NDDDB revealed that the following sensitive plants species are known to occur in the vicinity of the Project Area:

Mono Buckwheat (Eriogonum ampullaceum)

Status: no state status, federal Category 2 candidate, California Native Plant Society List 1B (rare, threatened or endangered in California and elsewhere)

The objectives of the present investigation are to:

1) describe and quantify the amount, timing, and specific locations of deer use of the Tioga Inn Project Area during the spring migration of 1992; 2) determine the relative abundance and habitats of Federal candidate, proposed or listed threatened or endangered species, state-listed species, and locally sensitive plant and animal species that are found at or near the Tioga Inn Project Area; 3) provide a complete description of all vegetative communities occurring within the Tioga Inn Project Area; 4) assess and quantify direct, indirect, and cumulative potential project-related impacts on wildlife and associated sensitive habitats; and 5) provide a specific mitigation plan to offset potential project-related impacts.

The information in this report will be incorporated into a Draft Environmental Impact Report (EIR) prepared for the Tioga Inn by the Mono County Planning Department.

II. ACKNOWLEDGMENTS

This investigation was conducted under a contract with the Mono County Planning Department, the lead agency for this

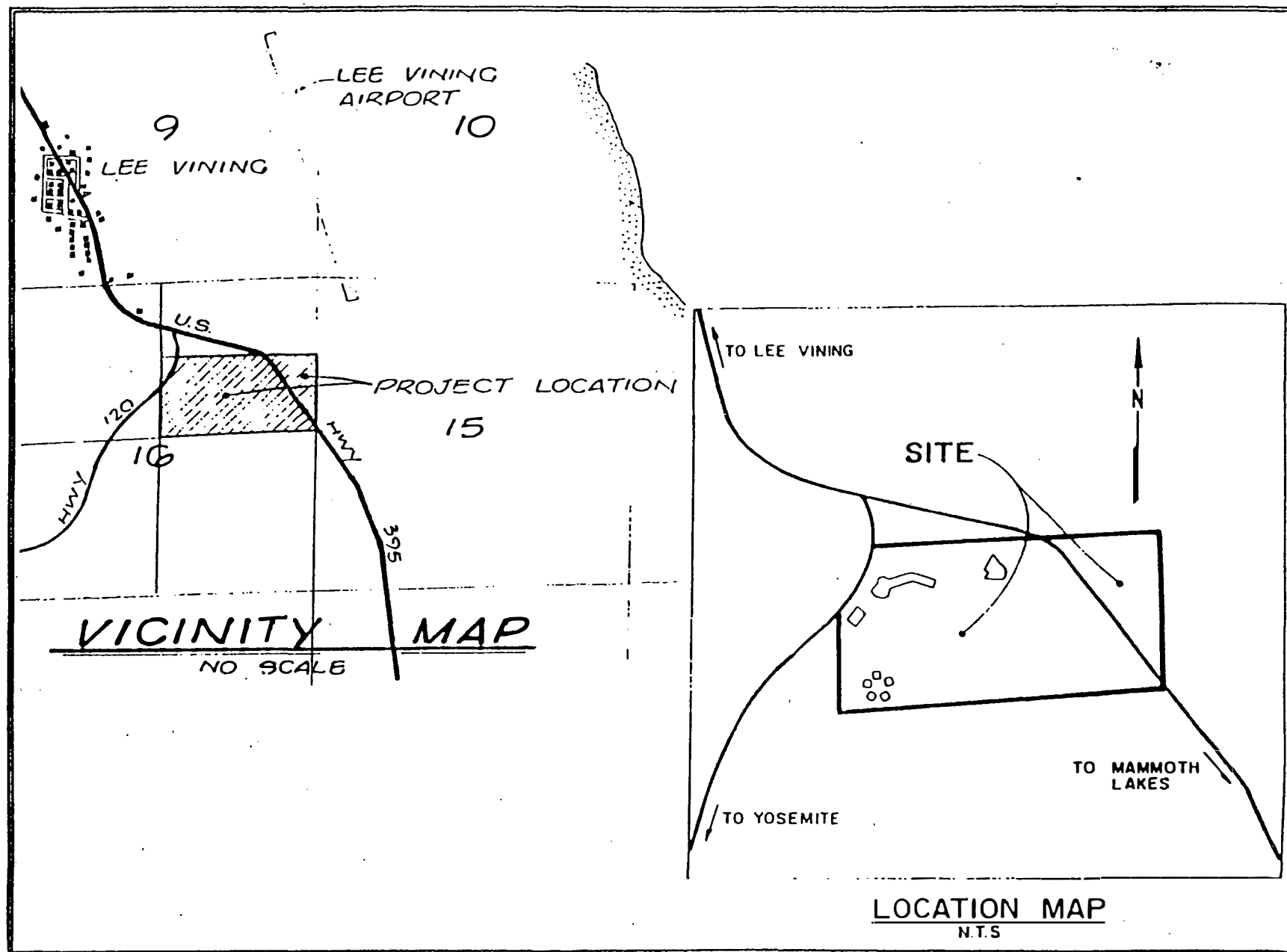
project. Some of the data presented here is from a DFG funded radio-telemetry study of the Casa Diablo herd which was conducted from January 1986-December 1988. The information presented in this report is to be used entirely for the purpose of assessing the environmental effects of the proposed Tioga Inn, and are not for publication, citation or other use without permission of the author.

III. STUDY AREA

The site of the proposed Tioga Inn, hereafter designated the Project Area, is located approximately one-half mile south of Lee Vining, California, southeast of the intersection of Highways 395 and 120 in the S 1/2 of the NE 1/4 of Section 16, T. 1 N., R. 26 E (Figure 2). It encompasses approximately 70 acres and is bordered by Highway 120 on the north, Highway 395 on the east, and USFS land on the south and west. Elevations on the project area range from approximately 6,800 to 7,000 feet.

The proposed Tioga Inn will include a 120 room full service motel, a 100 seat restaurant, a gas station/mini-mart, and 10 units of residential housing (Figure 3). The hotel will be situated on Parcel 1 (30.3) about 800 feet south of the intersection of Highways 120 and 395. The proposed restaurant will be situated on Parcel 2 (36 acres), the gas station mini-mart on Parcel 3 (2.4 acres), and the 10 units of residential housing on Parcel 4 (5.0 acres).

Figure 2. Location of the Tioga Inn Project Area near Lee Vining, California.



PROPOSED TIOGA INN & RESTAURANT

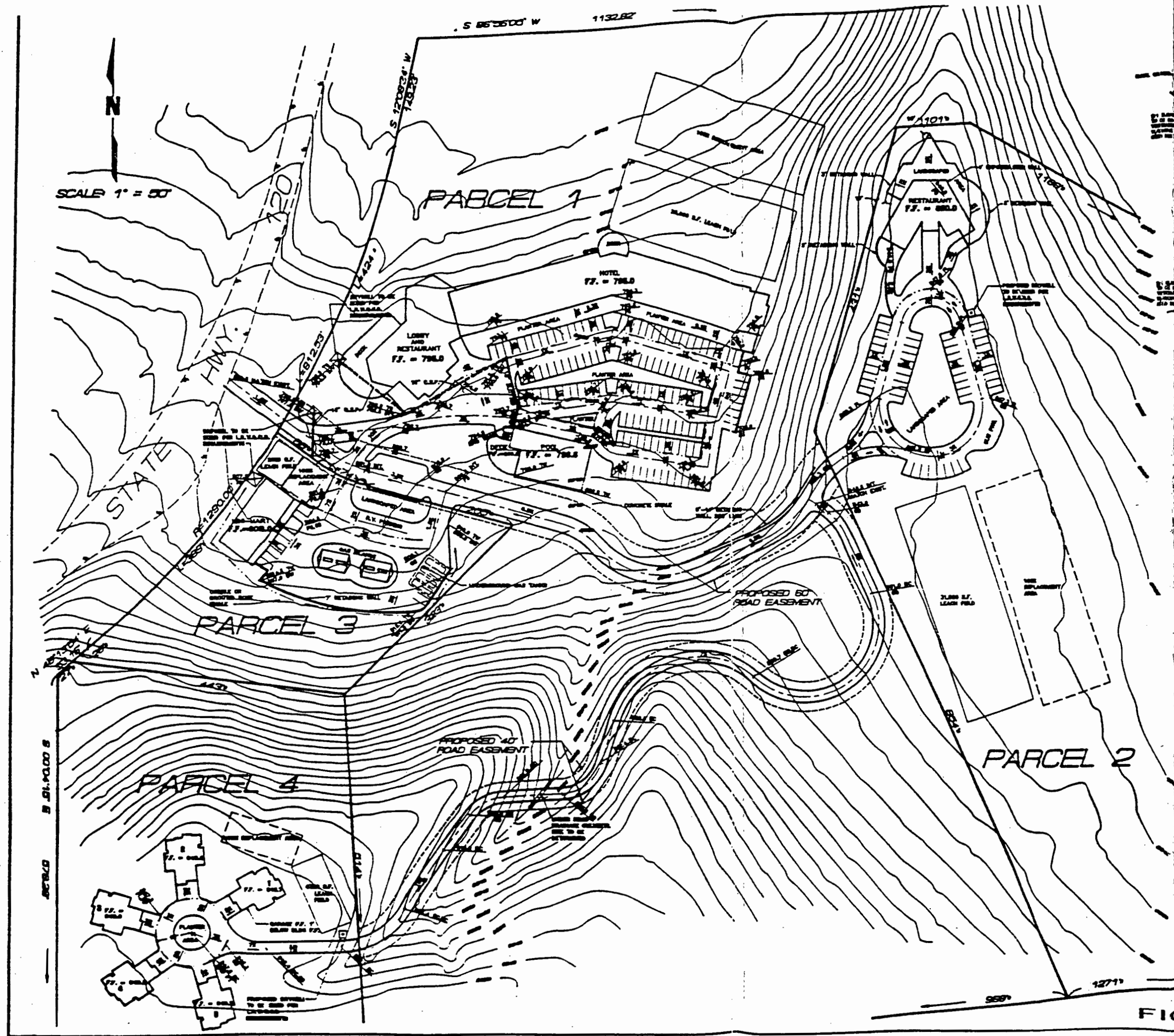
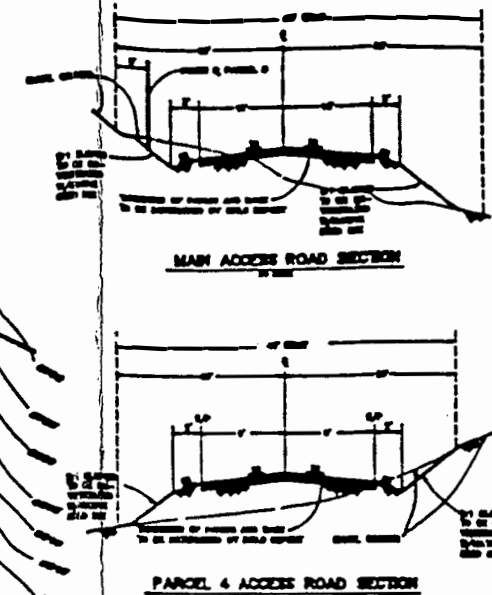


FIGURE 3



SITE DATA

- PARCEL 1 - 30.1 AC.
HOTEL - 120 ROOMS
GROSS FLOOR - 400,000 S.F. (EST. FLD.)
GROSS AREA - 1.1
SITE COVER - 1.1
PARKING REQUIRED - 10
PARKING PROVIDED - 10 + 2 GAR. SPACES
- PARCEL 2 - 20.0 AC.
RESTAURANT - SEATING CAPACITY 100
GROSS FLOOR - 400,000 S.F. (EST. FLD.)
GROSS AREA - 1.1
SITE COVER - 1.1
PARKING REQUIRED - 10
PARKING PROVIDED - 10 + 2 GAR. SPACES
- PARCEL 3 - 1.4 AC.
GAS STATION/AMT.
GROSS FLOOR - 400 S.F. (EST. FLD.)
GROSS AREA - 0.05
SITE COVER - 0.05
PARKING REQUIRED - 0
PARKING PROVIDED - 0 + 2 GAR. SPACES
- PARCEL 4 - 1.1 AC.
OFFICE/RETAIL UNIT
GROSS FLOOR - 100,000 S.F. (EST. FLD.)
GROSS AREA - 0.05
SITE COVER - 0.05
PARKING REQUIRED - 0
PARKING PROVIDED - 0 + 2 GAR. SPACES

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BY: [Signature]
CHECKED BY: [Signature]
APPROVED BY: [Signature]

SITE PLAN
PARCELS 1, 2, 3 & 4: TENTATIVE PARCEL MAP 34 -
PREPARED FOR DENNIS DONALD

IV. METHODS

Mule deer use of the project vicinity during the spring of 1992 was determined from a DFG funded radio-telemetry study of the Casa Diablo deer herd conducted from January 1986-December 1987, and track counts funded by the project proponent.

A) Mule Deer

1) Radio-telemetry

Deer were captured on Casa Diablo deer herd winter ranges from January 1986-March 1986 and February 1987-March 1987 using Clover traps (Clover 1956), drive nets and a Bell Jet Ranger III helicopter (Beasom et al. 1980), and a hand-held net gun. All captured deer were physically restrained and marked with large, plastic, consecutively numbered cattle ear tags (7.5 x 11.5 cm; Allflex Tag Systems, Harbor City, Calif.), color coded to wintering area. Twenty-four adult does were fitted with radio-collars. In addition, 1 adult male was instrumented with a radio transmitter mounted on expandable collars to allow for neck swell during the rut.

The locations of all radio-collared animals were obtained by triangulation from the ground or from a fixed-wing aircraft. Deer were located 3-4 times weekly during the spring and fall migrations. During the summer and winter months deer were located 1-2 times weekly. Initial ground locations were made from a vehicle equipped with a Telonics TR-2 receiver with an

attached program/scanner (TS-1) and a base loaded whip antenna. Triangulation bearings were obtained using a hand-held, 2 element antenna (RA-2A; Telonics, Inc., Mesa, Ariz.). Visual sightings of radio-collared deer were made whenever possible. Radio locations and visual sightings of radio-collared deer were marked on U.S. Geological Survey 7.5 and 15 minute series topographic maps.

Fixed-wing flights were conducted once weekly, weather permitting, during the winter and summer months, usually between 0800 and 1000 hours. Flights were conducted from a Cessna 185 at air speeds of 120-180 km/hr.

2) Track Counts

From radio-telemetry studies (Taylor 1988), it was determined that deer migration through the project vicinity occurs generally in a westerly and northwesterly direction. Accordingly, the investigator selected a track count survey route that incorporated dirt roads running in a generally north-south direction through and adjacent to the Project Area, bisecting the direction of spring migration (Figure 4). The route selected was 0.7 miles in length and began approximately 0.4 miles south of the Project Area at the junction of Highway 120 and the Los Angeles Department of Water and Power (LADWP) aqueduct road. In order to increase specificity of data, the 0.7 mile survey route was divided into even length segments recognizable by

flagged local landmarks. Segments 1-4 were located along the aqueduct road; segments 5-7 were located within the Project Area (Figure 4).

On the evening prior to each track count survey, usually around 1700 hours, the road surface of each transect was prepared for counting by grading with a drag made of a 5 foot section of chainlink fence. Dragging erased old tracks enough so that new tracks were visible. During each track count survey, which was conducted the following morning between 0700 and 0800 hours, both transects were surveyed on foot and the number of all tracks observed were recorded along with their direction of travel. Thus, the elapsed time from road preparation to track counting ranged from 14-15 hours. The direction of travel assigned to a track was the actual compass direction in which it was headed, e.g., northeast, southwest, etc. A track headed down the road was followed until it turned off the road; the direction in which it turned was subsequently recorded as its direction of travel.

Recording tracks by road segment was designed for the purpose of providing a quantitative representation of deer movement through each parcel. Recording tracks by direction of travel was designed to allow for separation of localized back-and-forth movements, performed by holdover and resident deer, from migratory movements.

3) Ground Surveys

Ground surveys of the entire Project Area were conducted on a weekly basis to identify any particular important travel routes or feeding, fawning or resting areas. All deer observed during field work were counted, classified by sex and age (adult or fawn) and their locations recorded.

B) OTHER WILDLIFE

In order to determine the presence, relative abundance, and locations of species other than mule deer, ground surveys were conducted on a weekly basis throughout the entire Project Area. Surveys were conducted in a non-systematic way by walking over each parcel and recording the presence of all wildlife species observed. Once an animal was detected, its numbers were determined, and location and activity, e.g., feeding, perching, roosting, etc., identified.

C) RARE PLANT AND VEGETATION SURVEYS

Because Eriogonum ampullaceum typically flowers toward the latter part of July, field surveys for this small annual cannot be conducted until that time. Surveys for Eriogonum ampullaceum will be conducted by Mark Bagley, a local botanist familiar with this species. Prior to surveys for Eriogonum ampullaceum, the phenology of known populations of this species will be examined to facilitate proper identification. Surveys for Eriogonum

ampullaceum will include systematic walking transects located at \leq 50 foot intervals, providing an estimated 25-50% sample coverage of the Project Area. In addition all plant species seen on sight will be identified to at least genus and to the level necessary to ensure that they too are not sensitive species. Those species not readily identifiable in the field will be collected for later determination. A list of all plants encountered on the site will be compiled by vegetation type.

A vegetation map of the entire area was prepared by the investigator. All vegetative communities were identified, their major components quantified, and locations mapped on U.S. Geological Service 7.5 minute series topographic maps.

V. RESULTS

A. Mule Deer

1) Radio-telemetry

a) Seasonal Movements--The annual life-cycle of deer from the Casa Diablo herd consists of four periods: spring migration, summer, fall migration, and winter. The spring migration begins in early April when deer leave the winter range and move in a westerly direction, along the base of the southern escarpment of the Glass Mountains, to a large spring holding area located on the upper Owens River (Taylor 1988). Holding areas are bulbous expansions of the migration corridor located at intermediate elevations where deer congregate for 2-6 weeks during the spring and fall migrations (Bertram and Remple 1977). These areas are

typical of migratory mule deer (Leopold et al. 1951, Russel 1932) and are recognized for their importance in providing nutritional spring forage for does in their third trimester of pregnancy (Bertram and Remple 1977, Bertram 1984, Loft et al. 1984, Kucera 1988). When deer increase their intake of easily and quickly digested types of forage, metabolites are readily absorbed and the net energy available to deer is greatly increased (Short 1981). As a result, deer are able to reverse the negative energy balance acquired over the winter and improve their overall physiological condition (Garrott et al. (1987)).

Another reason for deer delaying spring migration on the upper Owens River holding area may be the effects of weather on plant phenology, which is paramount among factors that influence forage availability (Nelson and Leege 1982). Throughout the eastern Sierra, the availability of succulent forage is related closely to snow conditions in the spring, and these two factors appear to strongly influence the timing and rate of migration from lower to higher elevations. Delaying spring migration several weeks until snow conditions have retreated allows Casa Diablo deer to move quickly through the migration corridor to summer ranges where quality forage is readily available. By arriving on summer ranges at a time when the snowpack has receded and plant phenology is at a later stage, pregnant does with increased energy demands can maintain the high gross energy intake levels they experienced on lower elevation

holding areas.

The timing of spring migration from the winter range was similar in 1986 and 1987, despite extreme differences in snowfall amounts recorded during the winters of 1985-86 and 1986-87. In both years, deer began arriving on the upper Owens River holding area in late March.

During the spring migrations of 1986 and 1987, 19 of 27 radio-collared deer from the Casa Diablo winter range migrated west along the south slope of the Glass Mountains to the holding area located near the upper Owens River (Figure 1) (Taylor 1988a). Of these 19 deer, 13 continued north from the upper Owens River to summer range located in the June Lake, Lee Vining and Lundy Canyon areas. After leaving the upper Owens River, these deer migrated around the south end of the Mono Craters and crossed Highway 395 near the Aeolian Buttes. They then continued in a westerly direction around the north end of Grant Lake to another spring holding area located in the Parker Bench/Sawmill Meadow areas. Deer remained on this holding area for an average of eight days, after which time they dispersed to their summer ranges. Six deer continued north, four of which summered in Lee Vining Canyon, one in Lundy Canyon and one at Lower Twin Lake near Bridgeport. Of the four deer which summered in Lee Vining Canyon, two summered on the Burger Preserve located on the north side of the canyon adjacent to the USFS Lee Vining Ranger Station; one summered on upper Lee Vining Creek near the

Southern California Edison Pool Plant; and one summered on lower Lee Vining Creek immediately adjacent to the Project Area. In addition, 12 non-radioed ear-tagged deer were also observed in Lee Vining Canyon during the summers of 1986 and 1987 (Taylor 1988a).

Assuming that the radioed sample was representative of the entire population of deer wintering in the Casa Diablo deer herd, a reasonable assumption given the trapping methods, about 22% of the Casa Diablo herd moved through or summered within the Lee Vining area during the spring and summer of 1986 and 1987. At that time, the Casa Diablo herd was estimated to have a winter population of about 1500 animals. Thus, it can be estimated that some 300 deer from the Casa Diablo deer herd summered within or migrated through the vicinity of Lee Vining.

Deer arrive on the summer range in May and June, produce fawns in July, and begin fall migration back to the winter range in October. Fall migration is more rapid than that of spring and is usually triggered by the first fall snow storm. The usual pattern is for the first fall storm to deposit snow at the higher elevations of the summer range during the first two weeks of October. This causes many high elevation deer to move to the upper Owens River holding area where they find adequate forage and cover. Then there is often a dry period until late October or early November when more severe storms move deer from the holding area to the winter range.

During the fall migration of 1986, 83% of radio-collared deer migrated from the summer range between 3 October and 8 November. In 1987, 82% of radio-collared deer migrated from the summer range between 11 October and 3 November. In both years, radioed deer spent an average of 10 days (range 1-41 days) during fall migrations on the Upper Owens River holding area (Timothy Taylor, pers. files). Deer were frequently observed on this holding area until mid-November, after which time they moved further east to the winter range. Radio-collared deer monitored for >2 consecutive years (n = 16) displayed strong fidelity to migration routes and holding areas. Deer arrive on the winter range in November and December, breed in December and January, and begin the annual life-cycle again.

2) Herd Characteristics and Management

The Casa Diablo deer herd has experienced extremely poor recruitment rates over recent years. Since 1986, spring fawn:doe ratios have averaged 22 fawns per 100 does. Reproductive studies of the Casa Diablo deer herd conducted in 1987 and 1988 suggest that poor fawn recruitment may be related to high neonatal losses on the summer range. Several factors are believed to contribute to neonatal losses including: 1) conflicts with land uses (i.e., OHV's, livestock grazing, recreation activities, etc.) that are either physically detrimental to deer habitat or decreasing the use of potentially productive deer habitat; 2) increased

predation from mountain lions (Felis concolor) and other predators; and 3) the possible lack of adequate forage on spring and summer ranges as a result of seasonal drought and overgrazing by livestock, which may result in reduced maternal nutrition in pregnant does prior to fawning (Thomas 1985, Taylor 1988b).

Buck to doe ratios have fluctuated over the years within the Casa Diablo herd, and are currently low due to low recruitment. From 1985-1991, post season buck ratios averaged 9.3 bucks per 100 does (DFG files). The most recent population estimate for the Casa Diablo herd based on the best available information is about 1500 animals (Ron Thomas, DFG, pers. comm.)

The primary management goal of DFG for the Casa Diablo herd is to restore deer numbers to levels compatible with existing range conditions and uses (Thomas 1985). According to the Casa Diablo deer herd management plan, this goal can be obtained by maintaining a spring population that is within carrying capacity of the range (2245 deer) (Thomas 1985). Therefore, current objectives are to maintain spring fawn ratios at 50 fawns per 100 does during cycles when the herd population is lower than usual, and to attain and maintain post season buck ratios of 20 bucks per 100 does (Thomas 1985).

3) Track Count Surveys

a) Timing and intensity of migration--Track count surveys were conducted between 17 April and 10 June 1992. A total of 16

surveys were performed during this 54 day survey period. The total number of individual track sets recorded during the survey period was 44. Appendix A, Table 1 presents the total number of tracks counted on each of the 16 surveys. The greatest number of tracks observed on any one survey was 12, on 5 May, after which there was a gradual, uneven diminution in deer activity through mid-June. There were no tracks recorded on surveys performed on 17, 20 and 23 April and 16 and 26 June.

Appendix A, Table 1 presents the breakdown of tracks counted by direction of travel. Of the 44 track sets recorded, 23 sets were headed north and west; 21 were headed south and east. For the purpose of this investigation, tracks crossing the survey route to the north and west are in the direction of spring migration; those to the south and east are opposite. Therefore, the net number of tracks crossing the route to the north and west are migrants while holdover deer or summer resident deer are represented by tracks crossing the route to the south and east.

The objective of this analysis is to treat the 16 surveys as a 16 day sample extending over a survey period of 54 days (17 April-10 June). Therefore, because the 16 surveys covered 29.6% of the 54 day survey period ($54/16 = 29.6\%$), the estimated number of migrants calculated to have moved directly through or adjacent to the Project Area is 77.6 ($23/.296$ or 23×3.375). This number will likely be low since errors in track counting (i.e., missed

tracks) may have occurred and daytime migrants are not included.

Now that a crude estimate of the number of migrants has been obtained, the next step is to calculate the amount of holdover or summer resident deer use of project vicinity during the 54 day survey period. Since each migrant is considered to be an individual deer, the number of holdover or resident deer can be stated as an individual deer for that day. This number is expressed in deer-days use. A deer-use day is the amount of use of any area made by one deer over a 24-hour period (Dasman 1981).

To calculate deer-days of holding over, the number of migratory tracks (i.e., deer that moved toward the summer range) must be subtracted from the total tracks, and the difference divided by 2 to account for holdover deer crossing the survey route and subsequently returning. These calculations are shown in Appendix A, Table 2, where the total number of migrants in column B (23.0) is subtracted from the total number of tracks in column A (44) to derive the total number of nonmigratory tracks in column C (21). Dividing 21 in half to account for back-and-forth movements, yields a total 10.5 holdover deer (column D).

By comparing the migrants (Appendix A, Table 2, column B) with holdover deer (Appendix A, Table 2, column D), it can be seen that for every migrant, an average of 2.2 deer are holding over (sum of column D divided by sum of column B). Since the 16 surveys covered 29.6% of the survey period, a total of 35

($10.5 / .279$ or 10.5×3.375) deer days are represented by holdover deer (Appendix A, Table 2, column D total). A quick check of column D shows that 2.5 deer is the highest daily number of nonmigratory deer, and this is the absolute minimum number of deer holding over. Thus, each deer would have to remain in the project vicinity for about 14 days to account for the 35 deer days of holdover. At the other extreme, if each deer remained in the project vicinity for 1 day, then 35 deer would be involved. The actual number deer holding over between these two extremes cannot be determined.

Since one migrant is equivalent to one deer-use day, there was an estimated total of 113 (sum of columns B + D) deer-use days of the project during the spring survey period (sum of column E).

b) Locations of deer activity--Appendix Table 3 presents the total number of tracks sets counted in each of the seven survey segments. Deer activity was most concentrated in segments 1-4, located to the south of the Project Area. A total of 34 track sets or 77% of all tracks observed, were recorded in these 4 segments. Nineteen (43%) of all track sets observed were recorded in segment 4, located on the LADWP aqueduct road immediately south of the southern border of Parcel 4.

Approximately 23% of deer activity was recorded within the limits of the Project Area (segments 5-7). Most of this activity

was restricted to segment 5, located in the upper southwest portion of Parcel 1 (Figure 3). Only 4 (9%) track sets were recorded in segments 6 and 7, located at the extreme northern end of the route in the central portion of Parcel 1.

Appendix Tables 4a and 4b present a breakdown of track count data for segments 1-4, located south of the Project Area, and segments 5-7, located within the Project Area. From Appendix Table 4a (column B), it can be seen that the total number of migrants estimated to have crossed segments 1-4 during the survey period was 61 (18×3.375) or 78% of the total number of migrants estimated to have crossed the entire survey route. It can also be seen that the number of nonmigrants estimated to have crossed segments 1-4 was 30 (9.0×3.375) or 86% of the total number of nonmigrants estimated to have crossed the entire survey route (Table 4a, column D). In addition, segments 1-4 received an estimated 88 deer days of use during the 54 day survey period or 78% of all total deer use recorded (column E).

Within the Project Area (segments 5-7), a total of 17 migrants and 8.5 nonmigrants, or 22% and 24% of the total number of migrants and nonmigrants recorded, respectively, were estimated to have crossed the survey route (Appendix Table 4b, columns B and D). In addition, the Project Area received a total of 25 deer days of use during the 54 day survey period or 22% of all total deer use recorded (column E).

There were no deer trails observed within the Project Area

boundaries. However, some light trailing does occur above the LADWP aqueduct road, along the north slope of the mountain located to the immediate south of the Project Area.

The fact that deer tracks were observed during the last three surveys conducted on 2, 5 and 10 June, indicates that the project vicinity may be used by a few summer resident deer. The direction of movement of these tracks suggests that the Project Area, along with Lee Vining Creek and the mountain located to the immediate south, compose a portion the summer home range of these deer.

B. Other Wildlife

No federal or state-listed or candidate rare, threatened or endangered species were observed during surveys of the Project Area. Nor were any species listed on the California Department of Fish and Game Natural Diversity Data Base list of "Special Animals". However, the Project Area does provide potential habitat for a few "Special Animals" including the American Badger (Taxidea taxus) and the Western White-tailed Hare (Lepus townsendii townsendii). Both species are known within the vicinity of the Project Area. The American Badger prefers open areas with sandy soils for digging burrows and pursuing rodents, its main prey source, while the Western White-tailed Hare prefers open brushlands and meadows.

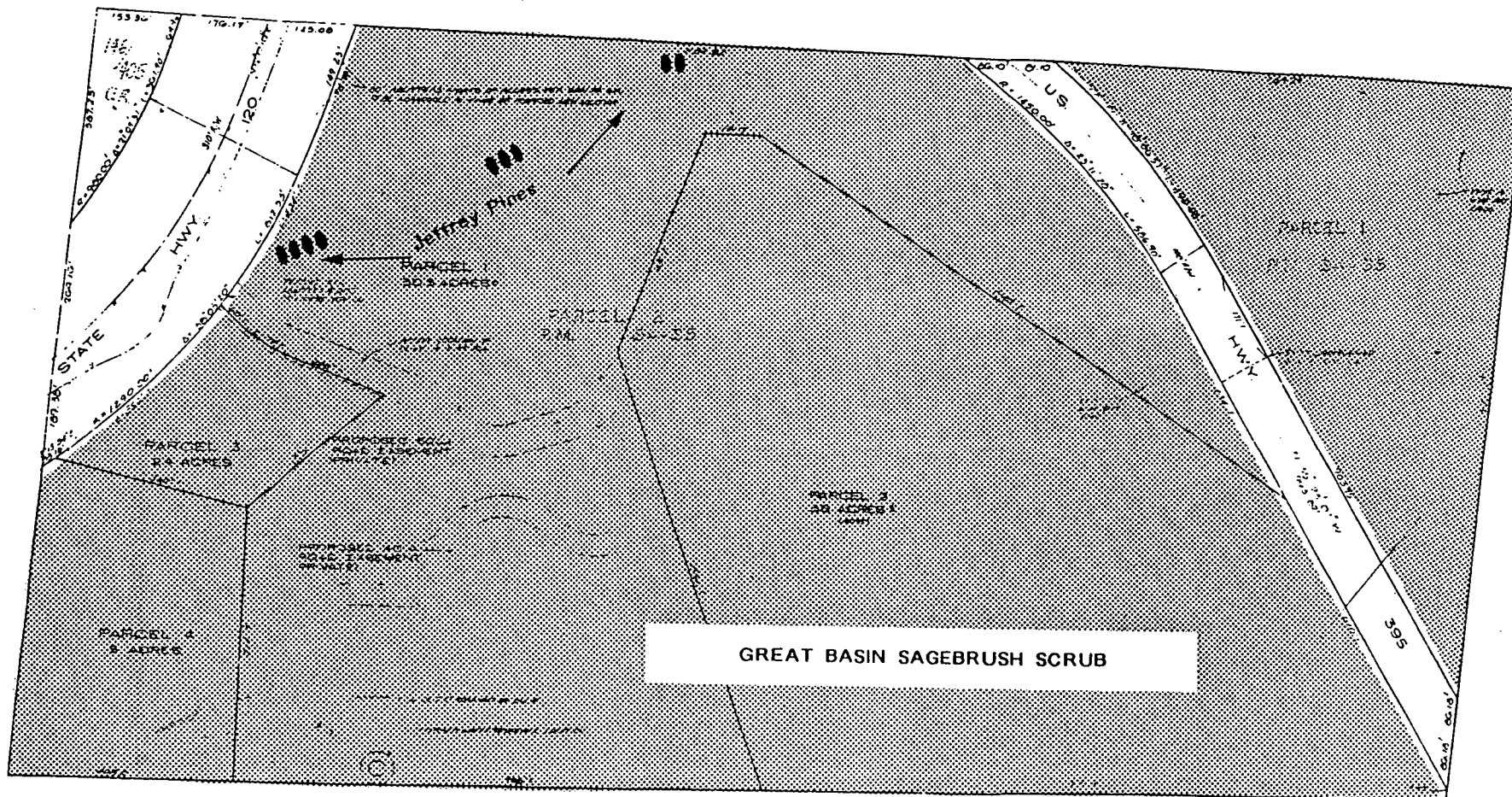
The only large carnivore positively detected within the

project vicinity was the coyote (Canis latrans). Black-tailed Jackrabbits (Lepus californicus), Chipmunks (Tamias sp.), Golden-mantled ground squirrels (Spermophilus lateralis) and California ground squirrels (Spermophilus beecheyi) were all commonly observed in the Project Area. A list of all mammal species observed or expected to occur in the Project Area is provided in Appendix Table 5.

The Prairie Falcon (Falco mexicanus), a California species of special concern, and the Golden Eagle (Aquila chrysaetos), a California Species of Special Concern and a Fully Protected Species, may occasionally forage over the area. A list of all birds observed or expected to occur within the Project Area is presented in Appendix Table 6.

C. Vegetation Types

The entire Project Area is covered by a fairly uniform stand of Great Basin Sagebrush Scrub (Figure 5). This was a fairly tall stand (2-3 feet) and dense scrub (estimated at 50-70% shrub cover) dominated by antelope bitterbrush (Purshia tridentata) and scattered big sagebrush (Artemisia tridentata), desert peach (Prunus andersonii), rubber rabbitbrush (Chrysothamnus nauseosus), and horsebrush (Tetradymia comosa). A few scattered Jeffrey pine (Pinus jeffreyi) (8 trees) and 2 lodgepole pine (Pinus contorta) occur on the northwest corner of Parcel 1 (Figure 5). Additionally, a few Jeffrey pine and pinyon pine



TIOGA INN
for: Dennis Domaille

Figure 5. Vegetation map showing locations of the Great Basin Sagebrush Scrub type in the proposed Tioga Inn project Area.

(Pinus monophylla) occur on the steep northwest slope of Parcel 4. The most common of the scattered herbs include needlegrass (Stipa sp.), squirreltail (Sitanion sp.), and Indian ricegrass (Oryzopsis hymenoides). Appendix Table 7 provides at least a partial list of plant species occurring in the Project Area. Other species may be added to this list during surveys conducted for Eriogonum ampullaceum.

VI. DISCUSSION

Impending development of the Tioga Inn and associated loss of habitat has created some concern for the future of mule deer which migrate through the area. From track count data, it was estimated that the Tioga Inn Project Area and adjacent vicinity received 113 deer days of use during the spring migration period. About 75% of this deer use, which equates to anywhere from 63 to 88 deer (61 migrants and 2-27 nonmigrants), is concentrated to the immediate south of the Project Area. There was only an estimated 25 deer days of use within the Project Area proper, the equivalent of about 17 migrants and anywhere from 1-8 nonmigrants.

Habitual behavior, topographic features, security cover, and human intrusion are factors which likely govern deer distribution within the Project Area and surrounding vicinity. The role that habitual behavior plays in deer migration has been widely

documented in the eastern Sierra Nevada (Kucera 1988, Taylor 1988a, Taylor 1991) and other areas of California (Bertram and Remple 1977; Loft et al. 1989). Radio-collared deer from the Casa Diablo herd monitored for 2 or more successive years displayed strong fidelity to individual summer ranges and migration routes by returning to the same ranges year after year (Taylor 1988a). This is largely due to topography and landscape and the existence of natural travel lanes that become established trails.

Track counts and ground surveys indicate that as deer migrate west toward Lee Vining Canyon, they contour the northern side of the ridge located immediately south of the Project Area (Figure 3). This east-west orientation along the base of the slope is the likely reason deer intercept the track survey route in the general vicinity of segment 4, which begins just south of the Project Area's Parcel 4.

Hiding cover is a feature of habitat that provides an animal security or a means to escape predators or harassment (Skovlin 1982). For mule deer, hiding cover is generally recognized as some form of vegetation, such as a brushy thicket, but may also be a drainage corridor. The pinyon pine (Pinus monophylla) forest which occupies the lower north and west slopes of the ridge located just south of the Project Area (above the LADWP aqueduct road), likely provides migrant deer with adequate security cover as they move along the lower portion of the

escarpment. With the exception of a few fragmented clumps of 3-5 foot high Sagebrush Scrub vegetation, the Project Area appears to be lacking adequate security cover for deer.

In addition to security cover, the Pinyon Pine type also provides habitat edge effect where it contacts the Sagebrush Scrub type just south of segment 4. An abrupt ecotone such as this likely furnishes deer with a greater variety of food and cover along the contact zone.

Because of the location of the Project Area near the intersections of Highways 120 and 395 (the gateway to Yosemite), human intrusion is rampant. Tourists seeking an unobstructed view of Mono Lake were often observed walking or driving roads located within and adjacent to the Project Area, especially within Parcel 1 which is adjacent to the Highway 120 pullout. This high level of human intrusion, when coupled with poor security cover and lack of habitat edge effect, likely makes the lower, more accessible portions of the Project Area unattractive to deer.

It is appropriate to emphasize that track counts provide a very crude estimate to deer numbers and usage throughout the Project area and surrounding vicinity. This is primarily due to problems associated with weather and poor tracking substrate which prevent track registration. According to Salwasser (1976) and Connolly (1981), track counts may underestimate total numbers of deer moving through an area for several reasons: rain, sleet,

snow, or wind may prevent track registration; during periods of heavier movement some tracks may obliterate others.

Conversely, track counts can also overestimate animal numbers because a potential exists for multiple counts of the same animals tracks. This source of error is impossible to quantify especially for holdover and summer resident deer because it may be the same individuals holding over for an unknown number of days. For these reasons, estimates of deer abundance provided in this report are meant only as approximations of relative deer use within the Project Area and surrounding vicinity. Furthermore, the precise number of deer using the project area at one time is not important; what matters is the estimate of magnitude. Track count data indicates that the Project Area and vicinity was used by approximately 100 deer during the 1992 spring migration.

VII. ENVIRONMENTAL IMPACT ANALYSIS

A. INTRODUCTION

Impending development of the Tioga Inn has initiated concerns with respect to potential adverse impacts on migratory mule deer and other wildlife. Concerns regarding mule deer were based on knowledge obtained from a radio-telemetry studies of the Casa Diablo deer herd (Taylor 1988a) which indicate that approximately 300 deer migrate through the project vicinity. A site review of the Project Area conducted by White (1984) was considered by CDFG and other agencies to be deficient in data on the timing, amount and specific locations of migratory deer use. In addition, the White (1984) study did not address potential environmental impacts of the proposed development or provide mitigation measures to avoid or minimize impacts. The present investigator was subsequently contracted to update previous work and provide an assessment of migratory deer use of the area.

This section describes the potential environmental effects of the Tioga Inn on plant and animal communities occurring within the Project Area. Impact assessment will include an analysis of potential impacts of the project by describing activities associated with each phase of the proposed project description that may have a direct, and indirect significant effect on biological resources.

Accompanying the impact assessment will be mitigation measures which would avoid or minimize potentially adverse impacts to insignificant or acceptable levels. This section also identifies those significant environmental effects which cannot be avoided if the project is implemented, including those effects which can be mitigated but not to a level of insignificance. The discussion of impacts to biological resources also include discussions pertaining to cumulative impacts or the incremental impact of the project when added to other past, present and reasonably foreseeable future actions.

B. IMPACTS TO BIOLOGICAL RESOURCES

1. Loss of Native Vegetation and Wildlife Species

Construction of the proposed Tioga Inn will directly impact existing Great Basin Sagebrush Scrub vegetation, a significant environmental effect that cannot be avoided. However, the proportion of acreage taken out of production compared to the remaining acreage of Great Basin Sagebrush Scrub vegetation in the Mono Basin is very low. Removal of existing vegetation will result in decreased biomass production from replacement of vegetation by parking lots, roads and buildings. Vegetation removal would reduce the amount of suitable habitat for Sagebrush Scrub dependent species, since food and shelter resources provided by vegetation are no longer present. As a result, there would be a corresponding reduction in diversity and abundance of Sagebrush Scrub dependent species, both on the development site and in adjacent natural areas (Howald 1982). Most adversely effected would be animals having relatively small home ranges, such as small mammals and birds. Local abundance of common and typical wildlife species, e.g., chipmunk (Tamias sp.), ground squirrel (Spermophilus sp.) and Brewer's sparrow (Spizella breweri), will decrease, since development results in loss of high quality habitat. In most cases, it is not possible for displaced animals to successfully establish themselves in nearby natural areas, since these

areas already contain as many animals as they can support (Howald 1982). If the area impacted by development is relatively small, larger wide-ranging species such as mule deer, coyote and mountain lion, can often find resources on adjacent ranges. However, when animals attempt to move, greater competition for scarce resources occurs, and weaker individuals gradually die out, resulting in decreased population size (Ingles 1965). Species diversity can also be reduced by local extirpation of common and typical species. This can occur when development eliminates or prevents the use of an essential resources in scarce supply, e.g., isolated thickets of vegetation required as hiding cover for mule deer fawns.

Natural plant revegetation within disturbed areas can be expected to develop extremely slow due to severe climate and poor soils. Secondary succession in disturbed areas would probably initially become dominated with a mixture of herbaceous species (grasses and forbs) and weeds. It is likely that shrub species would eventually reestablish on these sites provided that the soil resources were left intact.

Increased erosion potential on steep slopes within the Project Area would likely occur as a result of vegetation removal. The intensity of erosion would depend on a number of factors including volume and intensity of precipitation, relative slope of terrain, and soil condition (Owen 1975).

The potential impacts to wildlife from vegetation removal associated with the proposed project include:

- * Over utilization of adjacent habitats
- * Decreased availability of forage and cover (e.g., loss of Purshia as browse for mule deer)
- * Adverse physiological effects and reduce reproductive potential
- * Interference or alteration of migration routes and movement patterns
- * Reduced wildlife numbers

2. Impacts From The Spread of Weeds

Natural areas characterized by low levels of disturbance and relatively harsh climates, such as the Mono Basin, typically support few weed species (Howald 1982). However, soil disturbance over large areas, in conjunction with overgrazing from domestic livestock and increased traffic, results in the decline of native plant species (decreasers) and encourages the spread of more tolerant weed species (invaders) into the

area. There are numerous plants from throughout the world that have been introduced into California. These plants have the ability to survive without cultivation (Raven and Axelrod 1977). The presence of weeds can inhibit regrowth of native vegetation and also alter the availability of food supplies for herbivores (Howald 1982). In addition, some species of weeds also produce toxins that can be debilitating to some animals (Cronin et al. 1978).

3. Impacts From Free Roaming Pets

A typical problem associated with most development located in rural areas is harassment of wildlife by domestic pets. Free roaming domestic dogs can create an intolerable stress to deer (Reed 1981) and other wildlife, including rodents and small mammals (Most 1981). Free roaming house cats can interfere with the courtship and feeding of birds and small mammals (Most 1980). Free roaming pets are a significant environmental effect which can be mitigated, but not reduced to a level of insignificance.

The potential impacts to wildlife from free roaming domestic pets associated with an increased population base include:

- * Permanent decreased use or temporary desertion of traditional habitat
- * Shift of home range and change in distribution
- * Interference and alteration of migration routes
- * Reduced wildlife numbers
- * Reduced feeding efficiency
- * Use of more marginal habitats
- * Increased stress and energy expenditure
- * Decreased productivity

4. Impacts From Noise and Lights

Noise generated during construction activities and operational phases of the project is a form of human intrusion that can adversely effect wildlife behavior (Howald 1982). Many animals respond to frequent noise disturbance by moving further from its source, resulting in lower wildlife diversity and abundance and crowding of adjacent natural areas (Howald 1982). Some species, however, which are less mobile or occupy smaller home ranges (e.g., small mammals) cannot readily vacate an area subjected to frequent noise disturbance. This can influence an individuals ability to forage efficiently and successfully rear young.

Night lighting, like noise, typically accompanies

both construction and operation phases of development. The collective glow of lights associated with hotel, restaurant, mini-mart, and employee housing facilities will likely illuminate areas well outside the Project Area boundaries. This will inhibit nocturnal use of these adjacent areas by some species, (e.g., mule deer and owls). With respect to impacts to wildlife resources, noise and lighting are significant environmental effects which can be mitigated to a level of insignificance.

Collectively, potential impacts to wildlife from noise and lights associated with the proposed development include:

- * Permanent decreased use or temporary desertion of traditional habitat
- * Shift of home range and change in distribution
- * Interference and alteration of migration routes
- * Reduced wildlife numbers
- * Reduced feeding efficiency
- * Use of more marginal habitats
- * Increased stress and energy expenditure
- * Decreased productivity

5. Impacts to Mule Deer

There was an estimated 88 deer-days of use (75% of all deer use) of segments 1-4 during the 54 day survey period. As many as 60 migrants may have crossed this portion of the track survey route, illustrating its relative importance as a migration corridor.

The Project Area received an estimated 25 deer-days of use during the 54 day survey period. This relatively light amount of use indicates that the Project Area itself is of little importance to the Casa Diablo herd as a migration corridor, at least during the spring migration period. It may, however, be an important foraging area for a small number of summer resident and holdover deer.

a. Direct and Indirect Impacts

The construction and operation of the Tioga Inn within the proposed Project Area could impact deer use of the project vicinity in a variety of ways. The following discussion categorizes potential direct (primary), indirect (secondary) and cumulative effects to mule deer resulting from human intrusion, habitat removal, habitat alteration, and direct mortality. For clarity, direct, or primary impacts, are environmental effects resulting from development due to

construction and operation activities (e.g., loss of foraging and fawning habitat for deer) (Comer 1982). Indirect (secondary) environmental effects typically occur outside the Project Area as the result of increased permanent or seasonal population growth within the community, and do not readily show a cause-effect relationship (Dodge 1992). Examples of indirect effect impacts include increased deer-vehicle collisions, increased physiological stress and lowered productivity in migratory and resident deer, and permanent decreased use or temporary desertion of traditional habitat due to human intrusion. Cumulative effects are the composite of all environmental effects (direct and indirect) for the region resulting from past, present and reasonably foreseeable projects that are not related to the proposed project.

Direct and indirect impacts that would occur within and adjacent to the Project Area as a result of habitat removal, habitat alteration, human intrusion, and direct mortality, could adversely effect the herd segment which migrates through the area, particularly those animals (2-25 deer) which currently use the Project Area. Secondary impacts that would mostly be independent of the Tioga Inn and that would occur outside the proposed Project Area as a result of project generated human growth, e.g., dog harassment, increased deer-vehicle collisions, could adversely effect that portion of the Casa Diablo herd which migrates to the immediate south of the Project Area. Potential significant adverse impacts to this herd segment could have deleterious effects to overall herd productivity by contributing to the already poor recruitment rates currently experienced by the Casa Diablo deer herd.

1) Human Intrusion: Reflects disturbances to deer behavior which would render undisturbed habitat immediately adjacent to the Project Area unsuitable for deer without physically impacting habitat (indirect impact). Human intrusion could result from construction and maintenance activities; and visual stimulus, noise, domestic dogs, increased human activity, and increased traffic associated with an increased permanent and seasonal (summertime) population.

Potential Impacts:

- * Permanent decreased use or temporary desertion of traditional habitat: Construction activities (e.g., noise generated by heavy equipment), could displace migrant, holdover and summer resident deer which currently use the Project Area and immediate vicinity by forcing animals further upslope. This response

would constitute a significant environmental effect since as much as 3% of the Casa Diablo herd may be involved.

- * Increased use of marginal habitat types: Migrant, holdover and summer resident deer which use habitats within and adjacent to the Project Area, could be forced to use less suitable habitat for migration, foraging and fawning (e.g., does which fawn near Lee Vining Creek could be forced to more marginal fawning habitats located further from Lee Vining Creek, an area which provides adequate food, cover and water).
- * Alteration/interference of migration routes and shift of home ranges: Deer which currently migrate through the Project Area vicinity could abandon traditional habitats due to construction related activities (e.g., noise from heavy machinery) and operational phases (night lighting, human activity, dogs, etc.)
- * Increased energy expenditure and stress: Increased physiological stress could result from increased energy expenditures associated with use of more nontraditional habitats for migration and summer range.

- 2) Habitat Removal: Reflects permanent physical reduction in the amount of available habitat within the Project Area due to the placement of facilities (primary effect), and outside the Project Area due to increased community growth (secondary effect). Considered to be a significant environmental effect.

Potential Impacts:

- * Over utilization of adjacent habitat: Deer displaced from the Project Area (direct impact) and adjacent migration routes (indirect effect) could concentrate activity outside the project's zone of influence. This could create excessive crowding and increased competition for resources, which could, over time, result in over utilization of adjacent habitats. This response would constitute a significant environmental effect.
- * Declines/elimination of forage and cover availability: Reductions in available deer habitat due to placement of facilities and increased community growth.
- * Alteration/interference of migration routes and shift of home ranges: Deer which currently migrate through or summer within the project vicinity could abandon traditional habitats.

- * Adverse physiological effects and reduced reproductive potential: Forage loss, alteration of migration routes, and over utilization of habitats could result in reduced productivity in migrant, holdover, and summer resident deer potentially displaced by the proposed development.

- 3) Habitat Alteration: Represents change in plant species composition and structural characteristics due to the growth inducing effects of development.

Potential Impacts:

- * Change in availability of forage and cover within the Project Area and adjacent migration route.
- * Change in utilization of adjacent habitats.
- * Change in animal reproductive success: Increased physiological stress from habitat alteration from placement of facilities (direct impact) and increased community growth (indirect impact) resulting in decreased productivity.

- 4) Direct Mortality: Losses of deer due to construction activities as a result of increased deer-vehicle collisions created by utilization of alternate migration routes, e.g., across Route 395 or Route 120. Considered to be a significant environmental effect.

Potential Impacts:

- * Decreased deer numbers.
- * Decreased prey base for predators, mainly coyotes and mountain lions.

b. Cumulative Impacts

Comer (1982) defined cumulative effects as "the totality of interactive impacts over time; or the sum incremental synergistic effects on fish and wildlife habitats caused by all reasonable future actions over time and space". Cumulative impacts for an individual project may be minor, but collectively significant.

There are several reasonably foreseeable projects proposed on Casa Diablo deer herd migration routes and seasonal ranges which could have cumulative impacts to the Casa Diablo deer

herd. These projects include:

- * The Arcularius Ranch located on the upper Owens River holding area is planning a substantial expansion of their 1,080 guest ranch facility. The upper Owens River holding area is used by approximately 70% of the Casa Diablo deer herd during annual spring and fall migrations. For this reason, the holding area appears to be an extremely important component of the Casa Diablo deer herd's year-round range and likely plays an integral role in the productivity of this herd. Habitat degradation and human intrusion within the holding area could contribute to declining recruitment rates by lowering the ability of deer to overcome nutritional stress acquired over the winter.
- * The California Department of Transportation (Caltrans) is proposing a highway expansion from 2-4 lanes within the vicinity of Sandhouse Hill, located between the south June Lake Junction and approximately two miles south of Lee Vining. Telemetry data (Taylor 1988a) and track count data (Taylor 1990) indicates that between 50% and 66% of the Casa Diablo herd crosses this section of highway during annual spring and fall migrations. Therefore, the proposed highway expansion could result in additional direct mortality of deer due to the increased risk of deer-vehicle collisions.
- * Mammoth Mountain Ski Area has proposed development of the Hartley Springs, White Wing Mountain and San Joaquin Ridge areas for alpine skiing. These areas provide important migration and summer range habitat for the Casa Diablo herd.

Other considerations regarding migratory mule deer which should be addressed in the impact analysis include:

- * The Casa Diablo deer herd is currently experiencing low recruitment rates primarily as a result of a prolonged drought.
- 1) Human Intrusion: Reflects disturbances to deer behavior which would render undisturbed habitat immediately adjacent to the Project Area unsuitable for deer (indirect impact). Human intrusion could result from construction and maintenance activities; and visual stimulus, ambient noise, domestic dogs, increased human activity, and increased traffic associated with an increased permanent and seasonal (summertime) population.

Potential Impacts:

- * Permanent decreased use or temporary desertion of traditional habitat: Construction activities could displace migrant deer which currently use the area immediately south Project Area by forcing animals further upslope. This response would constitute a significant environmental effect since as much as 3% of the Casa Diablo herd may be involved.
 - * Increased use of marginal habitat types: Migrant, holdover and summer resident deer which use habitats south of the Project Area could be forced to use less suitable habitat for migration and foraging.
 - * Alteration of migration routes and shift of home ranges: Deer which currently migrate and summer adjacent to the Project Area could abandon traditional habitats.
 - * Increased stress and energy expenditure
- 2) Habitat Removal: Reflects permanent physical reduction in the amount of available habitat due to unrelated, reasonably foreseeable projects. Considered to be a significant environmental effect.

Potential Impacts:

- * Declines/elimination of forage and cover availability and over utilization of adjacent habitats: Deer displaced from the increased growth could concentrate activity outside the project's zone of influence. This could create crowding and increased competition for resources, which could, over time, result in over utilization of adjacent habitats. This response would constitute a significant environmental effect.
 - * Interference to daily movement patterns of holdover and summer resident deer: As proposed, the locations of facilities could alter movement patterns of summer resident and holdover deer.
 - * Adverse physiological effects and reduced reproductive potential: Forage loss could result in reduced productivity of summer resident deer potentially displaced by the proposed development.
- 3) Habitat Alteration: Represents change in plant species composition and structural characteristics due to the

growth inducing effects of unrelated, reasonably foreseeable development projects.

Potential Impacts:

- * Change in availability of forage and cover within the migration route.
- * Change in utilization of adjacent habitats.
- * Change in animal reproductive success: Increased physiological stress from increased community growth resulting in decreased productivity.

- 4) Direct Mortality: Losses of deer due increased deer-vehicle collisions on Mono County roadways.

Potential Impacts:

- * Decreased deer numbers.
- * Decreased prey base for predators, mainly coyotes and mountain lions.

C. MITIGATION MEASURES

Direct, indirect, and cumulative significant environmental effects to mule deer and other wildlife that would occur as a result of the proposed Tioga Inn development are attributed to human intrusion, permanent losses and alteration of existing habitat, and direct mortality. Mitigation measures designed to minimize the magnitude of a significant environmental effect or reduce impacts to a level of insignificance are presented below.

1. Construction Activities

During spring migration, mule deer does in their third trimester of pregnancy are experiencing increased nutritional demands due to accelerated fetal development and migration to the summer range. Mule deer does from the

Casa Diablo herd typically breed in late October and early November and give birth to fawns in late June and early July (Taylor 1988b). Noise, lights and other forms of human intrusion associated with construction activities could disturb pregnant does migrating through the project vicinity in the spring, resulting in increased stress and reduced reproductive success.

Impacts from construction activities will be minimized through the following measures:

- * Construction will be scheduled to minimize disturbance to migratory deer during the spring and fall migration/holding periods. Track count data indicates that in the spring deer arrive in the project vicinity as early as late April. The fall migration period can extend from mid-September through mid-December depending on the severity of weather. Therefore, construction activities within Parcel 4 should be scheduled during the interim period between spring and fall migration periods (1 June-15 September).

The objective of this measure is to minimize disturbance to migrant deer which use the project vicinity, especially the area south of Parcel 4, during the spring and fall holding/migration periods. Restricting the timing of construction to the interim period between spring and fall migrations will reduce, but not to a level of insignificance, direct human intrusion impacts associated with construction activities. However, this measure will not minimize construction associated impacts to summer resident deer. Nor will it reduce impacts to migratory deer in the event of an early migration (prior to 15 September).

- * Construction will be conducted during daytime hours in order to reduce disturbance to nocturnal wildlife species, particularly migratory mule deer.

2. Control of Domestic Dogs.

Many researchers have documented cases of deer mortality from dog attacks (Lindsale and Tomich 1953, Boyles 1976, Moser 1975, Dasmann and Taber 1956). For this reason domestic dogs would be controlled within the Project Area during both construction and operation phases. Mono County leash laws would be enforced to the greatest extent possible through adequate signing and regular patrol. Hotel guests and all patrons will be provided an enclosed area located away from the migration corridor to walk pets. Tioga Inn employees will be required to keep dogs in an enclosed area. A full-time project employee will likely be needed to successfully enforce this measure.

Implementation of this measure will minimize direct and indirect significant adverse impacts associated with human intrusion, and direct and indirect mortality, injury and harassment of deer and other wildlife from free roaming domestic dogs.

3. Noise and Lights

- * Vegetative Screening--Screening cover will be established on the south, west and east sides of Parcel 4 where employee housing is proposed. Screening cover should be planted in a 20 foot wide band consisting of an inner strip of native shrubs and an outer strip of trees. This design will effectively reduce illumination and noise into the migration corridor, screen employee houses from migrating deer, and provide additional wildlife habitat. Smith and Conner (1989) suggested that deer avoidance of structures declines with the amount of vegetation adjacent to them. Vegetative screening also has the function of sound pollution abatement, because it is particularly effective in absorbing high frequency sounds (Owen 1975). Visual screening will not be effective until a number of years after its implementation, when plants are large enough to provide a visual barrier. Therefore, the use of larger planting stock is recommended in order to accelerate this process. Fast growing tree species that may work well as screening cover and provide migrating and holdover deer with additional forage once they become established include; poplars (Populus sp.), alder (Alnus sp.), and willow (Salix sp.). Willow and alder are hydrophilic species that require copious amounts of water in order to survive. For this reason, it will be necessary to establish an irrigation system to ensure both rapid growth and longevity of these species. Poplars require less water than willows and alders, but still need mesic soils in order to survive. Slower growing endemic species requiring less water include: Jeffrey pine (Pinus jeffreyi), single-leaf pinyon pine (Pinus monophylla), western juniper (Juniperus occidentalis) (Appendix Figure 8).

Regardless of the tree species used as screening cover, it will be necessary to protect the terminal shoots of young individual trees from deer, rodents and domestic livestock. Several types of individual tree barriers have been designed to protect tree leaders, allowing them to grow quickly beyond the reach of deer. Wire cages have been widely used (Longhurst et al. 1962, Mealy 1969), but are expensive and must be removed as enclosed trees grow. Yawney and Johnson (1974) found that a 1.52 m (5 ft) wire fence surrounding seedlings worked well to protect them from deer. Vexar tubing (E.I. DuPont de Nemours and Company, Inc.) has been successful in protecting Douglas fir seedlings (Campbell and Evans 1969) and oak seedlings (Lasher and Hill 1977).

- * Impacts from night lighting can also be minimized by avoiding unnecessary lights and unnecessarily bright

lights. Lights which could potentially illuminate the migration corridor should be avoided or adequately screened.

Implementation of these measures would minimize direct and indirect significant adverse impacts associated with human intrusion resulting from employee housing and commercial lighting.

4. Fencing.

Fencing, depending on the type and location, can have indirect significant adverse effects on deer by interfering with migration and the use of seasonal habitats. Fencing can also result in direct mortality of deer (Urness 1976, Papez 1976). Therefore, any wire fences, except those required for retaining pets, will be prohibited. Any other impediments to deer movements such as spoil piles, open ditches, and excessive cut-fill slopes will be minimized to the greatest extent possible. For example, care must be taken to avoid leaving ditches or trenches open for a prolonged period of time since they can be hazardous to migrating deer and other wildlife.

5. Utilize Existing Dirt Roads

Access and maintenance roads will be designed to follow existing dirt road alignments whenever possible to avoid unnecessary removal of additional vegetation. This would minimize significant environmental effects associated with habitat loss and alteration.

6. Establish Driver Warning Signs

Establishing driver warning signs along Highway 395 and Highway 120 (west), would minimize significant environmental effects associated with direct mortality from deer-vehicle collisions.

7. Controlling Vehicle Access

Limiting vehicular access within the migration corridor immediately south of the Project Area would minimize significant environmental effects to deer resulting from increased human intrusion.

8. Maintain Existing Native Vegetation

Vegetative disturbance due to construction activities would be confined only to those areas designated for development to protect surrounding vegetation. In this way, landscaping needs are minimized by retaining the

maximum amount of native vegetation possible. The pad cleared for a particular building usually alters more habitat than just the building itself. Development designers are encouraged to use techniques to reduce the area altered by pads and drives. This could minimize significant environmental effects to deer associated with habitat loss and alteration.

9. Revegetation with Native Plants.

Revegetation of disturbed areas shall be conducted using native plants as soon as possible following construction. This could reduce significant environmental effects to deer associated with habitat loss and alteration. A list of native plants appropriate for revegetation are provided in Appendix Figure 8.

10. Control of Weeds

At the Tioga Inn project site, the spread of weeds can be deterred by revegetating disturbed sites as soon as possible, using mulches free of weed seeds, and covering stockpiled topsoil (Dodge 1992).

11. Control of Erosion

Unfortunately, many development projects are associated with extensive soil erosion largely because of either lack of planning or carelessness. For example, studies by the Soil Conservation Service (USDA 1970) have shown that erosion of soils on land used for development projects (highways, buildings, homesites, etc.,) is 10 times greater than on land in pasture and 2,000 times greater than on land in timber. Erosion control measures that might be effectively implemented at the construction site include:

- * No more vegetation should be removed from the site than is absolutely necessary for immediate construction purposes.
- * Steep road cuts should be revegetated as soon as possible after construction.
- * Disturbed areas should be reseeded as soon as possible after construction with native vegetation.
- * Temporary catch basins may be constructed to intercept run-off water and trap its sediment load. After construction has been completed and revegetated, the basins may be removed and the area graded and blended into the surrounding landscape.

- * Boards can be arranged in rows across steep areas to serve as temporary terraces, thus establishing soils and allowing seeding (USDA 1970).

12. Mitigation Monitoring.

Several mitigation measures will require monitoring. California law (PRC 210801.6) requires that mitigation monitoring be conducted. A plan will be developed to comply with measures outlined in the mitigation plan.

VIII. REVIEW OF LITERATURE RELEVANT TO THE PROPOSED PROJECT

According to Wallmo et al. (1976) and Bormann (1976), rural housing developments in deer habitat with their accompanying increases in automobiles, snowmobiles, off-road vehicles, dogs and human activity, affect large areas beyond the actual boundaries of the development. As a result, the overall effect of these encroachments on mule deer habitat is greater than indicated by analysis of the actual area involved. Disturbances associated with housing developments on and adjacent to deer winter range significantly alter, reduce or eliminate deer use of an area (Mackie and Pac 1980). Smith and Conner (1989) reported that a one-acre loss in habitat can equate to a 2.5 acre loss in deer habitat due to significant reductions in deer use around the area developed. Smith and Conner (1989) also suggested that when a house is built on deer range, deer affected by the house redistribute their use to just outside the zone of influence of the house. This could result in over utilization of more marginal habitats outside the zone of influence through increased interspecific competition for food and cover resources. Armstrong et al. (1983), indicated that cottage development in Ontario reduced the quality of winter white-tailed deer habitat. Mann (1985), suggested that deer use of an area decreased with increased development of recreational lot and second home subdivisions, but the intensity of use is dependent upon location, year, season and human activity. Cornett et al. (1979), provided evidence that deer use of a meadow near cabins received only 40 percent of the use of a similar control meadow located in an undisturbed area. Cornett et al. (1979) also reported that deer use was reduced by 30 percent within a 30-50 yard distance to hiking trails. Freedy et al. (1986) concluded that mule deer were more disturbed by people afoot than by snowmobiles.

Reproduction and condition studies of several local deer herds have shown that deer in the eastern Sierra exist on a negative energy budget during the winter months (Kucera 1988, Taylor 1988b). The energy required by activity is derived from products of digestion and stored fat reserves. In the winter, deer rely heavily on fat stores accumulated over the summer and fall months to supplement digestible energy available from the winter range (Mackie and Pac 1980, Short 1981). Deer also attempt to conserve energy by lowering their metabolic rate and by conducting energy-efficient activity and range use patterns (Mackie and Pac 1980). When normal activity patterns are disrupted due to development, drought, overgrazing, excessive snowfall, interaction with humans, or other factors, digestible energy intake can be reduced severely and the rate at which fat reserves are used will increase. This will ultimately decrease an animals ability to

survive the winter and reproduce the following year (Mackie and Pac 1980). This is especially true of deer with limited fat reserves, such as fawns or animals from poor-quality summer or intermediate ranges. In severe winters, these animals can tolerate little additional energy costs if they are to survive. Under repeated harassment, they will rapidly deplete stored fat and succumb to malnutrition when sufficient energy is no longer present to maintain normal bodily functions (Short 1981). According to Mattfeld (1973), the energy costs of running, especially in deep snow, is many times that of walking on bare ground.

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APPENDIX A

Appendix Table 1. Total number of tracks by direction of travel recorded on 16 track count surveys conducted in the Tioga Inn Project Area from 17 April-10 June 1992. Tioga Inn wildlife and vegetation study.

Survey No.	Date	NW	SE	Total
1	041792	0.0	0.0	0.0
2	042092	0.0	0.0	0.0
3	042392	0.0	0.0	0.0
4	042892	2.0	0.0	2.0
5	050192	2.0	0.0	2.0
6	050592	7.0	5.0	12.0
7	051092	5.0	4.0	9.0
8	051392	3.0	2.0	5.0
9	051692	0.0	0.0	0.0
10	052092	0.0	1.0	1.0
11	052392	2.0	3.0	5.0
12	052692	0.0	0.0	0.0
13	053092	2.0	2.0	4.0
14	060292	0.0	2.0	2.0
15	060592	0.0	1.0	1.0
16	061092	0.0	1.0	1.0
		23.0	21.0	44.0

Appendix Table 2. Calculated data from 16 track counts conducted in the Tioga Inn Project Area from 17 April-10 June 1992. Tioga Inn wildlife and vegetation assessment study.

A = Total number of tracks observed on 16 surveys.
 B = Total number of tracks attributable to migrants (determined by tracks N and W)
 C = Total number of tracks attributable to nonmigrants (A-B).
 D = Total number of deer on a given survey represented by tracks of nonmigratory deer (C/2).
 E = Total deer on a given survey (B + D).

Survey No.	Date	A	B	C	D	E
1	041792	0.0	0.0	0.0	0.0	0.0
2	042092	0.0	0.0	0.0	0.0	0.0
3	042392	0.0	0.0	0.0	0.0	0.0
4	042892	2.0	2.0	0.0	0.0	2.0
5	050192	2.0	2.0	0.0	0.0	2.0
6	050592	12.0	7.0	5.0	2.5	9.5
7	051092	9.0	5.0	4.0	2.0	7.0
8	051392	5.0	3.0	2.0	1.0	4.0
9	051692	0.0	0.0	0.0	0.0	0.0
10	052092	1.0	0.0	1.0	0.5	0.5
11	052392	5.0	2.0	3.0	1.5	3.5
12	052692	0.0	0.0	0.0	0.0	0.0
13	053092	4.0	2.0	2.0	1.0	3.0
14	060292	2.0	0.0	2.0	1.0	1.0
15	060592	1.0	0.0	1.0	0.5	0.5
16	061092	1.0	0.0	1.0	0.5	0.5
Sum X 3.375		44.0	23.0	21.0	10.5	33.5
			77.6	70.8	35.4	113.0

Appendix Table 3. Total number of track sets recorded in each survey segment of the Tioga Inn track count survey route on 16 track count surveys conducted from 17 April-10 June 1992. Tioga Inn wildlife and vegetation assessment study.

Survey No.	Date	Segment Number							Total
		1	2	3	4	5	6	7	
1	041792	0	0	0	0	0	0	0	0
2	042092	0	0	0	0	0	0	0	0
3	042392	0	0	0	0	0	0	0	0
4	042892	0	0	0	0	2	0	0	2
5	050192	0	0	0	1	1	0	0	2
6	050592	2	0	2	6	0	0	2	12
7	051092	1	1	1	5	0	1	0	9
8	051392	0	0	1	3	0	1	0	5
9	051692	0	0	0	0	0	0	0	0
10	052092	0	1	0	0	0	0	0	1
11	052392	2	1	0	2	0	0	0	5
12	052692	0	0	0	0	0	0	0	0
13	053092	0	0	0	2	2	0	0	4
14	060292	1	1	0	0	0	0	0	2
15	060592	0	0	1	0	0	0	0	1
16	061092	0	0	0	0	1	0	0	1
Total		6	4	5	19	6	2	2	44

Appendix Table 4a. Calculated data from 16 track counts conducted adjacent to the Tioga Inn Project Area (segments 1-4) from 17 April-10 June 1992. Tioga Inn wildlife and vegetation assessment study.

A = Total number of tracks observed on 16 surveys.

B = Total number of tracks attributable to migrants (determined by tracks N and W)

C = Total number of tracks attributable to nonmigrants (A-B).

D = Total number of deer on a given survey represented by tracks of nonmigratory deer (C/2).

E = Total deer on a given survey (B + D).

Survey No.	Date	A	B	C	D	E
1	041792	0.0	0.0	0.0	0.0	0.0
2	042092	0.0	0.0	0.0	0.0	0.0
3	042392	0.0	0.0	0.0	0.0	0.0
4	042892	0.0	0.0	0.0	0.0	0.0
5	050192	1.0	1.0	0.0	0.0	1.0
6	050592	10.0	7.0	3.0	1.5	8.5
7	051092	8.0	4.0	4.0	2.0	6.0
8	051392	4.0	3.0	1.0	0.5	3.5
9	051692	0.0	0.0	0.0	0.0	0.0
10	052092	1.0	0.0	1.0	0.5	0.5
11	052392	5.0	2.0	3.0	1.5	3.5
12	052692	0.0	0.0	0.0	0.0	0.0
13	053092	2.0	1.0	1.0	0.5	1.5
14	060292	2.0	0.0	2.0	1.0	1.0
15	060592	1.0	0.0	1.0	0.5	0.5
16	061092	0.0	0.0	0.0	0.0	0.0
Sum X 3.375		34.0	18.0	16.0	8.0	26.0
			60.8	54.0	27.0	87.7

Appendix Table 4b. Calculated data from 16 track counts conducted in the Tioga Inn Project Area (segments 5-7) from 17 April-10 June 1992. Tioga Inn wildlife and vegetation assessment study.

A = Total number of tracks observed on 16 surveys.

B = Total number of tracks attributable to migrants (determined by tracks N and W)

C = Total number of tracks attributable to nonmigrants (A-B).

D = Total number of deer on a given survey represented by tracks of nonmigratory deer (C/2).

E = Total deer on a given survey (B + D).

Survey No.	Date	A	B	C	D	E
1	041792	0.0	0.0	0.0	0.0	0.0
2	042092	0.0	0.0	0.0	0.0	0.0
3	042392	0.0	0.0	0.0	0.0	0.0
4	042892	2.0	2.0	0.0	0.0	2.0
5	050192	1.0	1.0	0.0	0.0	1.0
6	050592	2.0	0.0	2.0	1.0	1.0
7	051092	1.0	1.0	0.0	0.0	1.0
8	051392	1.0	0.0	1.0	0.5	0.5
9	051692	0.0	0.0	0.0	0.0	0.0
10	052092	0.0	0.0	0.0	0.0	0.0
11	052392	0.0	0.0	0.0	0.0	0.0
12	052692	0.0	0.0	0.0	0.0	0.0
13	053092	2.0	1.0	1.0	0.5	1.5
14	060292	0.0	0.0	0.0	0.0	0.0
15	060592	0.0	0.0	0.0	0.0	0.0
16	061092	1.0	0.0	1.0	0.5	0.5
Sum X 3.375		10.0	5.0	5.0	2.5	7.5
			16.8	16.8	8.4	25.3

Appendix A Table 5

The following list includes those mammal species most likely to be found at or adjacent to the Tioga Inn Project Area. Information used in this report comes from direct observations and from the following sources (Engles 1965).

Symbols

<u>Abundance</u>	<u>Status in Habitat</u>	<u>Sightings</u>
C Common	G General Habitat, present year-round	O Observed
U Uncommon	B Breeding Habitat	E Expected
R Rare	S Summer Resident	
	M Migrant	
	V Occasional Visitor	
	U Unknown	

<u>Common Name</u>	<u>Scientific Name</u>	<u>Si</u>	<u>A</u>	<u>St</u>
MAMMALS	CLASS MAMMALIA			
Sierra Nevada golden-mantled ground squirrel	<u>Spermophilus lateralis</u>	O	C	G
Porcupine	<u>Erethizon dorsatum</u>	E	C	U
Coyote	<u>Canis latrans</u>	O	C	G
Black bear	<u>Euarctos americanus</u>	E	C	V
Bobcat	<u>Lynx rufus</u>	E	C	G
Striped skunk	<u>Mephitis mephitis</u>	E	C	G
Mule deer	<u>Odocoileus hemionus</u>	O	C	G
Gray fox	<u>Urocyon cinereoargenteus</u>	E	U	G
White-tailed hare	<u>Lepus townsendii</u>	E	C	G
Black-tailed jackrabbit	<u>Lepus californicus</u>	O	C	G
Long-tailed weasel	<u>Mustela frenata</u>	E	C	G
Audubon's cottontail	<u>Sylvilagus audubonii</u>	O	C	G
Northern pocket gopher	<u>Thomomys talpoides</u>	E	U	G
Sagebrush vole	<u>Lagurus curtatus</u>	E	C	G

Appendix A Table 6

The following list includes those bird species most likely to be found at or adjacent to the Tioga Inn Project Area. Information used in this report comes from direct observations and from the following sources (Peterson 1961, Storer and Usinger 1963, Gaines 1965).

Symbols

<u>Abundance</u>	<u>Status in Habitat</u>	<u>Sightings</u>
C Common	G General Habitat, present year-round	O Observed
U Uncommon	B Breeding Habitat	E Expected
R Rare	S Summer Resident	
	M Migrant	
	V Occasional Visitor	
	U Unknown	

<u>Common Name</u>	<u>Scientific Name</u>	<u>Si</u>	<u>A</u>	<u>St</u>
Birds	Class Aves			
Red-tailed hawk	<u>Buteo jamaicensis</u>	O	C	G
American kestrel	<u>Falco sparverius</u>	E	C	G
Rough-legged hawk	<u>Buteo lagopus</u>	E	U	M
Golden eagle	<u>Aquila chrysaetos</u>	E	U	G
Great-horned owl	<u>Bubo virginianus</u>	E	C	G
Common nighthawk	<u>Chordeiles minor</u>	E	C	M
Poorwill	<u>Phalaenoptilus nuttallii</u>	O	C	S
Common raven	<u>Corvus corax</u>	O	C	G
Common flicker	<u>Sphyrapicus varius</u>	E	U	S
Gray flycatcher	<u>Empidonax wrightii</u>	O	C	S
Say's phoebe	<u>Sayornis saya</u>	E	C	S
Olive-sided flycatcher	<u>Nuttallornis borealis</u>	E	C	G
Pinyon jay	<u>Gymnorhinus cyanocephala</u>	O	C	G
Stellar's jay	<u>Cyanocitta stelleri</u>	O	C	G
Clark's nutcracker	<u>Nucifraga columbiana</u>	O	C	G
American robin	<u>Turdus migratorius</u>	O	C	G
Mountain bluebird	<u>Sialia currocoides</u>	E	C	G
Brewer's blackbird	<u>Euphagus cyanocephalus</u>	O	C	S
Brewer's sparrow	<u>Spizella breweri</u>	O	C	S
Brown headed cowbird	<u>Molothrus ater</u>	O	C	S
Green-tailed tohee	<u>Pipilo chlorurus</u>	O	C	S
Fox sparrow	<u>Passerella iliaca</u>	O	C	S
Song sparrow	<u>Melospiza melodia</u>	O	C	S
Black-billed magpie	<u>Pica pica</u>	O	C	G
Dark-eyed junco	<u>Junco hyemalis</u>	O	C	G

Appendix A Table 7

The following list includes those plant species observed in or adjacent to the Tioga Inn Project Area.

Common Name	Scientific Name
Shrubs	
Big sagebrush	<u>Artemisia tridentata</u>
Antelope bitterbrush	<u>Purshia tridentata</u>
Rubber rabbitbrush	<u>Chrysothamnus nauseosus</u>
Twisted rabbitbrush	<u>Chrysothamnus viscidiflorus</u>
Desert peach	<u>Prunus andersonii</u>
Horsebush	<u>Tetradymia comosa</u>
Trees	
Pinyon pine	<u>Pinus monophylla</u>
Jeffrey pine	<u>Pinus jeffreyi</u>
Lodgepole pine	<u>Pinus contorta</u>
Perennial Grasses	
Indian ricegrass	<u>Oryzopsis hymenoides</u>
Giant wildrye	<u>Elymus cinereus</u>
Needlegrass	<u>Stipa</u> sp.
Squirrel tail	<u>Sitanion</u> sp.
Perennial Flowering Plants	
Prickley phlox	<u>Leptodactylon pungens</u>
Sulphur-flowered eriogonum	<u>Eriogonum umbellatum</u>
Prickley poppy	<u>Aregemone munita</u>
Cryptantha	<u>Cryptantha circumscissa</u>
Hoary aster	<u>Machaeranthera canescens</u>
Mule ears	<u>Wyethia mollis</u>
Indian paintbrush	<u>Castilleja</u> sp.
Lupine	<u>Lupinus</u> sp.

Appendix A Table 8

Native Plants Recommended For Revegetation in the Tioga Inn Project Area.

<u>Common Name</u>	<u>Scientific Name</u>
Shrubs	
Antelope bitterbrush	<u>Purshia tridentata</u> *
Big Sagebrush	<u>Artemisia tridentata</u> *
Curl-leaf mountain mohogany	<u>Cercocarpus ledifolius</u> *
Rubber rabbitbrush	<u>Chrysothamnua nauseosus</u>
Mormon Tea	<u>Ephedra nevadensis</u> *
Wood's rose	<u>Rosa woodsii</u> *
Slender-leafed willow	<u>Salix exigua</u>
Trees	
Pinyon pine	<u>Pinus</u> sp. *
Lanceleaf cottonwood	<u>Populus acuminata</u> *
Desert willow	<u>Chilopsis linearis</u> *
Western juniper	<u>Juniperus occidentalis</u>
Jeffrey pine	<u>Pinus jeffreyi</u>
Perrenial Grasses	
Indian ricegrass	<u>Oryzopsis hymenoideds</u> *
Squirrel tail	<u>Sitanion hystrix</u>
Needlegrass	<u>Stipa comata</u>
Wild rye	<u>Elymus</u> sp.

* These plants are available from:

Plants of the Southwest
930 Baca St.
Santa Fe, NM 87501
(505) 983-1548

FISCAL IMPACT ANALYSIS

Report 4

**FINAL
ECONOMIC IMPACT
AND
FISCAL ANALYSIS
FOR
THE TIOGA INN
SPECIFIC PLAN AND EIR**

**PREPARED FOR:
MONO COUNTY PLANNING DEPARTMENT**

DECEMBER 1992

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Prepared for:
MONO COUNTY PLANNING DEPARTMENT

December 1992

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S12046B

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1. INTRODUCTION

PURPOSE OF ECONOMIC AND FISCAL ANALYSIS

CERTIFIED/Earth Metrics was retained by the Mono County Planning Department to conduct a study of the potential market demand and fiscal effects upon the county of a proposed hotel development to be located at the intersection of U.S. Highway 395 (US 395) and State Route 120 (SR 120), south of Lee Vining. The proposed development, called Tioga Inn, consists of a 120 unit hotel, a 100 seat restaurant, a service station/mini-mart, and 10 units of on-site housing.

This report is the product of CERTIFIED/Earth Metrics and consists of independent market research and objective evaluation relative to the market demand and fiscal effects of the proposed development. CERTIFIED/Earth Metrics has no financial interest in the subject hotel development.

STUDY APPROACH

Market analysis presented in this report evaluates the potential market demand for the hotel, restaurant, and service station/mini-mart portions of the proposed project. Current supply and potential market demand for lodging, restaurant, and service station/mini-mart are evaluated using a variety of techniques for market analysis. The proposed project is considered in terms of access, visibility, and proximity to visitor attractions, and is compared to competitive supply in the defined "market area." Data consisting of California tax and economic development data, traffic counts, visitor counts, archival and original survey data are assembled and reviewed in this market analysis.

A primary market area is defined, to distinguish between the proposed hotel's probable competition east of Yosemite National Park in Mono County and less probable competition with existing hotels on the "west-side" outside of Mono County. Price ranges and quality of competitive lodging and restaurants in the primary market area are documented. Historical trends in visitation and tourism are considered to form an opinion of potential market demand for the proposed hotel, restaurant, and service station/mini-mart.

Shift share analysis is provided to evaluate the baseline performance of the proposed hotel and amenities. Shift share refers to the proportionate share of an existing market that a proposed new commercial enterprise can be expected to capture, all locational and competitive factors being equal among the competitors. When there is competition for like-kind services, the market share captured by the new enterprise is shifted within the existing marketplace. The concept of shift share is important in fiscal analysis because fiscal benefit (i.e., tax revenue) does not necessarily accrue from shifting patrons among competitors within the boundaries of a taxing entity. Maximum fiscal benefit generally accrues instead from new business development in unserved or underserved markets.

SUMMARY

There appears to be unmet demand for lodging in the Lee Vining vicinity in summer. A small portion (one-in-six) of visitors attracted from Yosemite National Park to Mono Basin in summer are currently attracted to stay overnight in the basin. The constraint appears to be limited lodging supply. In winter, with Tioga Pass closed, shift share analysis demonstrates that the proposed 120-room hotel could potentially achieve 50 percent occupancy. Net revenue generation, exclusive of one-time fees intended to cover the costs of specified county services, is conservatively estimated to be \$195,000 (first full year after opening) to \$304,000 (fifth year). Fully 90 percent of the revenue would be derived from property tax and transient occupancy tax; therefore, the estimate is not sensitive to evaluations of the other project elements (i.e., restaurant, service station/mini-mart).

2. MARKET ANALYSIS

LOCAL SETTING

Mono County has a permanent population of approximately 10,403 persons (Department of Finance, 1992). The county experienced an average annual growth rate of 5.3 percent per year from 1970 to 1980, which slowed to an average of 1.4 percent per year between 1980 and 1990 (see Figure 1). Employment in Mono County is heavily weighted in the tourist industry with approximately 25 percent of all jobs held in the county resting in the hotel/motel industry, and 16 percent in eating/drinking establishments (see Table 1). Employment in the tourism industry is seasonal (Employment Development Department, 1990).

The location of the project site at the intersection of US 395 and SR 120, just south of Lee Vining, marks a key crossroads in the scenic eastern Sierra Nevada, one of the fastest growing tourist visitor areas in the state. The area surrounding the project site provides a wealth of scenic resources and summer recreational opportunities. Lee Vining's main attraction is Mono Lake, the focal point of the Mono Basin National Forest Scenic Area, and the Mono Lake Tufa State Reserve. Mono Lake is famous for its dramatic scenery (tufa towers) and is host to a wide variety of wildlife including large numbers of seagulls and migratory waterfowl. The newly constructed Mono Basin National Forest Scenic Area Visitor Center offers educational exhibits, art galleries, a 98 seat theater, bookstore, and other services for Mono Lake's estimated 200,000 yearly visitors.

According to interpretation of visitation records of the Mono Lake Committee Visitor Center in downtown Lee Vining, 64.5 percent of visitation is in the summer months (June through September) and 83 percent during the extended dry season (May through October). Visitation at the Mono Lake Committee Visitor Center in downtown Lee Vining is itself approximately 40,000 persons per year in recent years according to the Mono Lake Committee (Mono Lake Committee, 1992).

Lee Vining's motto of "Gateway to Yosemite" partly describes this community's favorable geographical position only 14 miles from Yosemite National Park's eastern entrance at Tioga Pass. World renown Yosemite National Park hosts over 3 million tourists per year, approximately 500,000 or 15 percent of whom travel through the Tioga Pass entrance in the summer months (see Figures 2 and 3). Other outdoor recreation opportunities can be found in the Inyo National Forest which hosts 27 campgrounds in the Lee Vining Ranger District, and in the nearby Toiyabe National Forest.

Northeast of Lee Vining is the historic town of Bodie, the most well preserved and largest authentic ghost town in the country. This old gold mining town has come to personify the "rowdy" spirit of the old west. The town is now a State Historic Park that offers a museum and self guided tours.

Another popular visitor area in the project site vicinity is the June Lake Loop and its surrounding recreational opportunities. The June Lake Loop offers spectacular vistas, four alpine lakes, 14 miles of fishing creeks, and several trailheads to backcountry terrain. In the winter months, nearby June Mountain offers skiing on over 500 acres and access from eight chairlifts. June Mountain is visited by approximately 75,000 skiers and winter sports enthusiasts each year. Mammoth Mountain, a much larger ski area, is located approximately 45 miles to the south of the project site.

Interpretation of Mono Basin visitation estimates and California Department of Transportation (CALTRANS) average daily traffic volume counts of U.S. 395 and S.R. 120 reveals that 1000 vehicles per day (vpd) are, during the summer months, attracted to the local Mono Basin attractions. This latter volume represents 25 percent of the daily traffic volume on U.S. 395 and 50 percent of the daily volume on SR 120.

Figure 1 Mono County Population
1970 - 1992

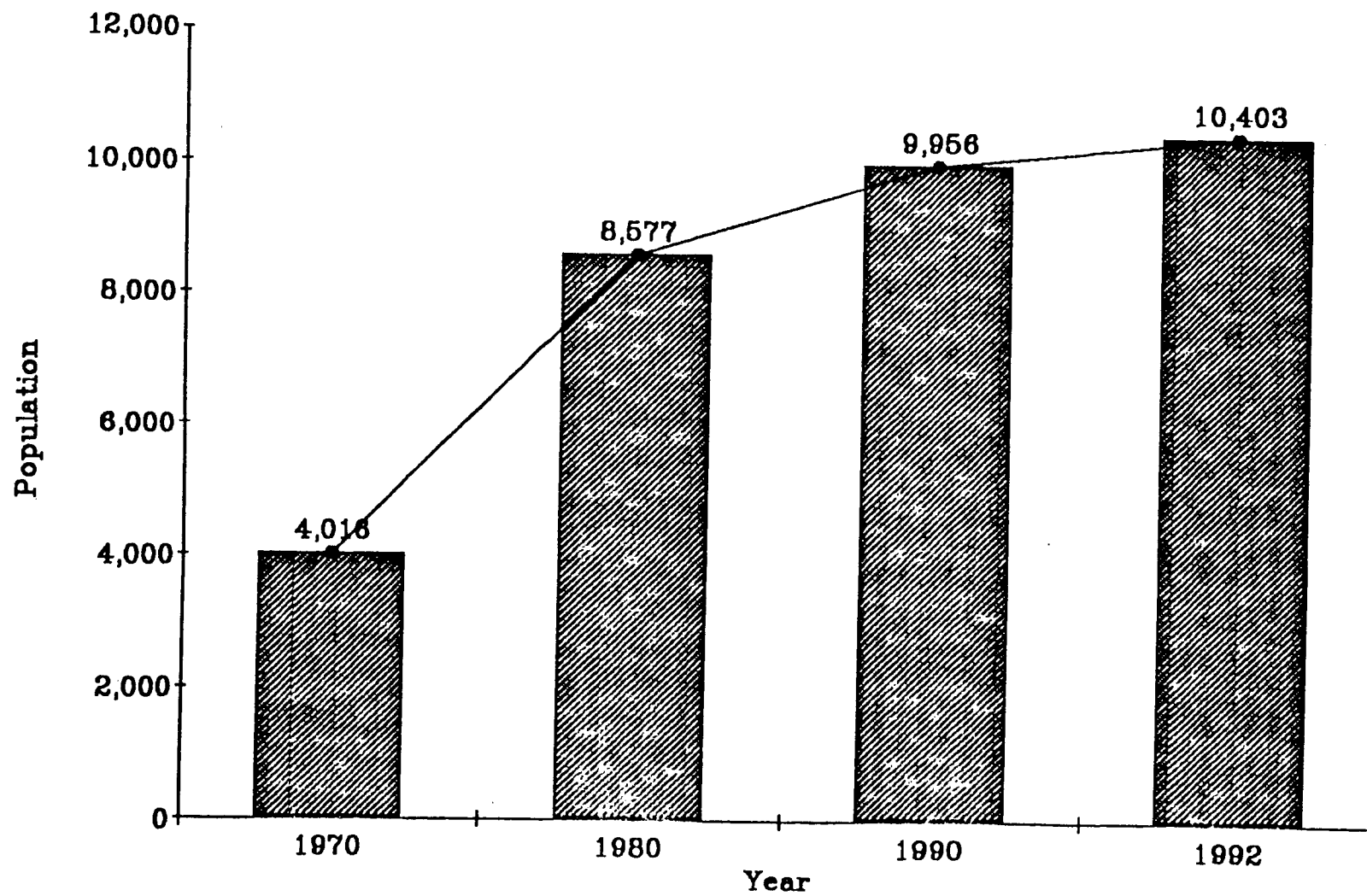


Figure 2 Yosemite National Park
Total Annual Visitors

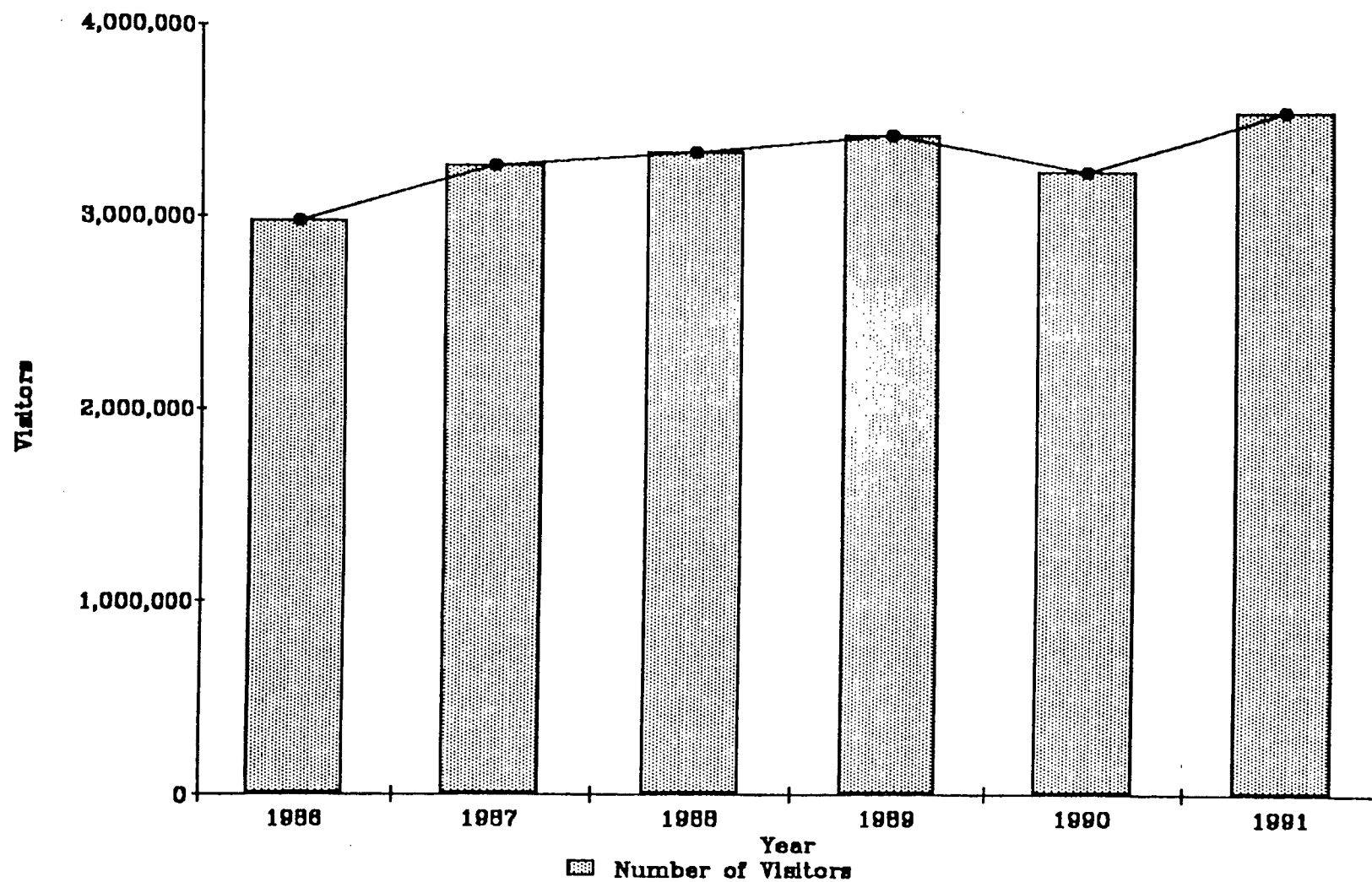


Figure 3 Yosemite National Park
Tioga Pass Entrance

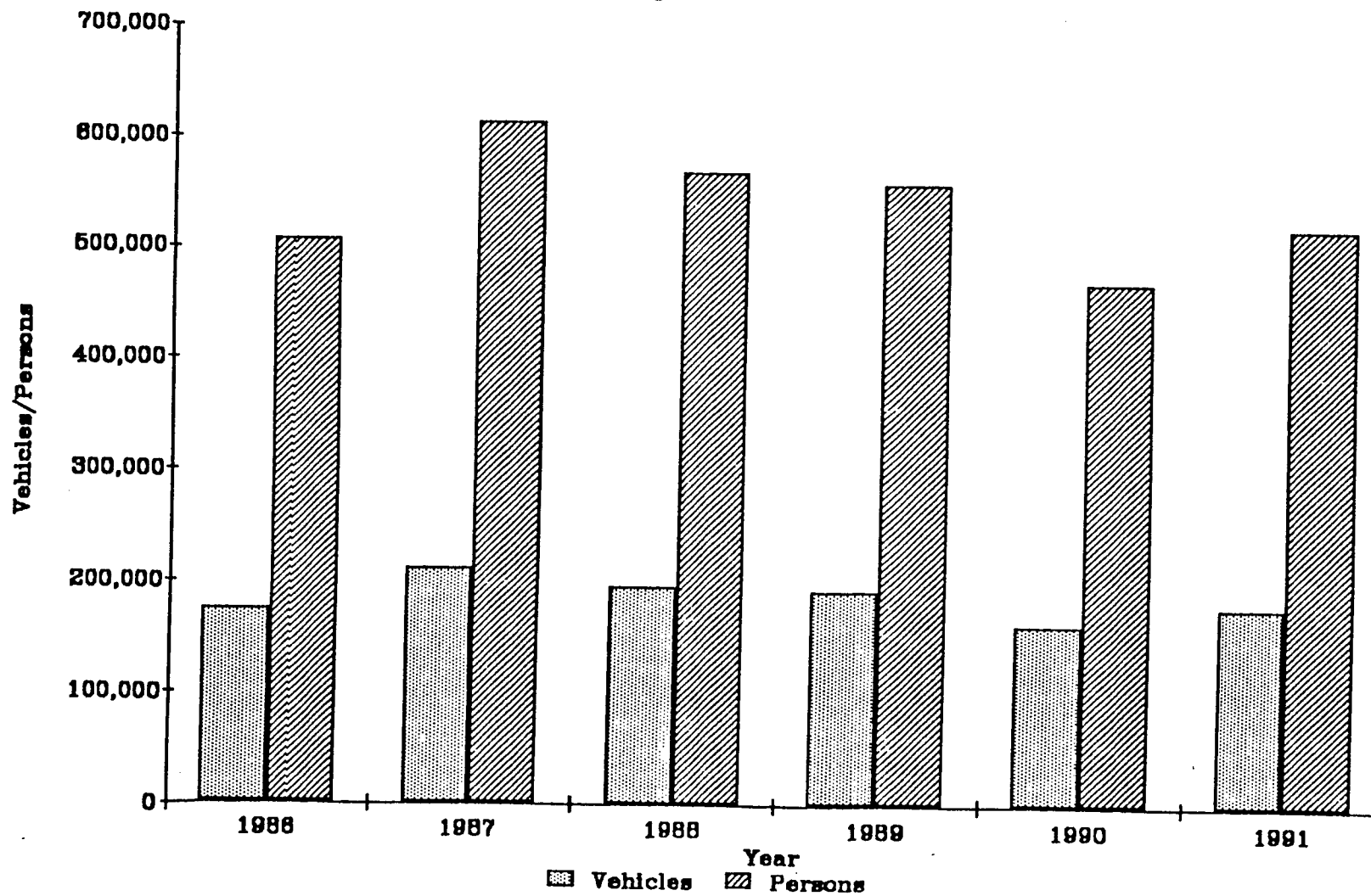


TABLE 1. 1990 MONO COUNTY EMPLOYEE COUNT BY INDUSTRY

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
Federal Government	99	96	92	107	138	183	208	195	195	132	115	176	145
State Government	148	149	141	119	112	111	108	106	102	106	124	140	122
Local Government	865	725	732	651	659	735	524	528	664	712	701	570	727
Agriculture	48	53	51	60	65	73	77	79	77	72	60	42	63
Mining/Construction	381	351	365	429	479	584	648	720	693	571	559	541	535
Manufacturing/Transportation	41	41	39	44	46	50	46	47	49	41	40	46	44
Communications/Utilities	66	64	68	70	71	68	73	76	77	70	72	70	70
Wholesale/Building Materials/ Hardware	57	58	55	59	59	56	66	60	58	57	58	57	58
General Merchandise/Food Stores	97	92	98	81	92	108	206	217	218	177	170	174	141
Auto Dealers/Service Stations	56	51	50	56	63	65	83	82	73	53	52	54	62
Eating/Drinking Places	956	990	1,038	879	745	745	926	911	867	694	634	654	837
Miscellaneous Retail	356	350	357	293	274	275	290	291	286	267	305	309	300
Financial/Insurance/Real Estate	418	451	443	365	354	326	317	350	331	294	316	373	362
Hotels/Motels	2,225	2,183	2,128	1,813	997	993	1,055	1,040	1,010	891	1,010	898	1,354
Personal/Business Services	63	68	64	70	53	60	50	60	63	65	56	62	61
Automotive/Miscellaneous Repair	46	41	44	49	46	50	51	46	44	49	50	50	47
Amusement/Recreation	59	57	54	78	61	79	70	63	59	48	40	46	60
Health/Legal Services	193	199	197	201	198	187	191	192	187	190	195	198	194
Education/Social Services/ Membership Organizations	140	141	138	113	104	121	99	91	95	84	85	90	108
Engineering/Accounting/ Management Services	85	94	92	84	91	100	103	101	98	133	123	125	102
Miscellaneous	10	9	8	12	8	6	15	11	8	10	9	7	9
Total Government	1,112	970	965	877	909	1,029	840	961	829	950	940	886	994
Total Private	5,297	5,293	5,289	4,756	3,806	3,946	4,366	4,437	4,293	3,766	3,834	3,796	4,407
Total All Industries	6,409	6,263	6,254	5,633	4,715	4,975	5,206	5,266	5,254	4,716	4,774	4,682	5,401
Hotel/Motels % of Total:													25%
Eating/Drinking Places % of Total:													16%

Source: California Employment Development Department, 1992.

MARKET AREA

A market area is defined as a geographic area from which future consumers of a proposed commercial project may originate. The proposed Tioga Inn development would consist of visitor-serving commercial uses. Residents of Lee Vining could also patronize the proposed restaurant and service station/mini-mart.

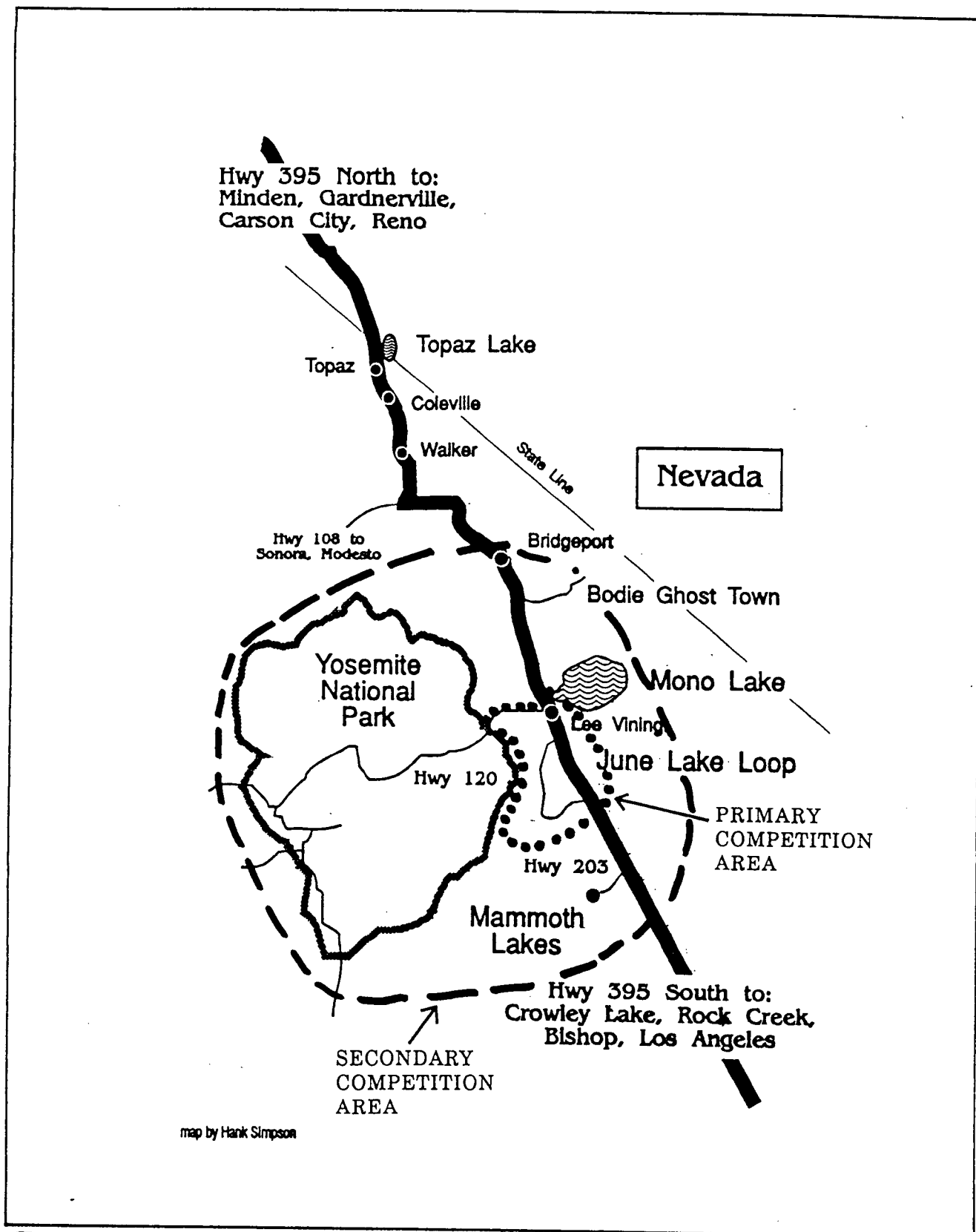
The primary market area is defined relative to the project site, where given a choice between similar alternatives, 75 to 85 percent of consumers will normally choose services located within this area. The secondary market area is the area where given a choice between similar alternatives, approximately 85 to 100 percent of consumers will normally choose services located within this area.

Estimation of the primary market area is based on a number of factors including kind of services, geographic position, quality of competitive services, proximity to visitor attractions, road access, driving times, and visibility. Different kinds of commercial uses (ie. hotel, restaurant, service station/mini-mart) can have different consumption patterns, hence different market areas.

The primary market area for lodging consists of Mono Basin and the area south to June Lake, east of Yosemite National Park (see Figure 4). Mammoth Lakes is excluded from the primary market area because it is approximately 35 miles south of the project site. Moreover, Mammoth Lakes is a destination vacation area with its own attractions, and the proposed hotel will not be in primary competition with the visitor attractions in Mammoth Lakes. Bridgeport was similarly excluded owing to its distance and lack of significant visitor attractions. The secondary market area for the proposed hotel extends south to Mammoth Lakes, north to Bridgeport, and, during summer, would also extend west to Yosemite National Park.

In summer, it is estimated that approximately 75 to 85 percent of visitors seeking lodging in the project site vicinity would stay within the primary market area. Nearly 100 percent of visitors seeking lodging would stay somewhere within the larger secondary market area which includes Yosemite National Park. The proposed site of the Tioga Inn is situated centrally, at the junction of two key highways (US 395 and SR 120), and close to the Lee Vining airstrip.

The primary market areas for restaurants and service stations/mini-marts are typically smaller than those for hotels. Convenience and attraction of passby traffic are the primary determinants for service stations/mini-marts. Consumers are less likely to travel more than a five mile radius to purchase similar services of food, automotive service, and mini-market goods. Because of this geographic limiting factor, a secondary market area is not considered meaningful for restaurants and service station/mini-marts. Therefore, the primary market area for the proposed restaurant and service station/mini-mart includes the community of Lee Vining only (see Figure 4).



LODGING DEMAND

Lodging demand in the primary market area varies seasonally and differs by community. Lee Vining receives the majority of its visitors between the months of May and October. This visitor pattern is consistent with the availability of nearby summer attractions (e.g., Mono Lake, Yosemite National Park, and the Inyo National Forest). Based on figures of monthly attendance at the Mono Lake Committee Information Visitor Center, it is estimated that on an annual basis approximately 65 percent of visitors visit Lee Vining in the dry season (June through September) and over 80 percent visit in the extended dry season (May through October). Lodging demand in Lee Vining follows this above seasonal pattern.

Approximately 75 percent of all Yosemite visitors are from California (Gramman, 1992). No formal visitor surveys have been completed for the Lee Vining area including Mono Lake, but the Lee Vining area could be expected to have hybrid tourist demographics combining those of Yosemite National Park and June Lake.

Lodging demand in June Lake is relatively less seasonal than lodging demand in Lee Vining owing to the winter attraction of June Mountain ski area. The June Lake Chamber of Commerce is currently performing a study to determine seasonal variations in tourism. Based on variations of lodging prices by season, it would appear that summer (May through September) and winter "ski weekend" demand are roughly equal.

Based on a report prepared by Quad Consultants, "Winter Population Survey: Mammoth Lakes/June Lake" (1983) average winter vacancy rates ranged from 24 percent in Mammoth Lakes to 30 percent in June Lake. Because of a drop in tourism experienced in the past two years during the nationwide recession, vacancy rates have been abnormally high.

In the summer motel/lodging survey conducted for the Yosemite Area Regional Transit Study approximately 44 percent of respondents indicated they would visit Mono County attractions (18 percent-Bodie Ghost Town, 17 percent-June Lake/Mammoth Lakes, and 9 percent-Mono Lake). Approximately 60 percent travelled by automobile or van. The motel/lodging survey was conducted by the Mariposa County Department of Public Works, in August and September 1991, at a total of 25 lodging places.

Of the 25 lodging places surveyed, three on Yosemite's east side were included (i.e., The King's Inn, Best Western Lakeview, and Gateway). Of the 443 survey questionnaires analyzed, approximately 11 percent (51 survey questionnaires) were survey questionnaires completed by guests at the three Mono County lodging facilities. If these 51 survey responses are excluded, then the proportion of "west-side" lodging patrons who also visited attractions on Yosemite's east side, but did not necessarily stay overnight on the east side, is 36 percent.

In a separate summer 1990 survey, called the Yosemite National Park (YNP) survey, approximately 24 percent of respondents stated they were spending at least one night in lodging in a nearby community. Approximately 6.5 percent of respondents noted specifically they were staying overnight in lodging on Yosemite's east side, from Mammoth to Bridgeport.

In number, these above Mariposa and YNP survey responses are equivalent to a potential 195,000 overnight visitors per summer season (1100 overnight visitors per day), who desire to stay at least one night in lodging on Yosemite's east side. At three persons per room average occupancy, this number equates to 65,000 booked room nights per season (350 booked room nights per day). A small proportion (one-in-six) of visitors attracted from Yosemite National Park to Mono Basin are currently attracted to stay overnight in Mono Basin. These numbers demonstrate that, in the summer season, bookings are

apparently constrained not only by visitor preferences in lodging but also by the limited supply of lodging in Mono Basin.

Lodging Supply And Competition

The proposed hotel would be unique among existing lodging facilities in the primary market area, that is, east of Yosemite National Park in the Lee Vining and June Lake vicinity. The proposed hotel would have 120 rooms, lobby, in-hotel restaurant, indoor pool, and health club. The estimated cost of an average room at the proposed hotel at opening is approximately \$100 per night. On the eastern side of Yosemite National Park, there are currently no full service hotels of this type north to Lake Tahoe, and south to Mammoth Lakes. Within the primary market area, which is Mono Basin east of Yosemite National Park, 120 rooms would represent approximately 25 percent of the total supply of lodging rooms if the proposed Tioga Inn were built.

The recent growth in destination-type hotels on the western side of Yosemite shows the strong expected growth of tourism to the Yosemite area from the western side. The new Marriott Tenaya Lodge in Fish Camp and the proposed "Yosemite Springs Resort" are manifestations of the unmet or latent demand for major destination hotels in the Yosemite National Park area. Because there is currently no high-end, amenity-rich lodging near Yosemite's eastern entry, the proposed Tioga Inn could be expected to attract patrons to stay overnight, who intend to visit Yosemite's east side, but who would not normally seek overnight accommodations or would seek them elsewhere outside of Mono Basin.

The competitive supply of lodging in the primary market area is presented in Table 2. As review of Table 2 shows, the proximate competitors consist of motels (primarily in Lee Vining) or motel/cabins (primarily in June Lake). June Lake also has a number of condominium units for rent which were not included in this analysis because they are not considered to be like-kind lodging. The lodging in the primary market area most comparable to the proposed project is the Boulder Lodge in June Lake. The proposed Tioga Inn is more accessible from Yosemite than Boulder Lodge, being located on SR 120 east of Tioga Pass.

Within the secondary market area there are a number of hotels that would provide a similar level of service, amenities, and price as the proposed Tioga Inn. In Yosemite National Park, the Yosemite Lodge (\$57-\$90 per night), Ahwahnee Hotel (\$177-\$201 per night), and Wawona Hotel (\$60-\$80 per night) would be in a comparable range of service and price. On the western side of the park, the Marriott at Fish Camp would provide similar amenities at slightly higher prices. In Mammoth Lakes, Mammoth Mountain Inn (\$69-\$145 per night), Jagerhof Lodge (\$69-\$135 per night), Quality Inn (\$69-\$140 per night), Shilo Inn (\$69-\$110 per night), Sierra Lodge (\$65-\$85 per night), and Travelodge (\$57-\$105 per night) would be in a comparable price/amenity range as the proposed hotel.

Shift Share Analysis

As is common in new hotel developments in developed resort areas or other developed tourist destination areas, early business success typically depends upon competitive displacement or "shift" of patrons from existing lodging within the market area. Because the proposed Tioga Inn would be unique in Lee Vining in its provision of accommodations and amenities (rooms are expected to cost almost twice as much as the average in the area), competitive displacement can be expected to be minimal and not sufficient to assure the proposed hotel's success. The viability of the proposed hotel would depend instead upon management's ability to attract summer visitors of Mono Lake/Mono Basin National Forest Scenic Area and Yosemite National Park to stay overnight.

Existing lodging in the primary market area would not be in direct competition with the proposed Tioga Inn for provision of like-kind services. Existing lodging in the primary market area would continue to serve the market for rooms in the \$40 to \$70 range; in contrast, the proposed hotel is planned to serve the higher-end, \$100 to \$150 range. One target market consists of the one-in-six Yosemite visitors who although interested in visiting attractions in Mono Basin seek overnight accommodations elsewhere outside the primary market area.

In summer, the proposed hotel could be expected to attain a maximum of 10 to 15 percent of its booked room nights from displacement of patrons of existing lodging within the primary market area. Most bookings would have to be obtained from the numerous visitors attracted to Mono Basin and Yosemite National Park who do not currently seek overnight accommodations or who currently seek accommodations elsewhere outside the primary market area. A modest percentage (3 to 5 percent) of patrons of existing lodging facilities in Mono Basin could potentially be attracted to upgrade to the \$100 to \$150 per night range from the \$40 to \$70 per night range. This estimate is approximate, based on the above-described dissimilarity of the proposed hotel accommodations and accommodations of existing lodging in the Mono Basin, and is intended to emphasize that displacement of patrons from existing lodging facilities in Mono Basin would not be sufficient for financial feasibility of the proposed hotel.

In winter, with Tioga Pass closed, the proposed 120-room hotel would be dependent upon displacement of patrons of existing lodging within the primary market area. Much of the winter attraction to the Mono Basin is derived from skiing. Based on shift share analysis, if the proposed Tioga Inn captured a proportionate share (25 percent) of the existing winter room bookings (45,000 booked room nights per season or 250 booked room nights per day), the proposed inn could potentially achieve 50 percent occupancy (60 booked room nights per day).

A proportionate share is expected when competing facilities are comparable and similarly located. The proposed Tioga Inn would generally have superior amenities and room accommodations, would be closer to the Lee Vining airport, but would be farther from the local ski areas. Mammoth Mountain ski resort, for example, is approximately 45 miles south of Lee Vining.

A smaller 60-room hotel in winter could potentially achieve 60 percent occupancy (35 booked room nights per day). This potential booking in winter is calculated from the same assumption of proportionate share of existing room bookings. The proportionate share for a new 60-room hotel is 14 percent, based upon the estimated existing supply of rooms in hotel-type lodging (360 rooms).

TABLE 2. HOTEL-TYPE LODGING WITHIN THE PRIMARY MARKET AREA

NAME	ROOM TYPE/RATE	UNITS	AGE
Best Western- Lakeview Lodge Lee Vining	<u>Summer</u>		
	Sing. \$65	47	No Information
	Dbl. 75		
	<u>Winter</u>		
Blue Skies Motel Lee Vining	Sing. \$47	11	50+ Yrs.
	Dbl. 57		
	<u>Summer</u>		
	Sing. \$37		
El Mono Motel Lee Vining	Dbl. 60	10	65 Yrs.
	<u>Winter</u>		
	Closed		
	<u>Summer</u>		
Gateway Motel Lee Vining	Sing. \$49	12	40 Yrs.
	Dbl. 65		
	<u>Winter</u>		
	Closed		
King's Inn Lee Vining	<u>Summer</u>	14	56 Yrs.
	Sing. \$45-48		
	Dbl. 51		
	<u>Winter</u>		
Morphey's Motel Lee Vining	Closed	44	2-30 Yrs.
	<u>Summer</u>		
	Sing. \$63		
	Dbl. 73		
	<u>Winter</u>		
	Sing. \$44		
	Dbl. 51		

(CONTINUED)

TABLE 2 (CONTINUED). HOTEL-TYPE LODGING WITHIN THE PRIMARY MARKET AREA

NAME	ROOM TYPE/RATE	UNITS	AGE
Whispering Pines June Lake	<u>Summer (Aug. & Holidays)</u> Dbl. Motel - w/kitchen \$55	65	0-30 Yrs.
	<u>Winter</u> Dbl. Motel - w/kitchen \$60		
June Lake Motel and Cabins June Lake	<u>Summer (July to August)</u> Dbl. Motel \$50	26	20+ Yrs.
	<u>Winter (weekend)</u> Dbl. Motel \$52		
June Lake Village June Lake	<u>Summer (weekend/holiday)</u> Dbl. Motel \$59	22	Approx. 20+ Yrs.
	<u>Winter</u> Dbl. Motel \$54		
Boulder Lodge June Lake	<u>Summer (July - August)</u> Dbl. Motel \$75	60	36 Yrs.
	<u>Winter (holiday)</u> Dbl. Motel \$68		
Source: CERTIFIED/Earth Metrics, 1992.			

Lodging Demand Conclusions

CERTIFIED/Earth Metrics estimates that the proposed 120-room hotel would in the long-term (after five years of operation) be able to achieve an average occupancy rate of 85 percent or better during the summer months (May through October), and 50 percent occupancy in the winter months (November through April). The former summer rate is based on the preceding analysis which demonstrates demand for lodging by visitors of Mono Basin and limited supply. The latter winter rate is based on the reasoning presented previously that the proposed Tioga Inn could potentially capture a proportionate share (25 percent) of winter bookings in "east-side" lodging. The lower winter occupancy level results from winter closure of Tioga Pass, lack of winter attractions in the immediate area of Lee Vining, and availability of competitive lodging in June Lake and Mammoth Lakes.

The nation and region are in an economic recession. Travel by Americans including Californians is in a slump. Considering these current market factors and competitive factors, it is the opinion of CERTIFIED/Earth Metrics that in the first year of operation, the proposed 120-room hotel could attain average occupancy rates of 65 percent at \$100 per room night in the "summer" months (May to October), and 40 percent at \$74 per room night in the "winter" months (November to April). As summer occupancy rates improve to 85 percent or better in subsequent years, summer room rate increases of approximately 4 to 5 percent per year would be attainable.

In summer the proposed Tioga Inn hotel could achieve a strong level of market support while not displacing a significant number of patrons from existing lodging in Mono County. In winter with the closure of Tioga Pass the proposed hotel would be dependent upon displacement of patrons of existing lodging in Mono County. These conclusions follow from the market analysis and market conditions presented herein and summarized below:

- The facilities, services, and quality of accommodations of the proposed hotel could be unique in the primary market area.
- The project site location is ideal for attracting visitors from Yosemite National Park and Mono Lake. Specific attractions to the site are the panoramic views of the surrounding Mono Basin and its proximity to Yosemite's Tioga Pass entry.
- The proposed hotel in summer could attract tourists to stay overnight in the Lee Vining area, satisfying the latent demand of 6.5 percent of existing Yosemite National Park tourists for lodging in Mono Basin, rather than shifting patrons from existing Lee Vining lodging.
- Growth in popularity of Yosemite National Park as a national and international tourist destination, combined with the limited amount of lodging inside the park boundaries, enhances the long-term outlook for peripheral hotels including the proposed Tioga Inn.
- In winter the proposed Tioga Inn could attract some of the existing patrons of June Mountain and Mammoth Mountain ski areas to stay overnight at the proposed inn. For a new 120-room hotel a proportionate share of the market is estimated to be 25 percent or, equivalently, 60 booked room nights per day. Some of this potential represents spillover from Boulder Lodge in June Lake.

RESTAURANT DEMAND

The proposed development would include two restaurants: a coffee shop style restaurant located within the hotel building and a separate 100 seat restaurant located on top of the site's eastern ridgeline. This analysis focuses on the separate 100 seat restaurant (the "proposed restaurant"). The proposed restaurant is expected to have lunch entrees in the \$6.00 to \$10.00 range and dinner entrees in the \$12.00 to \$22.00 range. The restaurant would also offer panoramic views of the Mono Basin area.

The primary market area would consist of the Lee Vining area only. Given a choice among similar alternatives, 95 percent of consumers, including guests of the proposed Tioga Inn, would be expected to eat within a 10 mile radius of the project site.

Restaurant Supply and Competition

A list of restaurants and entree price ranges in the Lee Vining area is presented in Table 3. As Table 3 shows, the proposed restaurant would compete with a number of restaurants in both the lunch and dinner trades. The main competitors for the lunch trade would be Nicely's, Blue Skies (open in summer only), and the Yosemite Trails Inn. The main competitors for the dinner trade would include the Yosemite Trails Inn and the Mono Inn (open in summer only).

TABLE 3. RESTAURANTS WITHIN THE PRIMARY MARKET AREA

RESTAURANT	LUNCH \$	DINNER \$	OPEN
Blue Skies	\$4.25 - \$8.00	\$4.25 - \$8.00	Summer only
Bodie Mike's	N/A	N/A	Summer only
Kellogg's	N/A	N/A	N/A
Mono Cone	N/A	N/A	Summer only
Mono Inn	N/O	\$9.50 - \$16.00	Summer only
Nicely's	\$3.25 - \$5.00	\$6.95 - \$10.95	Year round
Yosemite Trails Inn	\$4.00 - \$6.30	\$8.95 - \$15.95	Year round

N/A - Not available at time of survey

N/O - Not open

Source: CERTIFIED/Earth Metrics, 1992.

The location of the proposed restaurant has good visibility and access from both US 395 and SR 120. This preferred location could enable market penetration into the tourist restaurant market.

The proposed restaurant would derive its core of patronage from guests of the proposed hotel. Their patronage can be expressed in summer and winter seatings. For the proposed 120-room hotel, the baseline number of seatings in summer could potentially be 200 seatings per evening (two turns per evening). In winter, the baseline number of seatings could potentially average 120 seatings per evening (1.2 turns per evening). A "turn" or "turnover" refers to the number of times the tables at the restaurant would be used in one evening. The above baseline estimates are based solely on the core or "baseline" patronage of hotel guests.

Shift Share Analysis

Owing to direct competition between the proposed restaurant and select existing restaurants in Lee Vining (i.e., Mono Inn and Yosemite Trails Inn), the proposed restaurant could potentially shift a percentage of existing business. Maximum patronage shift, during the first two years of the proposed restaurant's opening, is estimated based upon the concept of proportionate market share. Expressed as a percentage of the lunch and dinner trade in Lee Vining area restaurants, the maximum percent shift is 20 to 25 percent (average three percent per restaurant for each of the seven existing restaurants open in summer). Patronage shift could vary among individual restaurants.

This above percent shift of the existing lunch and dinner trade to the proposed restaurant is the maximum, near-term shift conservatively estimated based upon simple shift share analysis. The actual shift could potentially be less owing to mitigating factors:

- i) co-location. The proposed hotel, service station, and restaurant would tend attract new lunch and dinner patrons among highway travellers and hotel guests rather than shift patrons away from existing Lee Vining area restaurants; and,
- ii) principle of comparability. The proposed restaurant entree prices as conceived by the project applicant are relatively higher compared to those of the existing competitive restaurants.

In the long-term, within five years of opening, the proposed hotel/restaurant is expected to capture enough trade consisting of highway travellers, hotel patrons attracted to stay overnight, and Yosemite National Park/Mono Basin visitors, that there would be a net increase in the local lunch and dinner business. Additional business attracted by the proposed project after two years could also have a positive "spill-over" effect upon the existing local restaurants (e.g. Nicely's) and other businesses in Lee Vining.

Restaurant Demand Conclusions

CERTIFIED/Earth Metrics estimates that the proposed restaurant could achieve a baseline summer season seating of 50 to 60 percent of capacity within two years. Capacity is three turns per evening or, equivalently, 300 seatings. With establishment of market identity in ensuing years, capacity levels of 70 to 80 percent (210 to 240 seatings per evening) could be achievable.

In the winter season, restaurant patronage is likely to be reduced from the summer levels as described in the discussion entitled "Lodging Demand Conclusions." In winter, baseline seating of 30 to 40 percent of capacity could be achievable within two years. In ensuing years capacity levels of 50 to 60 percent (150 to 180 seatings per evening) could be achievable.

The above estimates are based on core or baseline patronage by hotel guests. Shift share analysis demonstrates that maximum restaurant patronage shift from the existing Lee Vining area restaurants to the proposed restaurant could be 20 to 25 percent. The maximum shift is not expected owing to mitigating factors described above.

The proposed 100 seat restaurant could potentially achieve a high level of market support owing to the following factors:

- Excellent location, visibility, and access from US 395 and SR 120.
- Unique restaurant location that would provide panoramic views.
- Creation of restaurant market demand from the hotel portion of the proposed project.

SERVICE STATION/MINI-MART DEMAND

The proposed project would also include a service station and mini-mart. The service station/mini-mart would be located at the main entrance to the development near the existing scenic turn-out on SR 120, south of US 395.

Service Station/Mini-Mart Supply and Competition

The market area for a service station/mini-mart is geographically limited by consumer preferences purchase fuel and convenience food and other convenience within a short distance of the consumer's travel path. Location is the most important determinant in the capture of trade at service stations. When a motorist needs to purchase gasoline, he/she generally does so at the closest possible, or most convenient service station. Only gross price differences or credit card/brand name loyalty between competitive suppliers could potentially sway this general consumer preference for convenience. For this reason, the primary competition area for the proposed service station/mini-mart at its largest consists Lee Vining.

Average daily traffic (ADT) volumes on U.S. 395 and SR 120 are illustrated in Figure 5. These figures reflect ADTs, in both directions combined, counted on US 395 south of SR 120, and on SR 120 at US 395. As is evident in Figure 5, US 395 carried at least 4000 vehicles per day (vpd) and SR 120 carried at least 2300 vpd, in each year during 1987 to 1991. This traffic volume has supported three service stations in Lee Vining.

Lee Vining currently has three service station/mini-mart combinations: B-P, Chevron, and Union 76. The Blue Skies Motel also has a mini-mart, but is not considered competitive owing to its lack of a service station element. These above three service stations are located within a quarter of a mile of each other in downtown Lee Vining.

The proposed service station/mini-mart would achieve a high degree of market capture owing to its superior highway visibility and location on SR 120 and near US 395. With name-brand recognition and competitive pricing, it could attain a high percentage share of the business of motorists. The proposed project would create some demand for the service station from patrons of the proposed hotel and restaurant, and the service station itself could potentially attract business to the proposed coffee shop and gift shop.

Shift Share Analysis

Patronage of the existing service stations in Lee Vining would be shared with the new service station at the proposed project. Based on existing traffic volumes and preferred location on US 395 and SR 120, the proposed service station could be expected to capture at least a proportionate share (25 percent) of fuel and mini-market sales from existing service providers in Lee Vining.

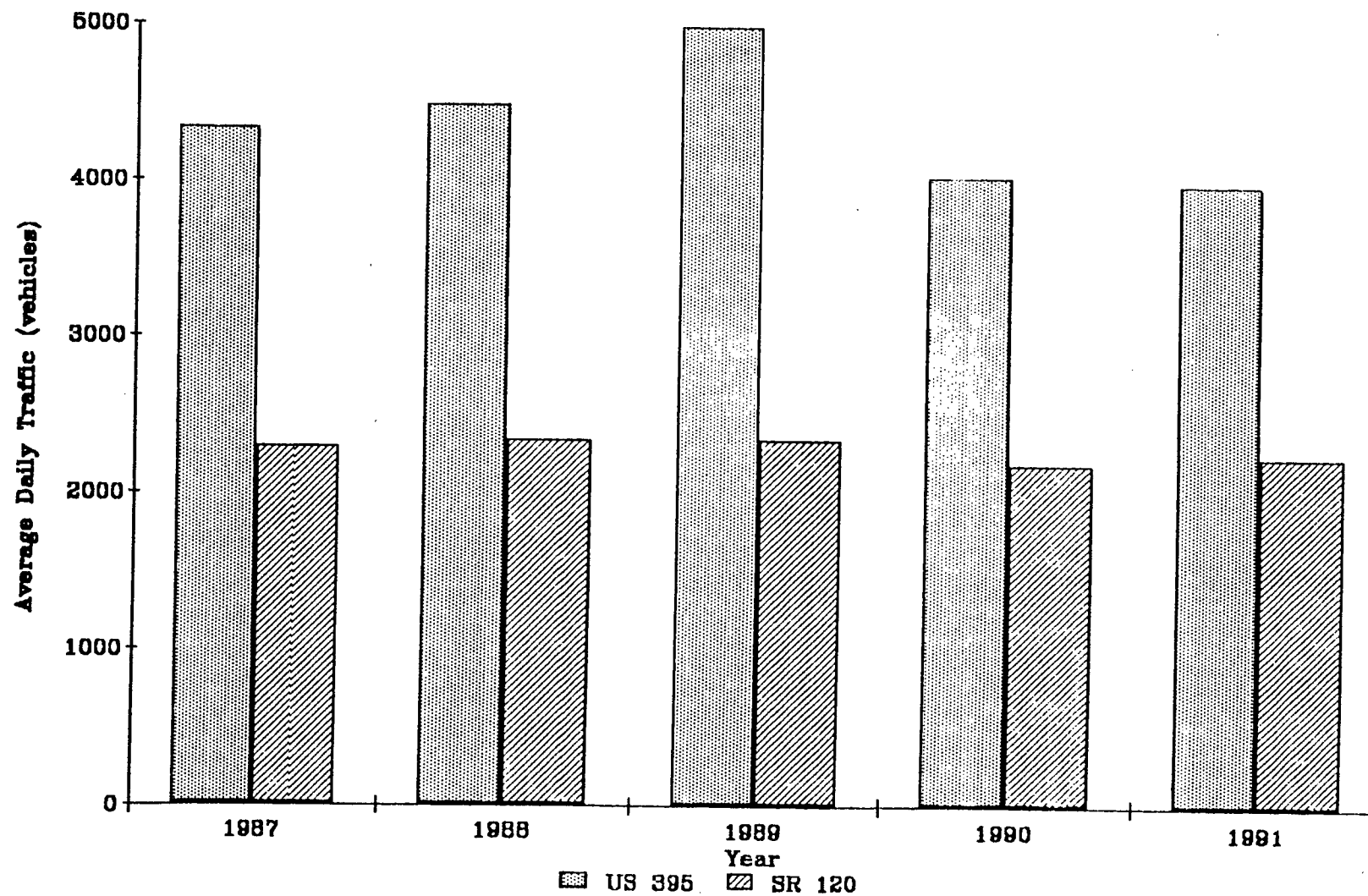
The existing service stations (B-P, Chevron, and Union 76) could potentially continue to operate at reduced shares of patronage consisting of motorists travelling north/south on US 395 and other motorists who have strong brand-name loyalty. It is also possible that one of the existing service station operators could seek to relocate at the proposed site rather than operate at 75 percent of his existing business volume.

Service Station/Mini-Mart Demand Conclusions

The proposed service station/mini-mart could attain at least a proportionate share of the trade in the Lee Vining area for the following reasons:

- Preferred location, visibility, and access from US 395 and SR 120.
- Creation of service station/mini-mart market demand by the hotel and restaurant portions of the proposed project.

Figure 5 Average Daily Traffic Volume
U.S. 395 and S.R. 120



3. FISCAL IMPACT ANALYSIS

The following fiscal analysis focuses on evaluating potential fiscal effects of the proposed project on Mono County. The analysis addresses the direct changes in revenues and public service costs resulting from the proposed project. As most of the on-site infrastructure improvement cost would be provided by future developers, on-site capital improvement costs are not included as part of this analysis. Other jurisdictions (State of California, U.S. Forest Service, etc.) could also be fiscally affected by the implementation of the proposed project. The proposed project would be expected to favorably impact the tax and revenue collection of the county.

EMPLOYMENT

The proposed project, at full build-out, would be expected to generate an estimated 108 permanent and/or seasonal jobs (see Table 4) and an undetermined number of temporary construction related jobs. Based on an average household size in the unincorporated areas of Mono County of 2.56 persons, at 100 percent occupancy the housing portion of the proposed project (ten units) could be expected to house up to 26 persons including employees of the proposed project. This additional employment would also result in generation of local sales tax and property tax revenues by the employed residents, would be a positive fiscal benefit to the county.

TABLE 4. PERMANENT AND SEASONAL EMPLOYMENT PROJECTIONS FOR THE PROPOSED TIOGA INN PROJECT

BUSINESS	EMPLOYMENT DENSITY (1)	EXPECTED EMPLOYMENT
Hotel	0.67 employees/room @ 120 rooms	80
Restaurant	0.22 employees/seat @100 seats	22
Service Station with Mini-Mart	6 employees/station	6
Total		108

(1) Average employment densities from Trip Generation (1991). Hotel employment density of 0.67 per room is average of hotel and motel densities.

Source: Trip Generation Institute of Transportation Engineers (1991), and CERTIFIED/Earth Metrics (1992).

REVENUE GENERATION

Three main sources of locally generated tax revenue in the county are property taxes (secured and unsecured), sales/use taxes, and transient occupancy tax which collectively accounted for approximately 95 percent of the total collected taxes in Mono County in fiscal year 1990-1991 (Mono County Final Budget, County Assessor's Office, 1992). The main license fees and permit fees the proposed project can be expected to generate are pool and food permits, business license fees, construction permits, and well and septic permit fees. The estimated taxes, license fees, and fees that would be generated by the proposed project are detailed below.

Property Tax Revenue

The project site (Assessors Parcel Numbers 21-08-11 and 12) has an assessed value of \$154,069 (Mono County Tax Assessor, 1992). At a property tax rate of one percent, the county currently collects \$1,541 in property tax revenue per year from the project site. The proposed project would substantially increase the assessed value of the subject property because of the addition of the proposed improvements.

Table 5 presents the estimated increase in the assessed value of the property and improvements. The estimated construction cost of the proposed project was adjusted by 25 percent to reflect an estimated assessed value of the project improvements (Mono County Assessor's Office, 1992).

The hotel portion of the project would have an estimated assessed value of approximately \$4.2 million. The restaurant and service station/mini mart together would have an estimated assessed value of \$757,000. The proposed five duplex housing units would have an estimated assessed value of \$1.2 million. The proposed project, property and improvements, at full buildout, would have an estimated assessed value of \$6.32 million and generate an estimated \$63,217 in property tax revenue in 1992 dollars.

TABLE 5. ESTIMATED PROPERTY TAX REVENUE FOR THE PROPOSED TIOGA INN PROJECT

PARCEL NUMBER	CURRENT ASSESSED VALUE	CURRENT PROPERTY TAX @ 1%
21-08-11	\$117,678	\$1,177
21-08-12	<u>36,391</u>	<u>364</u>
Subtotal	\$154,069	\$1,541

PROPOSED IMPROVEMENTS	ESTIMATED COST OF CONSTRUCTION	ADJUSTMENT (25%)	ESTIMATED PROPERTY TAX
Hotel	\$3,383,325	\$4,229,156	\$42,292
Restaurant and Service Station/mini-mart	\$605,745	\$757,181	\$7,572
Houses (Ten Units)	<u>\$945,000</u>	<u>\$1,181,250</u>	<u>\$11,813</u>
Subtotal	\$4,934,070	\$6,167,588	\$61,676
TOTAL (Existing with Improvements)		\$6,321,657	\$63,217
NET INCREASE IN PROPERTY TAX			\$61,676

Source: Mono County Tax Assessor, 1992.

CERTIFIED/Earth Metrics, 1992.

Transient Occupancy Tax

The proposed project would include a 120-room, full service hotel (see Section 2, Market Analysis). Based on market projections, the proposed hotel could ultimately be expected to achieve an average occupancy rate of 85 percent during the "summer months" of May through October. The winter occupancy rate is estimated to average 50 percent. Given an average summer room rate of \$100 per night and an average winter room rate of \$74 per night, the proposed hotel could be expected to generate approximately \$213,000 per year (1992 dollars) in occupancy tax revenue by the fifth year after opening. This figure is net additional transient tax revenue, which accounts for 10 percent shifted patronage from other existing lodging in the county (see Table 6). In the initial years if the proposed hotel were open only in the summer or extended summer season, the transient tax increment received by Mono County from the proposed Tioga Inn would be at least \$114,000.

TABLE 6. ESTIMATED TRANSIENT OCCUPANCY TAX REVENUE FROM THE PROPOSED TIOGA INN (EXPRESSED IN 1992 DOLLARS)

PERIOD	AVERAGE OCCUPANCY RATE (%)	BOOKED ROOM NIGHTS	ROOM REVENUE	TAX REVENUE AT 9 PERCENT
Summer (May-October \$100/night)	85	18,360	\$1,836,000	\$165,240
Winter (November-April) \$74/night)	50	10,860	803,640	72,328
Year One(a)	65(a)	14,040	1,404,000	
Year Two(a)	74(a)	15,984	1,598,400	
Year Three(b)	55	24,090	2,213,860	
Year Four	65	28,470	2,556,060	
Year Five and Later	67.5	29,220	\$2,639,640	\$237,568
Shifted Patronage Adjustment (-10%)				\$213,811

Notes: All revenue is expressed in uninflated 1992 dollars.

(a) Hotel open in summer season only. Occupancy is for six months.

(b) Hotel opens in winter season. Occupancy is the annual occupancy rate.

Source: CERTIFIED/Earth Metrics, 1992.

Sales Tax

The proposed project would generate additional sales tax revenue for Mono County. The county currently collects sales tax on all taxable sales at a rate of 7.25 percent. One percent of all sales generated at the project site (except hotel rooms and nontaxable food items) would return to Mono County. An additional 0.25 percent of sales generated at the project site would also return to the county in the form of transportation funds. Therefore, Mono County can expect to receive 1.25 percent of taxable sales from the project site.

The estimated sales and sales tax revenue of the proposed project are presented in Table 7. Sales tax calculations assume full project build-out of all ancillary commercial elements (i.e., gift store, service station, minimart, 100 seat restaurant and coffee shop) and are expressed in uninflated 1992 dollars, that is, as if the taxable sales were at today's prices.

TABLE 7. ESTIMATED SALES TAX REVENUE FROM THE PROPOSED TIOGA INN PROJECT

BUSINESS	ESTIMATED ANNUAL SALES (a)	COUNTY SHARE OF SALES TAX REVENUE (1.25%)
Restaurant	Hotel guests \$1,470,000	
	Other patrons <u>800,000</u>	
	Subtotal \$2,270,000	\$28,375
Service Station/ Mini-Mart	3 year average of all service stations in Mono County = \$227,400 per station + 10% adjustment	
	Subtotal <u>229,600</u>	<u>2870</u>
TOTAL	\$2,299,000	\$31,245
INCREMENT - Accounting for 25 percent shifted patronage (b)		\$28,000
- Accounting for maximum shifted patronage and relocation of one service station to Tioga Inn (c)		\$18,375

(a) Assumes full operation in year five after initial startup. Sales are expressed in uninflated 1992 dollars.

(b) Shifted patronage adjustment is applied only to "restaurant--other patrons" and "service station/mini-mart." It is not applicable to "restaurant--hotel guests" which guests are assumed to be attracted to the area because of the hotel and, therefore, do not represent patrons shifted from existing restaurants.

(c) Maximum patronage shift is defined as follows: \$800,000 per year of the proposed restaurant's trade is shifted from existing restaurants and one of the existing three service stations relocates to the Tioga Inn site.

Source: CERTIFIED/Earth Metrics, 1992.

The estimated taxable sales of the proposed 100 seat restaurant and coffee shop were calculated in two different ways: i) by restaurant patronage of hotel guests only and ii) by restaurant seating capacity and average per person meal tabs. CERTIFIED/Earth Metrics conservatively estimated that at full project buildout, the restaurant could be expected to attain nearly 100 percent of the business of hotel patrons. The average per person restaurant receipt, with appetizer, entree, and beverages, was estimated at \$8.00 for lunch and \$17.00 for dinner. The proposed restaurant could potentially generate an estimated \$1.47 million per year in gross food and beverage sales to hotel guests. Based upon seating,--two seatings or "turns" at dinner and three at lunch, 65 percent seating, and restaurant service 300 days per year,--the project restaurant could generate total receipts of \$2.27 million per year (see Table 7).

The estimated taxable sales of the proposed service station/mini-mart were calculated by averaging the per station taxable sales in Mono County from 1989 - 1991 based on State Board Equalization taxable sales data. As all service stations in Mono County do not contain mini-marts, this figure was adjusted upward by 10 percent. The proposed service station/mini-mart was estimated to generate approximately \$229,600 in sales, and \$2870 in annual sales tax revenue to the county (1992 dollars).

All of the taxable sales generated by the proposed project would not reflect "new" business or incremental sales tax in Mono County. A portion of the sales volume at the project site would represent shifted patronage from the competitors in the Lee Vining and June Lake area. CERTIFIED/Earth Metrics conservatively estimates that 25 percent of specified taxable food and retail sales of the proposed project could potentially reflect shifted patronage or spending that could have occurred elsewhere at existing outlets in the county. The sales tax figures in Table 7 were adjusted accordingly.

Several fees would be collected by Mono County. The purpose of the fees listed below is to pay for the costs of specified service provision by Mono County. Fees are summarized in Tables 8 and 9.

TABLE 8. OTHER ANNUAL REVENUE FROM THE PROPOSED TIOGA INN

FEE	UNITS	FEE PER YEAR
<u>Business Licenses</u>		
\$25 per business	3	\$75
<u>Pool Permits</u>		
\$60 per pool or spa +	1	\$60
\$50 per additional unit	1	\$50
<u>Food Permits</u>		
Variable amount based on restaurant size 100 seat restaurant = \$140 per year	1	<u>\$140</u>
TOTAL		\$325

Source: CERTIFIED/Earth Metrics, 1992.

TABLE 9. ONE-TIME FEE REVENUE FROM THE PROPOSED TIOGA INN

<u>Building Permit Fees</u>		
IMPROVEMENTS	COST OF CONSTRUCTION	PERMIT REVENUE
Hotel	\$3,383,325	\$37,924
Restaurant Gas Station/Mini-Mart	\$605,745	8,140
Homes	<u>\$945,000</u>	<u>\$12,889</u>
TOTAL	\$4,934,070	\$58,953
<u>School Impact Fees</u>		
CONSTRUCTION TYPE	SQUARE FOOTAGE	REVENUE
Commercial @ \$0.26/square foot	60,700	\$15,782
Residential @ \$1.56/square foot	<u>13,500</u>	<u>\$21,060</u>
TOTAL	74,200	\$36,842
<u>Well and Septic Permits</u>		
SYSTEM	NUMBER ON SITE	PERMIT REVENUE
Commercial Septic @ \$25 per system	1	\$25
Residential Septic @ \$50 per system	1	\$50
Commercial Well @ \$100 per Well	1	\$100
Residential Well @ \$50 per Well		<u>\$50</u>
TOTAL		\$225
Source: CERTIFIED/Earth Metrics, 1992.		

Business License Fees

Mono County would receive approximately \$75 for new business licenses see Table 8).

Pool And Food Permit Fees

The Mono County Health Department collects annual fees for pools, spas, and restaurants in the county. The current annual fee for a commercial pool is \$60 per pool or spa, plus an additional \$50 per year for each additional pool or spa. The proposed project is expected to have a pool and a spa which would generate \$110 per year in annual permit revenue.

The annual Health Department fee for restaurants varies depending on the size of the restaurant. The current fee for a 100 seat restaurant is \$140 per year (see Table 8).

Construction Permit Fees

The county collects one time construction permit fees based on the estimated construction cost of a proposed project. Table 9 presents the estimated construction costs of the proposed project at build-out and the estimated permit fee revenue. The county can expect to collect an estimated \$58,953 in construction permit fee revenue from the proposed project (see Table 9).

Well And Septic Permit Fees

The Mono County Health Department collects one time fees for private well and septic system permits, both of which are proposed as part of the project. The current health department fee for well permits is \$50 per residential well, and \$100 per commercial well. The current fee for septic systems is \$25 per residential system and \$50 per commercial system. The proposed project would have one commercial and one residential well which would generate \$150 in fee revenue. The project would have one residential and one commercial septic system, generating \$75 in fee revenue. The Mono County Health Department can expect to collect at least \$225 in one time well and septic permit fees (see Table 9).

School Impact Fees

Owing to overcrowding of many of California's schools, the state has authorized school districts to collect school impact fees from development projects. These fees are designated for the construction of school facilities and are intended to mitigate the student generation impacts of development projects. The project site is located within the boundary of the Eastern Sierra Unified School District. The district currently collects fees of \$0.26 per square foot of commercial development and \$1.56 per square foot of residential development. Table 9 shows the estimated school impact fee revenue generated from the proposed project at full buildout. At the proposed building density, the proposed project can be expected to generate approximately \$36,842 in one time school impact fee revenues (see Table 9).

Fire Impact Fees

The Lee Vining Fire Department would receive fire mitigation fees of \$0.50 per square foot of covered structure (Strazdins, 1992). The total fire mitigation fee is estimated to be \$37,100 based on a total of 74,200 proposed square feet.

TAX AND FEE REVENUE SUMMARY

Within five years at full buildout of all commercial elements, the proposed project could be expected to generate an estimated \$304,000 incrementally to Mono County in additional annual local taxes and annual fee revenues. The county could also expect an estimated \$133,000 in one time fee revenues (see Table 10). One-time fee revenues are intended to cover the cost of specified services provided by Mono County and do not, therefore, represent any budget surplus.

TABLE 10. REVENUE SUMMARY FOR MONO COUNTY FROM THE PROPOSED TIOGA INN

REVENUE SOURCE	ONE-TIME FEES	ANNUAL REVENUE	
		First Year	Fifth Year
Property Tax		\$63,217	\$63,217
Sales Tax		18,000	28,000
Transient Occ. Tax		114,000	213,000
Business Licenses		75	75
Pool Permits		110	110
Food Permits		140	140
Building Permits	\$58,953		
School Impact Fee	\$36,842		
Fire Mitigation Fee	\$37,100		
Well and Septic Permits	<u>\$225</u>		
TOTAL	\$133,120	\$195,000 (rounded)	\$304,000 (rounded)

Source: CERTIFIED/Earth Metrics, 1992.

4. PUBLIC SERVICE COSTS

FIRE DEPARTMENT

Mr. Tom Strazdins of the Lee Vining fire station was contacted to assess the potential fiscal impact of the proposed project on the fire station. The Lee Vining area is served by an all volunteer fire department. The Lee Vining area is served by one station located in town. This station is equipped with a total of three trucks including one rescue truck and two structure rigs with 35 foot ladders. The volunteer man power includes a total of 20 volunteers.

Mr. Strazdins stated that new equipment could potentially be required as a result of the proposed project. Mr. Strazdins also noted that he is familiar with the proposed project plan for Tioga Inn. Sprinklering, hydrant placement, and water storage requirements would be reviewed by the Fire Department as part of the Building Permit process. Mr. Strazdins was particularly concerned with the water system which he understood to be a private well system, not Lee Vining's municipal water system.

COUNTY SHERIFF

Lieutenant Padilla of the Mono County Sheriff's office was contacted to assess the potential fiscal impact of the proposed project on law enforcement. Police protection in the Lee Vining area is served by the Mono County Sheriff's office. Sheriff deputies based in Bridgeport routinely patrol the Lee Vining area from 8:00 A.M. to 12:00 P.M. The area employs a residential deputy system where local residents are on-call for any potential law enforcement needs 24 hours per day. These deputies are reimbursed on a per call basis. The Sheriff's office currently utilizes two residential deputies in June Lake and one in Lee Vining. Calls in the area are generally for family disturbances and bar fights. Calls for disturbances at local hotels is generally very light (Padilla, 1992).

Lt. Padilla did not foresee any need for additional personnel, equipment, or patrolling resulting from the proposed project.

SCHOOLS

Mr. Rick Miller, Superintendent of the Eastern Sierra Unified School District, was contacted to determine the potential fiscal impact of the proposed project on schools. The Lee Vining area is served by the Eastern Sierra Unified School District which administers Lee Vining Elementary and Lee Vining High School. The high school currently enrolls approximately 51 students and has no capacity problem. The elementary school currently enrolls approximately 120 students and is close to capacity (Miller, 1992).

At an average student generation rate of 0.4 students per household (grades K-6), the proposed 10 housing units would be expected to generate approximately four new elementary students. Also, a portion of the estimated permanent employment generated by the proposed project could potentially represent new residents to the community and, hence, children of these employees of the proposed project could add to the current school enrollment. If this student generation falls mainly in the elementary grades, Lee Vining Elementary may experience overcrowding.

Mr. Miller noted that at a worst case scenario, the proposed project may cause the school district to employ a portable classroom at the elementary school. It is expected that the district collected developer fees (\$36,842) would pay for the proposed project's fair share of any portable classroom additions. Mr. Miller also noted that the project applicant may enter into negotiations with the district to pay for any additional classroom needs resulting from the proposed project.

OTHER COUNTY SERVICES

Because the vast majority of the proposed project would consist of visitor serving commercial uses, the impact to other county services would be expected to be minimal. While any addition to the permanent population to the area would generate incremental costs to county services, these costs are considered to be too small to quantify.

COST SUMMARY

The proposed project could potentially generate net revenue in excess of public services costs to Mono County and the Mono County School District. Fire and police protection services do not anticipate any quantifiable increase in the cost of providing services to the Lee Vining area. Although the project could potentially create, as a "worst case," the need for a portable classroom at Lee Vining Elementary, developer fees and/or developer negotiation with Eastern Sierra Unified School District could mitigate the cost of such a portable classroom. Any incremental costs of additional county services resulting from permanent population increases would be considered minimal.

5. SHORT-TERM BENEFITS VERSUS LONG-TERM PRODUCTIVITY

SHORT-TERM BENEFITS

The proposed project could potentially have a number of short-term benefits to the county. The construction of the proposed project would bolster the local building industry and generate a substantial number of construction jobs. The increased construction activity would in turn fuel local retail sales in Lee Vining as construction workers patronize local shops, restaurants, and service stations. The proposed project would also generate an estimated \$133,000 in one-time permit and fee revenue to Mono County (1992 dollars).

LONG-TERM BENEFITS

The proposed project could also have a substantial number of long-term benefits to the county. At full buildout, the proposed project would generate approximately 100 permanent or seasonal jobs, and provide housing for approximately 26 residents. This estimated permanent and seasonal employment could further stimulate the local economy.

The county could also expect a net increase in tax and fee revenues if the project were implemented (see above). In each year after opening tax and fee revenues to the county would exceed the estimated cost of providing county services to the project.

6. SOCIOECONOMIC IMPACTS

According to CEQA guidelines, economic or social effects of a project shall not be treated as significant effects on the environment. Only by linking a socioeconomic impact to a physical change in the environment, can this type of impact be considered significant under CEQA guidelines.

The proposed project is demonstrated herein to have a net positive effect on the economic and social condition of the county. As discussed above, the proposed project could generate tax and fee revenues in excess of services costs to the county. The proposed project would include 10 housing units which would house approximately 26 persons. With an estimated employment of 108 persons at build-out, the proposed project could be expected to stimulate the local economy through local spending by the project employees. This statement applies even allowing for hiring of current residents of Mono County who are unemployed or underemployed.

One negative socioeconomic aspect of the proposed project could be the perception of local businesses that the proposed project would detract from their business. In fact, the proposed hotel and restaurant would not be economically viable if they did not attract new patrons to the area. This analysis estimates that the proposed hotel would derive no more than 10 percent of its booked room nights from patronage shifted from local lodging. The proposed restaurant would derive no more than 25 percent of its trade from patronage shifted from competing restaurants in the primary market area.

From the perspective of owners of existing lodging, restaurants, and other retail outlets in the primary market area, potential reductions in business volume can be expected to be small and short-term. For the existing service stations, relocation of one of the three existing outlets to the proposed project site is considered; relocation would have no adverse socioeconomic consequence. For the existing eating places, three percent for each business is estimated; and for each lodging facility, three percent or no reduction is estimated. Business failures are not forecast.

In the long-term (after five years of opening) the project could have a net positive benefit on the local economy. A portion of Tioga Inn guests could patronize the shops, restaurants, and service stations in nearby Lee Vining and June Lake, who otherwise might not have stopped in the area. Under CEQA guidelines competition and potential for shifted patronage are not to be considered as adverse environmental impacts.

7. ALTERNATIVE PROJECT PHASING

The applicant has tentatively proposed a phasing plan as follows:

- Phase 1: hotel
- Phase 2: portion of housing
- Phase 3: service station/mini-mart
- Phase 4: portion of housing
- Phase 5: restaurant

By implementing the proposed project in the Applicant's Phasing Plan, competing restaurant, service station and mini-mart businesses in the primary market area could potentially be less affected than if all were project elements were implemented concurrently. In Phases 1 and 2 (above), the primary beneficiaries of the applicant's phasing concept would be local restaurants and service stations. In Phases 3 and 4, the primary beneficiaries would be local restaurants.

The Applicant's Phasing Plan may not be practical from the perspective of hotel viability. Restaurant service would most certainly be a requisite to the financial success of the proposed hotel. Also, related to the success of the hotel, provision of less than full-service lodging could potentially result in reduced occupancy rates and room rates, reductions which could also translate into reduced tax and fee revenues.

Alternatives to the Applicant's Phasing Plan were considered. In Alternative Phasing #1, hotel, restaurant, and housing elements of the proposed project would be constructed concurrently exclusive of the proposed service station/mini-mart and coffee shop, which would be constructed later. The alternative phasing concept could provide essential services demanded by patrons of high-end lodging accommodations, and create additional demand for highway commercial services in Lee Vining. Tax and fee revenues would be reduced to approximately \$170,000 per year in the first years after opening from the \$195,000 per year estimated for the complete "build-out" project.

In Alternative Phasing #2, the service station/mini-mart and coffee shop would be constructed later after the hotel, restaurant, and housing. The hotel would be constructed in two phases, hypothetically of 60 rooms each. Room rates in phase one could potentially be increased slightly, and occupancy rates would increase, compared to the room rates and occupancy rates documented herein in this report for the 120 room hotel. Alternative Phasing #2 could have minor benefits for the existing local lodging facilities and for Mono County. Phase one (60 rooms) would place the proposed Tioga Inn on a scale more similar to that of existing lodging facilities. The proposed hotel could nevertheless target patrons of higher-end accommodations. Tax and fee revenues would be reduced in phase one to approximately \$100,000 per year from the \$195,000 per year estimated for the complete project. Property value and tax increment on the subsequent second phase could potentially be assessed at somewhat higher levels, to the potential fiscal benefit of Mono County.

APPENDIX E1

2017 SGSI Well Test Technical Memorandum



ENVIRONMENTAL • GEOTECHNICAL • GEOLOGY • HYDROGEOLOGY • MATERIALS • MINING

July 18, 2017

SGS Job No: 3.31393

Dennis Domaille
Tioga Gas Mart
22 Vista Point Drive
Lee Vining, CA 93541

Subject: **TECHNICAL MEMORANDUM**
Pumping Test Results
Tioga Gas Mart Water-Supply Well
Lee Vining, California 93541

Reference: Kleinfelder, 1992, "Modified Phase I Groundwater Resources Assessment and Review of a Fault Investigation Report for the Tioga Inn Specific Plan, Lee Vining, California, August 21.

Mr. Domaille:

Pursuant to your request, Sierra Geotechnical Services, Inc. (SGS) is pleased to present this Memorandum regarding our pumping test of your existing domestic water well located at the Tioga Gas Mart, Lee Vining, California.

Introduction

Provided herein is a summary of the findings and results of a recent pumping test conducted by Sierra Geotechnical Services, Inc (SGS) in an existing domestic water well at the Tioga Gas Mart (TGM), which is located approximately 2,340 ft southeast of the intersection of Highway 120 and Highway 395 near the town of Lee Vining in Mono County, California. Figure 1, "Well Location Map," illustrates the location of the subject well. In addition, and at the request of Mono County Planning Department representatives, water levels in a nearby observation well were also monitored during the pumping test of the subject water well; the location of this offsite well is also shown on Figure 1. This offsite water well, the Winston Well, which is at the site of a former Union 76 fueling station, has reportedly never been placed into service; the SGS geologist observed conditions that indicate this offsite well has not been used for many years.

Well Construction Data and Prior Testing Information

Pumping Well

The pumping well for the subject recent pumping test was constructed in 1984 by Maranatha Drilling & Pump Service of Bishop, California using the direct mud-rotary drilling method. A copy of the State of California Department of Water Resources (DWR) Water Well Driller's Report (also known as a driller's log; State Well Completion Report No. 231900) is provided in the Appendix.

Key construction details for this pumping well include:

1. The casing is 8 5/16 inches outside diameter (OD) and it has a wall thickness of 0.188 inches. The casing was set to a reported total depth of 600 ft below ground surface (bgs).
2. The perforations were placed continuously between the depths of 380 to 580 ft bgs, and consist of 1/8-inch wide by 3-inch long slots. The type of perforations (i.e., louvers, or machine-cut horizontal or vertical slots) was not documented on the driller's log.
3. It is unknown what type of steel was utilized for the well casing, as this was not documented on the driller's log. However, SGS observed that the above ground portion of the casing appeared to be low carbon steel (LCS).
4. The gravel pack is "3/8-inch" gravel and it was placed in the annular space between the well casing and the 12 5/8-inch diameter borehole walls, between the depths of 42 ft and 600 ft bgs.
5. The driller's log reports that a sanitary seal was installed to a depth of 42 ft bgs, and it consisted of a concrete slurry in the annular space around the outside of the upper portion of the well casing.
6. The only information available for the earth materials encountered during drilling of the well is the driller's generalized descriptions of the drill cuttings. The earth materials logged by the driller on the DWR log included layers of tan clay and sand from 0 to 10 ft bgs, a mix of cobbles, boulders, and granite from 10 to 410 feet bgs, and fractured granite, gravel, and boulders from 410 to 630 feet bgs.
7. The pump intake in this well is set at a depth of 598 ft and is a submersible type of pump.

Flow data listed on the driller's log dated July 1984 included the following:

8. A maximum airlift rate of 150 gpm created a maximum "airlift pumping water level" (APWL) of 600 ft after four hours of airlifting. This airlift method of "pumping" does not provide accurate pumping rates and resulting "pumping" water levels cannot be determined.
9. The data for static water level (SWL) was 340 ft at that time.
10. No information is available for the original specific capacity for this well because no actual test pumping or pumping tests were conducted.

Observation Well

The observation well is known as the “Winston” well and, based on field examination of the wellhead by SGS, the above ground portion of the well consists of 6-inch PVC casing. The observation well was constructed in 2005 by Maranatha Drilling & Pump Service of Bishop, California using the direct mud-rotary drilling method and is located approximately 3,600 ft northwest of the pumping well (see Figure 1). A copy of the State of California Department of Water Resources (DWR) Water Well Driller’s Report; State Well Completion Report No. 0912020 is provided in the Appendix. Key construction details for this pumping well include:

1. The casing is schedule 200 PVC with an inside diameter (ID) of 6 inches and a wall thickness of 0.305 inches. The casing was set to a reported total depth of 630 ft below ground surface (bgs).
2. The perforations were placed continuously between the depths of 300 to 630 ft bgs, and consist of 0.0625-inch wide slots. The type of perforations was not documented on the driller’s log.
3. The gravel pack is “3/8-inch pea gravel”, which was placed in the annular space between the well casing and the 9 7/8-inch diameter borehole walls, between the depths of 50 ft and 630 ft bgs.
4. The driller’s log reports that a sanitary seal was installed to a depth of 50 ft bgs, and it consisted of a concrete slurry in the 12 ¼-inch annular space around the outside of the upper portion (50 ft.) of the well casing.
5. The only information available for the earth materials encountered during drilling of the well is the driller’s generalized descriptions of the drill cuttings. The earth materials logged by the driller on the DWR log included layers of granite boulders and sand from 0 to 85 ft bgs, a mix of small boulders, sand and clay from 85 to 150 feet bgs, brown clay and loose gravel from 150 to 275 ft bgs, “real sticky” brown clay from 275 to 325 ft bgs, sand and a “little bit” of brown clay from 325 to 400 ft bgs, hard granite with little brown clay from 400 to 510 ft bgs and, hard brown clay and small rocks from 510 to 665 ft bgs.
6. There is no pump installed in this well.

Flow data listed on the driller’s log dated 3/25/2005 included the following:

1. A maximum airlift rate of 28 gpm created a maximum APWL of 630 ft after eight hours of airlifting. This airlift method of “pumping” does not provide accurate pumping rates and resulting “pumping” water levels cannot be determined.
2. The static water level was 380 ft. at that time.
3. No information is available for the original specific capacity for this well because no actual test pumping or pumping tests were conducted.

Previous Pumping Test Work – TGM Well

An initial extended step drawdown test was performed on the TGM well by Kleinfelder (1992) on June 24 to June 25, 1992. The first two steps were pumped continuously for two hours, while the third step was continuously pumped for nearly 21¾ hours. Average pumping rates of 38, 91 and 132.5 gpm were reported by Kleinfelder for their step test. Pumping data from the 1992 dated step drawdown test included the following data:

1. The initial pre-test SWL was 339 ft bgs.
2. The calculated specific capacities of the well were 11.14 gpm per foot of water level drawdown (gpm/ft dd), 9.00 gpm/ft dd, and 7.52 gpm/ft dd, respectively.
3. The transmissivity (T) of the aquifer was reported to be 15,600 gallons per day per foot of saturated thickness (gpd/ft). Apparently, a boundary effect was encountered during the test, after which the T was reported to be 31,800 gpd/ft.
4. Based on the testing, Kleinfelder recommended a final pumping rate of 400 gpm.

Results of Recent Pumping Test

The subject TGM well test was a constant rate pumping test. For this test, both the TGM well and the offsite water level observation well were equipped with a pressure transducer that was installed by a SGS geologist, in order to continuously record changes in water levels before, during, and after the test. In addition, occasional manual water level measurements were collected by the SGS geologist during the test, using a hand-held water level sounding device. In the pumping well (i.e., the existing domestic-supply well at the Tioga Gas Mart), the reference point (rp) for all water levels was 0.43 ft above ground surface (ags); whereas in the offsite observation well, the rp was 1.3 ft ags. The water level pressure transducers were installed to an approximate depth of 440 feet below the wellhead reference point (brp) in the TGM well, and to an approximate depth of 450 ft brp in the water level observation well. The manual and pressure transducer water level measurements have been corrected to ground surface herein. Pumping of the subject TGM well was performed using the existing pump, the pump intake for which was reportedly set at a depth of 598 ft bgs.

Based on the results of the previous step drawdown test by Kleinfelder (1992) and maximum pumping capacity of the existing pump, a nominal test pumping rate of 100 gpm was selected by SGS for the constant rate pumping test. This test was performed on May 16 and 17, 2017, for a continuous duration of 24 hours (1,440 minutes). Figure 2, "Water Levels During Constant Rate Pumping Test," illustrates the water level changes in both the pumping well and the observation well during the constant rate testing period. A summary of the key test data is as follows:

1. A pre-test SWL of 351.5 ft brp was measured in the TGM well by SGS prior to the startup of the test.
2. After 24 hours (1,440 minutes) of continuous pumping at an average rate of 102 gpm, a maximum PWL depth of 388.9 ft brp was recorded in the TGM well; this resulted in a maximum water level drawdown of 37.4 ft.
3. The current specific capacity of the well for this 24-hour constant rate test is calculated to be 2.73 gpm/ft dd. This is significantly lower than the specific capacities calculated during the 3-point step drawdown test in this well by Kleinfelder in 1992 (11.14 gpm/ft dd, 9.00 gpm/ft dd, and 7.52 gpm/ft dd), respectively.
4. The transducer installed in the observation well recorded no changes in water levels, i.e., no drawdown impacts were monitored/recorded by the pressure transducer in the offsite "Winston" well (see Figure 2). SWL was 349.5 ft brp.

No adverse field observations concerning water clarity, entrained air, and/or sand content were noted in the TGM well by the SGS geologist during the constant rate test (i.e. pumped water was clear and no entrained air or sand was observed during the pump test). The owner states that no sand has been found in his water storage tanks from the pumping of this well. This was not investigated by the SGS geologist.

A final water level recovery measurement was recorded by SGS on May 18, 2017, approximately 25 hours following the cessation of the pumping portion of this test. This final water level measurement in the TGM well was reported to be 352.2 ft brp; this water level is 0.2 ft deeper than the pre-test SWL.

Summary and Conclusions

The TGM well is cased to a depth of 600 ft with a nominal 8-inch diameter steel casing. Perforations were reportedly installed from depths of 380 to 580 ft bgs; a 20-foot section of blank cellar casing lies below the perforated casing. A 42-foot deep cement sanitary seal was reportedly emplaced for the existing well.

A constant rate pumping test was performed to determine the amount of water level drawdown that would be induced in the TGM well, which was pumped at an average rate of 102 gpm for a continuous pumping period of 1,440 minutes. Pumping at this rate yielded a PWL of 388.9 ft brp. Based on a pre-test SWL of 351.5 ft bgs, a maximum drawdown of 37.4 ft was created in the TGM well.

The current and long-term specific capacity of the TGM well for this 24-hour constant rate test is

calculated to be 2.73 gpm/ft dd. This current value is significantly lower than the specific capacities calculated during the short-term step drawdown tests by Kleinfelder in 1992.

Water levels were also measured in the offsite “Winston” observation well. During the 24-hour constant rate pumping test of the TGM well, no water level drawdown interference was recorded in Winston well.

The maximum PWL in the TGM well was at a depth of 388.9 ft bgs at the end of the 24-hour pumping test. This maximum is slightly below the depth to the top of the uppermost perforation interval in this well (the perforations begin at a depth of 380 ft bgs). Consequently, cascading water conditions did occur during testing, and such conditions should be anticipated to occur again in the future during normal operation of the well and, especially, during extended periods of pumping. Cascading groundwater can and likely will become aerated (i.e., it will contain entrained air). As a result, and over extended periods of time, cavitation of and damage to the pump could occur, and there will be an increase in the amount of and frequency for well rehabilitation in the future. Aerated water increases the opportunity for buildup of chemical precipitates and/or biological growths/slimes on the perforations and gravel pack. When this buildup occurs, the resultant clogging of the perforations and gravel pack will cause the specific capacity of the well to decline, the pumping levels will decline, pump parts will wear, and pumping costs will increase.

The Tioga Gas Mart well presently has the capacity to pump at a sustained rate of 100 gpm, even with the cascading effect. Over time the rate could diminish somewhat due to deterioration as previously noted.

Recommendations

Based on the foregoing, we recommend the following:

1. Measurement and recording of SWLs, PWLs, pumping rates and pumped volumes should be performed monthly for the first year for baseline determination; quarterly monitoring can be performed thereafter.
2. The pump should be removed and a video survey performed to determine the degree of corrosion and the buildup of organic material and/or precipitates in the perforated intervals. The video survey too, will help determine the current depth of the sediment fill in the bottom of the casing.
3. Monitoring for possible pumping of sand should also be performed on a semi-annual basis.

Thank you for this opportunity to provide this service. If you have any questions regarding this Technical Memorandum, please contact us.

Respectfully,
SIERRA GEOTECHNICAL SERVICES, INC.



Dean Dougherty, Vice President
Environmental Professional, PG 6497



Roger Smith
Senior Groundwater Geologist

Attachments:

Figures 1 & 2

TO LEE VINING

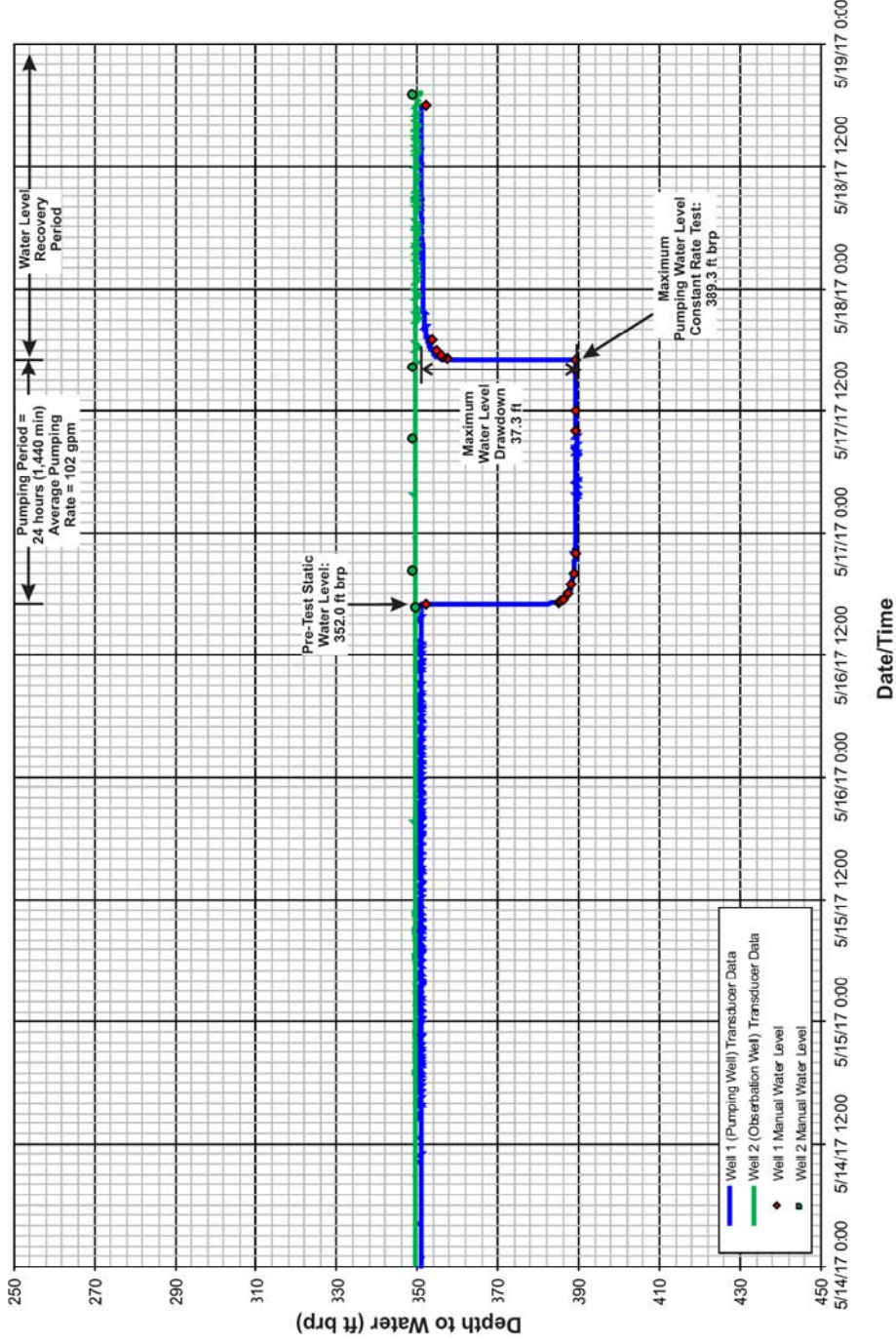
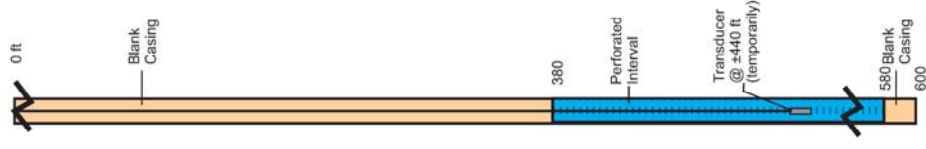


TO YOSEMITE

TO MAMMOTH LAKES

PROJECT:	LOCATION MAP		
	TIOGA GAS MART WATER WELL		
SOURCE:	GOOGLE EARTH IMAGE 26 JUNE 2016		
SCALE:	1"=1000'	DATE:	JULY 18, 2017
DRAWING:	FIGURE 1.DWG	DRAWN BY:	DD
JOB NO.:	3.31393	TITLE:	FIGURE 1

Well Schematic



PROJECT: WATER LEVELS DURING CONSTANT RATE TEST	
TIOGA GAS MART WATER WELL	
SOURCE: TIOGA GAS MART WELL NO. 1 LEE VINING, CALIFORNIA	
SCALE: N/A	DATE: JULY 18, 2017
DRAWING: FIGURE 2.DWG	DRAWN BY: DD
JOB NO: 3.31393	TITLE: FIGURE 2

APPENDIX E2

2019 SGSI Supplemental Technical Memorandum



GEOTECHNICAL • GEOLOGY • HYDROGEOLOGY • MATERIALS TESTING • INSPECTION

Dennis Domaille
Tioga Gas Mart
22 Vista Point Drive
Lee Vining, CA 93541

March 25, 2019

Subject: **VIDEO MONITORING RECOMMENDATIONS OF OLDER WELL**
Tioga Gas Mart Water Well
Lee Vining, California

Reference: **TECHNICAL MEMORANDUM**
Pumping Test Results
Tioga Gas Mart Water-Supply Well
SGSI Project Number 3.31393; Dated July 18, 2017

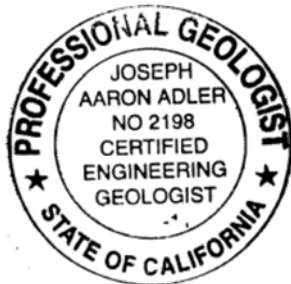
Within our 2017 memorandum, SGSI as part of a rehabilitation program, recommended that the pump within the existing well be removed and a video survey be performed to determine the degree of corrosion and the buildup of organic material and/or precipitates in the perforated intervals (Page 6, Recommendations Section, Bullet Point #2). At the time, this statement was intended as a mitigation measure. However, since issuance of the memorandum, a new well has been installed which relegates the subject well to a backup/redundancy position. Therefore, the statement may be considered as a recommendation and not a required measure. The owner shall be aware that without a survey, and/or rehabilitation the life span of the subject "older" well could be diminished.

We appreciate the opportunity to be of service to you. Should you have any questions regarding this report, please do not hesitate to contact us.

Respectfully,

SIERRA GEOTECHNICAL SERVICES, INC.

Joseph A. Adler
Principal Geologist
CEG 2198 (exp 3/31/2021)



Thomas A. Platz
Principal Engineer
PE C41039 (exp 3/31/2021)



APPENDIX F

**Peer Review of 2017 SGSI Well Test Memorandum
By Resource Concepts Inc.**



Resource Concepts Inc

Engineering • Surveying • Water Rights
Resource & Environmental Services

www.rci-nv.com

CARSON CITY OFFICE
340 N. Minnesota St.
Carson City, NV 89703-4152
Ph: (775) 883-1600
Fax: (775) 883-1656

Memorandum

DATE: November 1, 2018
TO: Michael Draper, Mono County Community Development
FROM: Reed A. Cozens, Resource Concepts, Inc.
PROJECT: Mono County Community Development
SUBJECT: Third Party Review- Aquifer Pump Test Technical Memo

Resource Concepts, Inc. (RCI) has reviewed the technical memorandum prepared by Sierra Geotechnical Services, Inc. (SGS). This memo details an aquifer pump test associated with the Tioga Gas Mart well (TGM well), located in Lee Vining, California. In this review evaluations were made regarding the data and conclusions presented in SGS's memo.

This pumping test was carried out to determine:

1. The hydraulic properties of the aquifer.
2. Water level changes in the aquifer because of groundwater pumpage.

The data evaluated included, but were not limited to: aquifer transmissivity, storage coefficient, confining layers, natural boundary conditions, well efficiency, and pumping rates used during the test.

General Observations

The subject aquifer pump test was performed in May 2017 to evaluate potential impacts of the Tioga Gas Mart's expansion on the town of Lee Vining's water supply wells, and/or the springs that feed Mono Lake. An observation well (also known as the Winston well,

located approximately 3,600 feet to the northwest of the TGM well) was used to record the static water level changes as a result of pumping from the TGM well.

Data Evaluation

Subject (Pumped Tioga Gas Mart) Well: The subject well is an 8-inch cased well, drilled to a depth of 600 feet. In the spectrum of western state water wells, this is a small to mid-sized well in diameter but drilled deeper than the average domestic or small-scale commercial well.

Well capacity is governed by aquifer characteristics and pump performance. According to the SGS memo the subject TGM well is capable of a sustained rate of pumping at 100 gallons per minute. Again, in the spectrum of western state water wells this discharge rate is approximately three times greater than the average domestic well, but in-line with the proposed commercial operation. If consistently pumped at 100 gpm the TGM would extract approximately 160 acre-feet over the course of one year.

Observation well (Winston Well): The location of the observation well (Winston well) is located approximately 3,600 feet to the northwest of the subject well. Based upon the well information provided in the SGS memo, this well is similarly screened and reaches the same water bearing formations within the aquifer as the TGM well. It would have been preferable to have utilized an observation well at a closer radial distance to the TGM well. However, there appears to be limited available wells in the area to choose from.

Pumping rates. During the SGS aquifer pump test a steady rate of 102 gallons per minute was used. In our professional experience, this is a reasonable diversion rate for aquifer evaluation at this location.

Length of test: The SGS constant rate test of the TGM well was performed for 24-hours. This is a common duration for aquifer pumping tests, and 24-hours is considered acceptable for a test of this type. As a rule, during a pump test drawdown equilibrium at the pumping well should be sought, with test pumping continued for an equivalent amount of time or greater. Data in the SGS memo indicates that these conditions were met and exceeded.

Aquifer transmissivity. This unit is directly proportional to the aquifer's capacity to transmit water. A practical understanding dictates that the higher the transmissivity value, the farther away the effects of the groundwater pumping will be observed.

Through a report completed in 1992 by Kleinfelder Engineering Company (Kleinfelder), the SGS memo references the aquifer transmissivity of the subject well. The estimated transmissivity value at this location is 15,600 gallons per day per foot of saturated thickness (gpd/ft); and after an unidentified condition change, is calculated at 31,800 gpd/ft. These figures should be considered low on the regional scale, and reasonably correspond with the gravel and coarse sand soil types likely to found in the alluvial fan of the Mono Lake Basin.

Confining layers: Based upon the well information provided in the SGS report there does not appear to be a significant confining layer formation at the TGM well location. However, in the observation well (Winston well), the well log shows strata of clay and granite, which are the primary confining materials in the region. As a result, this portion of the observation aquifer may be partially confined. Additionally, Kleinfelder identified a transmissivity change that further corroborates this assumption. Typically, confining conditions result in greater impacts to nearby wells, if they intercept the same water bearing formation(s).

Storage Coefficient (also known as Storativity): This unitless term was not addressed in the SGS memo. However, as a general rule, this unit is more appropriate to define conditions associated with confined aquifers, as opposed to unconfined aquifers. RCI concurs that the calculation of a storage coefficient is not germane to this aquifer pump test and that its absence does not affect the conclusions of this memo.

Natural Boundary Conditions: Lee Vining Creek is located approximately one-half mile north of the subject well, and one-tenth of a mile south of the observation well. It is likely that Lee Vining Creek interacts with the aquifer(s) underlying its channel. However, the effects of this water feature were not discussed within the SGS memo. A more detailed analysis would be necessary to determine how much, if any, stream depletion occurs from

Lee Vining Creek as a result of pumping the TGM well. Additional boundary conditions include the Sierra to the west and Mono Lake to the east. Both of these features are outside the radius of impact for this pump test.

Well Efficiency: The SGS memo did not report any well efficiency data.

Overall Evaluation

Overall the SGS memorandum was found to be reasonable and technically sound. The Tioga Gas Mart well is not particularly large in either size or capacity; and appears to be situated in a location without obvious conflicts. With this said, the Tioga Gas Mart well is not expected to have a measurably significant impact on Lee Vining's water supply wells or on the springs that feed Mono Lake; however, the location of any specific feature of concern was not identified within the SGS memo.

Of all the options available to evaluate an aquifers characteristic and/or the effects of groundwater pumping, nothing can match the observational insights of a properly performed aquifer pump test. However, if the goal is to manage a limited amount of water, then the findings of these tests should be coupled with effective water use regulations and administrative policies. With over forty years of experience in water rights and environmental services, RCI would be happy to further discuss the solutions they have seen work within the surrounding region. Please do not hesitate to contact us should you have any questions or comments. Thank you.

APPENDIX G

SGSI Response to Peer Review



GEOTECHNICAL • GEOLOGY • HYDROGEOLOGY • MATERIALS TESTING • INSPECTION

Dennis Domaille
Tioga Gas Mart
22 Vista Point Drive
Lee Vining, CA 93541

December 7, 2018

Subject: **RESPONSE TO REVIEW COMMENTS**
 Tioga Gas Mart Water Well
 Lee Vining, California

Reference: **RCI THIRD PARTY REVIEW MEMORANDUM**
 Tioga Gas Mart Well
 November 1, 2018

Included herein is our response to the third-party review comment regarding the potential loss of water from Lee Vining Creek, from groundwater well pumping at the project site. Comments are listed below, followed by our response.

Comment: *RCI Memo, Page 3 – Natural Boundary Conditions:* Lee Vining Creek is located approximately one-half mile north of the subject well, and one-tenth of a mile south of the observation well. It is likely that Lee Vining Creek interacts with the aquifer(s) underlying its channel. However, the effects of this water feature were not discussed within the SGS memo. A more detailed analysis would be necessary to determine how much, if any, stream depletion occurs from Lee Vining Creek as a result of pumping the TGM well.

Response: Water flows in Lee Vining Creek are controlled mostly by Southern California Edison (SCE) and Los Angeles Department of Water and Power (LADWP) releases from the upstream reservoirs. Minimum water flows are legally required (Decision D1631; SWRCB Order 98-05) to be maintained in the Creek. At present, min-max flows are required between 25 to 35 cfs depending on time of year and snowpack.

The following simple mathematical model expresses the potential effect on Lee Vining Creek from groundwater pumping at the site. Modeling does not consider variables such as distance from the creek, geology, transmissivity, or usage (which will be greatly reduced during winter months and at night) which would further reduce any potential impacts on the creek from pumping.

Assumed Flow Rates

102 gpm constant rate flow from Tioga Well.
25 cfs daily required minimum flow.

Daily Effect

102 gpm x 60 min x 24 hours = 146,850 gpd.
146,850 gpd = 0.23 cfs
0.23cfs/25cfs = 0.9 percent daily usage

Annual Effect

146,850 gpd X 365 days = 53,600,250 gpy.
25 cfs = 16,154,761 gpd = 5,896,487,765 gpy
53,600,250gpy/589,648,740gpy = 0.9 percent yearly usage

Based on the values calculated, the potential for stream depletion on Lee Vining Creek from pumping of the well, is considered negligible (<1-percent). The values would be further reduced if distance, geology, transmissivity, and usage were considered.

References

<https://www.monobasinresearch.org/data/mbrtdframes.htm>

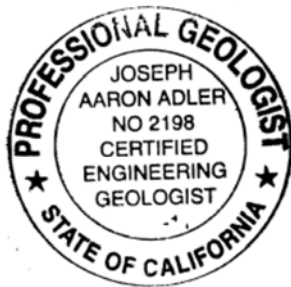
We appreciate the opportunity to be of service to you. Should you have any questions regarding this report, please do not hesitate to contact us.

Respectfully,

SIERRA GEOTECHNICAL SERVICES, INC.



Joseph A. Adler
Principal Geologist
CEG 2198 (exp 3/31/2019)



Thomas A. Platz
Principal Engineer
PE C41039 (exp 3/31/2019)



APPENDIX H

LRWQCB Withdrawal of NOP Request for a Jurisdictional Delineation

LRWQCB WAIVER OF REQUIREMENT FOR JURISDICTION DELINEATION (25 May 2018)
Tioga Workforce Housing Project

From: Zimmerman, Jan@Waterboards <jan.zimmerman@waterboards.ca.gov>
Sent: Friday, May 25, 2018 11:18 AM
To: Gerry LeFrancois <glefrancois@mono.ca.gov>
Cc: Copeland, Patrice@Waterboards <patrice.copeland@waterboards.ca.gov>; Steinert, Tiffany@Waterboards <Tiffany.Steinert@Waterboards.ca.gov>
Subject: RE: Tioga Inn Project SP amendment in Lee Vining

Gerry, I will leave that up to you. If you are confident that work will not occur in or disturb wetlands or other surface water resources, then that is your call. However, if we inspect and suspect that resources are onsite and being impacted by the project, then we will require a delineation at that time. Hope that helps!

Jan Zimmerman, P.G. #8392
Senior Engineering Geologist
Lahontan Regional Water Quality Control Board
760/241-7376
<http://waterboards.ca.gov/lahontan/>

From: Gerry LeFrancois [<mailto:glefrancois@mono.ca.gov>]
Sent: Tuesday, May 22, 2018 10:35 AM
To: Zimmerman, Jan@Waterboards <jan.zimmerman@waterboards.ca.gov>
Cc: Copeland, Patrice@Waterboards <patrice.copeland@waterboards.ca.gov>
Subject: Tioga Inn Project SP amendment in Lee Vining

Hi Jan. I was wondering if there is any way to **not** do a wetlands determination study for this project. There is no surface water or meadow areas on the parcels involved for the Tioga Inn Specific Plan amendment. The CEQA consultant feels time and effort would be better spent on other project issues and/or concerns. Staff agrees.

I am happy to give you a project tour if you or someone from your office is up this way! Please let me know your thoughts. Thank you.

Gerry L.

Gerry Le Francois
Principal Planner Mono County CDD
760.924.1810 (office)

APPENDIX I

**Biological Resource Assessment by
James Paulus, Ph.D.**

Tioga Inn Project Assessment of Biological Resources

December 30, 2018 DRAFT

prepared by:
Jim Paulus, Ph.D.
consulting biologist
P.O. Box 2657
Oakhurst, CA 93644

prepared for:
Bauer Planning and Environmental, Inc.
Sandra Bauer, Principal
1271 Tropicana Lane
Santa Ana, CA 92705

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Tioga Inn Project Assessment of Biological Resources

December 30, 2018 DRAFT

prepared by:

Jim Paulus, Ph.D.
consulting biologist
P.O. Box 2657
Oakhurst, CA 93644

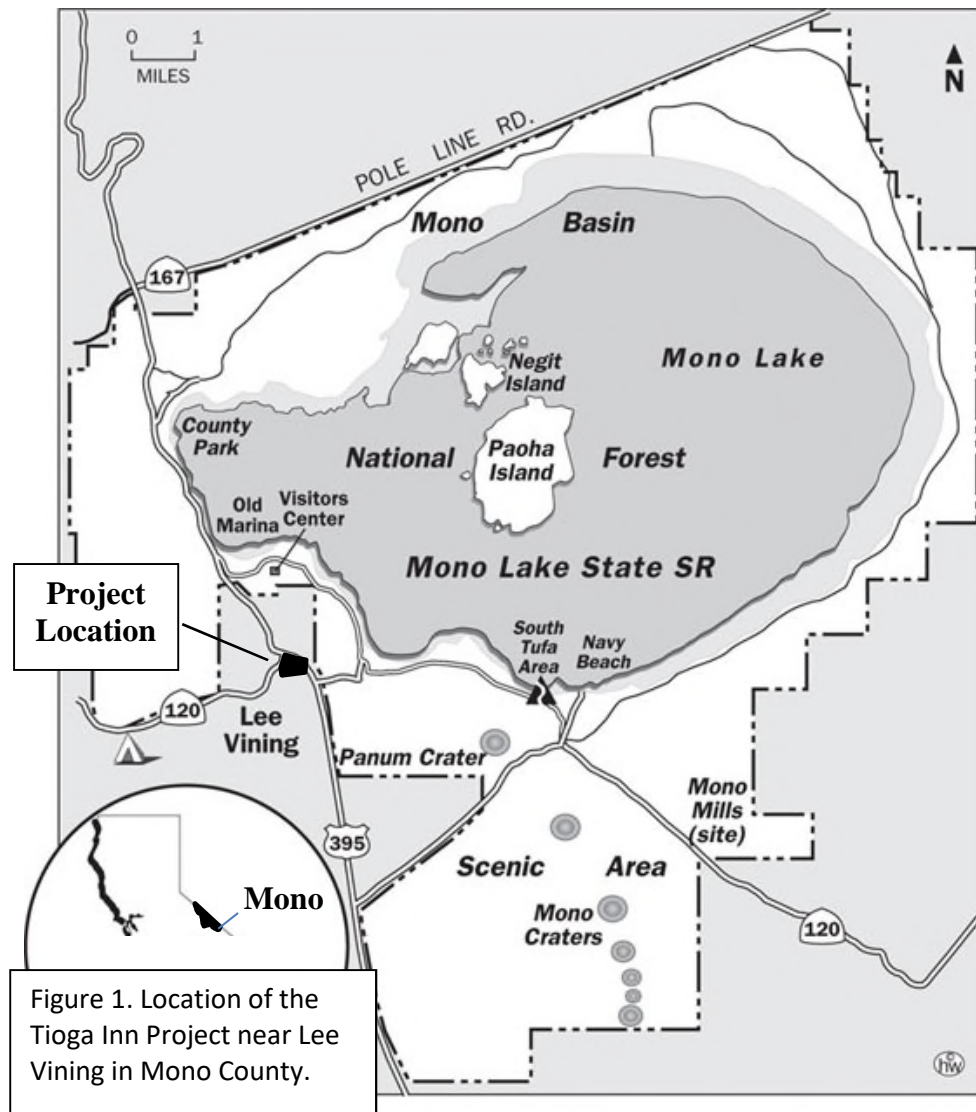
prepared for:

Bauer Planning and Environmental, Inc.
Sandra Bauer, Principal
1271 Tropicana Lane
Santa Ana, CA 92705

1. Introduction

A review of biological resources including potentially occurring special status species was conducted in April-May 2017 at a proposed location of new work force housing project and ancillary infrastructure near Lee Vining in central Mono County, California. This project would be implemented as part of the private development known as Tioga Inn, which is located at the intersection of U.S. Highway 395 and State Route 120 (Figure 1). Once constructed, the Tioga Inn Workforce Housing Project (hereafter, “project”) will adjoin existing improved roadways, a small residential development, and commercial facilities including a gas station that has been operated on the property for the last 2 decades, as well as a hotel and restaurant that previously have been approved subsequent to environmental impact analysis that was completed in 1992-1993 (Mono County Planning Department, 1993).

Project construction will directly affect the remaining habitats for plants and wildlife at an average elevation of 6940 ft (2115 m), within a substantial portion of the four contiguous lots (total 67.8 acres) that comprise the Tioga Inn development. Currently, the existing facilities and other areas lacking cover by native vegetation total 10.6 acres. The approved but as yet unbuilt hotel and restaurant, ancillary buildings, and new parking will convert an additional 4.7 acres and will temporarily disturb (with restoration to native vegetation) an area totaling 1.4 acres. The newly proposed workforce housing, sewage treatment and disposal systems, and road portions of the Tioga Inn project (Figure 2, these elements were not proposed in 1993) will cause another 6.5 acres of new, permanent habitat conversion and 5.0 acres of temporary devegetation and soil disturbance (Table 1). Operation of the new workforce housing facilities could have impacts that will reach beyond the construction footprint, mainly due to expected changes and increases in human activity.



2. Study Area and Setting

The project is located near the southern edge of the town of Lee Vining. Its landscape position is at the base of the steeply sloping Sierra Nevada eastern flank, where the mountainous terrain transitions swiftly to the comparably level Mono Basin. The study area for the analysis of biological resources as reported here falls completely outside (to the east of) the riparian forest corridor that closely follows Lee Vining Creek's perennial flow (Figure 2). No tributaries to Lee Vining Creek occur within the study area; moreover, natural channels that exhibit bed and banks or other evidences that flows are conveyed within the study area, seasonally or otherwise, are not present.

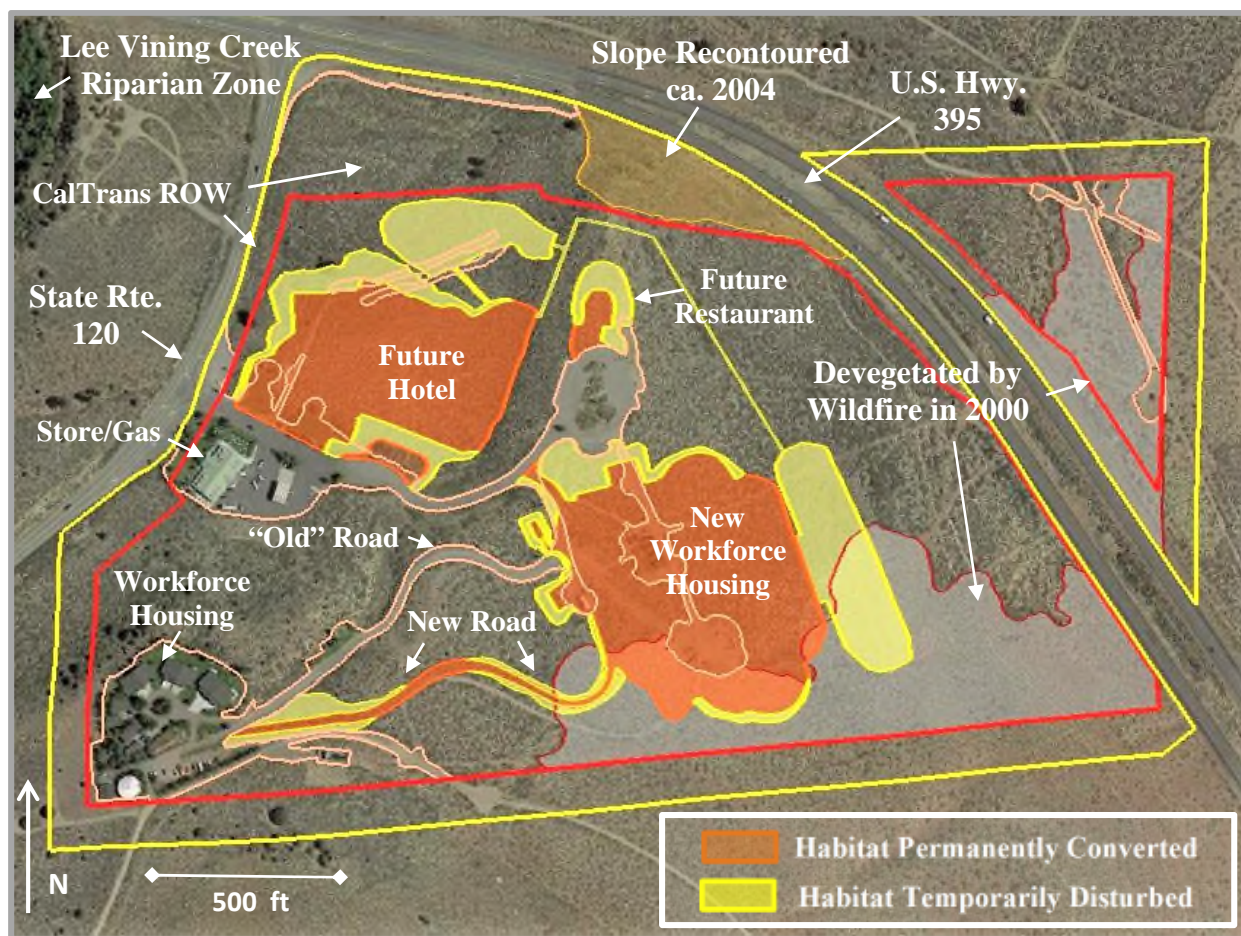


Figure 2. Study area (gold outline, 93.4 acres) for biological resources at the Tioga Inn Project near Lee Vining, California. The privately-owned parcels that will be affected by the project (red outline, 67.8 acres) and Caltrans Right-Of-Way adjacent to U.S. Highway 395 and State Route 120 were surveyed in order to map the site's available habitats in May and June 2017. Surveys that were conducted during this same period to ascertain special status plant and wildlife presence/absence included additional 100 ft buffers (areas between gold and red outlines). The locations of the existing developments, previously approved but as yet unbuilt hotel and restaurant elements, and newly proposed workforce housing, road, and sewage disposal system elements are shown. Base image date is June 26, 2016.

Because the proposed project, in concert with existing Tioga Inn developments (Figure 2) and with hotel and restaurant elements that were granted prior approval (Mono County Planning Dept., 1993), will substantially fill in the parcels lying west and south of U.S. Highway 395, the habitat areas that occur within adjacent highway Caltrans Right-Of-Way corridors (areas will not be directly impacted) will become ecologically isolated. These areas were therefore added to the study area for biological resources that may be impacted by the project.

The boundaries of the study area were readily located in the field using fencelines at the property edges, or the remnants of fencelines that had been burned during a May 2000 wildfire. A GPS was used to map property edges (Figure 2) prior to start of surveys. GPS was also used to align and walk parallel transects during surveys conducted in May through June 2017.

Table 1. Summary of acreages impacted in areas that currently have been converted to paved or otherwise devegetated surfaces (existing store and gas station, workforce housing, roads, parking), in areas where prior development approval has been obtained but the disturbance to native vegetation have not yet occurred (hotel, restaurant), and in areas of current native vegetation cover where project elements have been recently proposed (new workforce housing, new road, and new wastewater treatment/subsurface dripline disposal system). Impacts that are associated with devegetation and soil disturbance have been grouped either as permanent (conversion to buildings and other impermeable surfaces, conversion to non-native landscaping) or as temporary (areas subject to planting and restoration to native habitat).

	Type of Impact		Total
	Permanent (Acres)	Temporary (Acres)	
Current Converted	10.5	0.1	10.6
Has Prior Approval	4.7	1.4	6.1
Newly Proposed	6.5	5.0	11.5
Total	21.8	6.4	28.2

The soils of the project area are mainly granitic sands and gravels derived from the combined processes of glacial, riverine and lakeshore deposition and reworking where Lee Vining Canyon exits the mountains and enters the Mono Basin. Mono Lake now lies 400 feet lower than the project site, one mile to the north and east. The steepest slopes of the study area, which are located adjacent to the area of the planned restaurant and near existing, “work force” housing at the southwestern edge (Figure 2), are often stony and sometimes are densely armored by relic lakeshore cobbles. Development of the project area’s soil habitat also has been strongly influenced by local volcanic activity, which is now in evidence throughout the site as significant deposits of pumice-based sands and gravels.

The highly traveled State Route 120 (hereafter, SR 120) and the 4-lane, divided U.S. Highway 395 (Hwy 395) dominate the landscape to the immediate the west and north, at the lowest elevations of the study area (Figure 2). SR 120 and Hwy 395 function to some degree as ecological barriers to wildlife use of the study area’s northern and western portions. At present, a relatively unaltered ecological connection to the expansive Mono Basin shrublands appears to be maintained only at the portion of the study area that lies east and north of Hwy 395. Relatively uninterrupted slopes of the southern portion of the study area, away from the highways, also at present retain some sense of open space. Habitat alterations that have occurred there during the past two decades are associated mainly with overlook visitors and by occupation of existing workforce housing. Important changes that likely have taken effect since 1993 at this southern area, and which should be considered when identifying project impacts throughout the entire site west of Hwy 395, include substantial increases in daily human activity, new night lighting and landscape irrigation, increased noise, new food subsidies for wildlife, the presence of domestic animals including dogs, and large-scale removal of native vegetation by a wildfire in Lee Vining Canyon around and within the site.

3. Vegetation and Wildlife Resources

In preparation for field surveys, the available literature was reviewed and local agency personnel were interviewed in order to develop a list of potentially occurring special status plant and animal species, as detailed below. The findings obtained during studies previously conducted at this same location by biologists M. Bagley and T. Taylor (1992) were incorporated into the current review. Lists of the potentially occurring special status plants and animals, and sensitive plant communities of the Lee Vining area, were also provided by Mono County (2015). Field studies were performed in May and June 2017. The review of agency-administered status lists for potentially occurring special status species was performed prior to field work in 2017 and subsequently repeated in November 2018. Potentially occurring special status species that as of November 2018 are known to occur (or have occurred) within 15 miles of the project and in habitats that are similar to those currently provided within the project area were included in the current investigation.

3.1 Study Area Plant Communities and Species

Plants and plant communities that currently exist within the study area are in a relatively undisturbed condition, or are slowly recovering from wildfire that occurred nearly twenty years ago, or in very limited areas exhibit evidence of having been mechanically disturbed/devegetated more recently. The project may benefit native plant cover in some areas due to irrigation using the effluent from the project's new wastewater treatment system, but installation of this type of infrastructure requires temporary vegetation disturbance. Meanwhile, new negative impacts to the site's existing plant communities (Figure 3) due to the construction of new housing and other buildings and roads will include permanent reductions to their extents (Table 1), and potentially may diminish their current ecological functions such as support of occurring special status plant populations.

3.1.1 Literature Review – Special Status Plant Communities and Species

A list of special status plant species that could have some potential to occur within the habitats available at the project site was compiled (Table 2), based upon a review of regional data (Mono County Planning Department, 2015, Halford and Fatooh, 1994, California Native Plant Society (CNPS), 2001, 2018, CalFlora, 2018, California Department of Fish and Wildlife (CDFW), 2018a, 2018b), published regional floras (Baldwin, *et al.*, 2012, Jepson Herbarium, 2018), and botanical surveys that have been performed for the preparation of environmental documents for nearby projects (Bagley, 2002, Chambers Group, 2011, Paulus, 1998, 2012, 2013). The literature review also included a June 2018 search of the California Natural Diversity Database (CNDDB) records for the USGS Lee Vining, Lundy, Negit Island, Sulphur Pond, Mount Dana, Mono Mills, Koip Peak, June Lake, and Crestview quadrangles (CDFW, 2018c). Consortium of California Herbaria (2018) records for the Western Mono Basin (north to Conway Grade) were also included in the literature search results (Appendix A). Potentially occurring plant species were considered to be “special status” if they have state or federal status as rare, threatened or endangered (CDFW, 2018a), or are included in the CNDDB list of special plants (CDFW, 2018b), or are listed by CNPS in their inventory of sensitive California plants (CNPS, 2001, 2018), or are included in the most recent Sensitive plant list prepared by Inyo National Forest (U.S. Forest Service, 2013).

Table 2. Special status plant species that potentially could occur at the proposed project. Flowering period data is from CNPS (2018). None of these species are federally listed. A key to the rank or status symbols follows the table. NL = not listed.

Scientific Name Common Name Life Form	Rank or Status				Typical Habitat	Flowering Period
	USFS	CDFW	CNPS	NDDB		
<i>Allium atrorubens</i> var. <i>atrorubens</i> Great Basin onion bulbiferous perennial			2B.3	S2	scrub, woodland, sandy or rocky	May-June
<i>Astragalus monoensis</i> Mono milkvetch herbaceous perennial	S	R	1B.2	S2	open gravel or pumice soils	June- August
<i>Boechera bodiensis</i> Bodie Hills rockcress herbaceous perennial	NL	NL	1B.3	S3	sagebrush scrub	June-July
<i>Boechera cobrensis</i> Masonic rockcress herbaceous perennial	NL	NL	2B.3	S3	sagebrush scrub	June-July
<i>Chaetadelpa wheeleri</i> Wheeler's dune broom herbaceous perennial	NL	NL	2B.2	S2	sandy scrub, often alkaline	May- September
<i>Cusickiella quadricostata</i> Bodie Hills cusickiella herbaceous perennial	NL	NL	1B.2	S2	sagebrush scrub, often clay soil	May-June
<i>Eremothera boothii</i> ssp. <i>boothii</i> Booth evening primrose herbaceous annual	NL	NL	2B.3	S2	sagebrush scrub	April- September
<i>Eriastrum sparsiflorum</i> few-flowered woollystar herbaceous annual	NL	NL	4.3	S4	open scrub, sandy	May-July
<i>Lupinus duranii</i> Mono Lake lupine herbaceous perennial	S	NL	1B.2	S2	open scrub, pumice	May- August
<i>Mentzelia torreyi</i> Torrey blazing star herbaceous perennial	NL	NL	2B.2	S2	sagebrush scrub	June- August
<i>Streptanthus oliganthus</i> Masonic Mountain jewelflower herbaceous perennial	S	NL	1B.2	S3	xeric woodland, rocky slopes	June-July

Scientific Name Common Name Life Form	Rank or Status				Typical Habitat	Flowering Period
	USFS	CDFW	CNPS	NDDB		
<i>Tetradymia tetrameres</i> dune horsebrush shrub	NL	NL	2B.2	S2	sagebrush scrub, dunes	May-September
<i>Thelypodium integrifolium</i> <i>ssp. complanatum</i> foxtail thelypodium herbaceous perennial	NL	NL	2B.2	S2	sagebrush scrub, xeric woodland	June-August
<i>Thelypodium milleflorum</i> many-flowered thelypodium herbaceous perennial	NL	NL	2B.2	S3?	sagebrush scrub, rocky	April-August
<i>Viola purpurea</i> ssp. <i>aurea</i> golden violet herbaceous perennial	NL	NL	2B.2	S2	sandy sagebrush scrub	April-June

Rank or status, by agency:

USFS = US Forest Service, Inyo National Forest, Bishop Office (2013):

S = Sensitive List.

CDFW = California Department of Fish and Wildlife listings under the California Endangered Species Act and Native Plant Protection Act (CDFW, 2018a):

R = Rare.

CNPS = California Native Plant Society listings (CNPS, 2001, 2018):

1B = rare and endangered in California and elsewhere,

2B = rare, threatened or endangered in California, but more common elsewhere,

4 = plants of limited distribution in California – watchlist species.

Threat Code extensions:

.1 is Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat),

.2 is Fairly endangered in California (20-80% of occurrences threatened),

.3 is Not very endangered in California (< 20% of occ's threatened or no current threats known).

NDDB = California Natural Diversity Data Base rankings (CDFW, 2018b):

S1 is < 6 occurrences or < 1000 individuals or < 1000 acres,

S2 is 6-20 occurrences or 1000-3000 individuals or 2000-10000 acres,

S3 is 21-100 occurrences or 3000-10000 individuals or 10000-50000 acres,

S4 is apparently secure in California.

? indicates CNDDDB uncertainty in status.

This review was initially performed in April 2017 immediately prior to field surveys. When repeated in November 2018, two changes in status or known species distribution were identified resulting in the addition of few-flowered woollystar (*Eriastrum sparsiflorum*) and Bodie Hills rockcress (*Boechera bodiensis*) to the search list (Table 2). The 2018 literature review and CNDDDB records search results thus indicate that 15 special status plant species and the sensitive plant community Mono Pumice Flats occur within 15 miles of the project and in habitats that bear some resemblance to those available within the project area. Previously documented occurrences of special status plant species or sensitive communities within the study area were not found in CNDDDB records or other available literature (Appendix A), including the 1993 review of the Tioga Inn project under CEQA. This does not signify special status species absence; it merely is evidence that none have been reported.

Potentially occurring special status plant species (Table 2) exhibit an herbaceous perennial or shrub growth habit, except the annual herbs Booth's evening primrose (*Eremothera boothii* ssp. *boothii*) and few-flowered woollystar (*Eriastrum sparsiflorum*). The perennials would be expected to bear leaves and flowers at the time of the May-June 2017 surveys, and some would be expected to exhibit developing fruits. The expected phenologies of the annuals Booth's evening primrose and few-flowered woollystar would be bearing leaves, flowers, and mature fruits (Table 2). These annuals are the only special status species that have some likelihood to occur in mechanically disturbed habitats. None of the potentially occurring plant species is federally listed or a candidate for listing. Mono milkvetch (*Astragalus monoensis*) is state listed as Rare. Mono milkvetch is endemic to the Mono Lake Basin and a few other nearby depressions where vegetation is sparse and nutrient-poor, pumice gravel soil is present.

3.1.2 Vegetation Inventory and Search for Special Status Plant Species

An inventory of plant species and vegetation community types present within the entire study area was completed using transect-style field surveys conducted on May 17-21 and June 4-5, 2017. Buffer areas (Figure 2) were included in the search for special status populations. All plant species encountered along wandering transects spaced at 50 feet intervals were identified to the level of taxa that was sufficient to determine special-status species presence or absence. Any species that were not at once recognized were keyed by the consulting botanist using The Jepson Manual (Baldwin, *et al.*, 2012). The methods that were employed comply with CDFW guidelines for floristic survey (CDFG, 2009). May and June fall within the potentially occurring species' anthesis periods (Table 2). The documented high diversity of occurring plant species, especially among native annuals (Appendix B) that established high abundances, suggests that the complete flora was represented well at the time of survey, due to favorable climate during the early portion of the growing season in 2017. J. Paulus of Oakhurst, California, performed all botanical survey work, totaling 40 hours.

Species composition including non-native presence was recorded along the transects. Plant communities were separated for mapping by using shifts in the frequencies of dominant species to define associations, which then were grouped within the upland shrublands Alliance types defined by Sawyer, *et al.*, (2009). Boundaries mapped at burn scar edges were abrupt. Boundaries otherwise were clearly discernible in the field, but changes in the relative frequencies of shrub dominants among the occurring associations were typically not abrupt. Each mapping unit was characterized based upon rapid belt transect counts to estimate the relative frequencies of dominants, and ocular estimation ($\pm 10\%$) of total cover and average height.

3.1.3 Plant communities

Plant community boundaries were identified within the entire 67.8 acres of the four affected parcels, and within 13.5 acres at adjacent Caltrans ROW areas (Figure 3). Vegetation cover in an undisturbed condition remains throughout most the study area where conversion to elements of Tioga Inn has not been already implemented. This cover appears as upland scrub of varying species compositions, yet relatively uniform in appearance and consistently dominated by diverse shrubs.

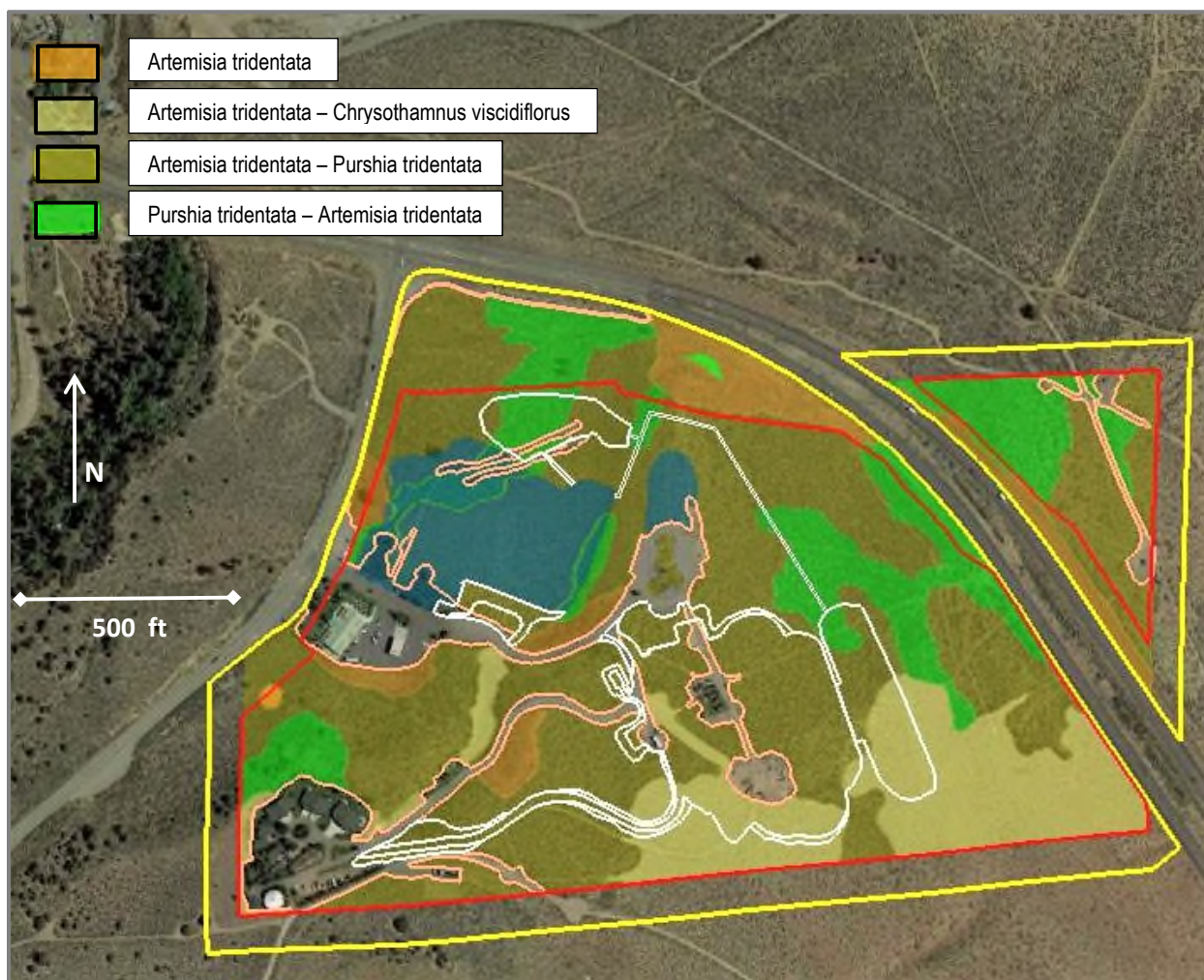


Figure 3. Plant communities that occur within private lands where work force housing and associated infrastructure at the Tioga Inn development have been proposed. The existing site improvements (pink outlines), the locations of previously approved but as yet unbuilt elements of the Tioga Inn development (hotel and restaurant, shaded blue), and the vegetation that will be permanently or temporarily displaced by the proposed project (white outlines) are shown.

In 1992, local cover was described using a larger community level of classification as “uniform scrub”, prior to any Tioga Inn-related construction (Bagley, 1992, Taylor, 1992). Since that time, notable changes other than conversion to elements of Tioga Inn (Figure 2, 10.6 acres

permanently devegetated) are 1) widening of Hwy 395 to four lanes, which necessitated slope recontouring within the Caltrans ROW (Figure 2, 2.2 acres), and 2) complete vegetation removal and change to weedy, early seral plant cover as mapped within the eastern margin of the site, which occurred when wildfire burned much of lower Lee Vining Canyon in May 2000 (Figure 2, 14.8 acres). These areas currently support some native scrub species, but the recovering canopy is less uniform. As of 2017, most warrant classification as alliances that distinctly differ from those found within undisturbed portions of the site (Figure 3). In the burn zone especially, the slowly recovering vegetation now is of low diversity, and usually is dominated by invasive, non-native grasses. The created scar thus visibly persists. The contiguous fire scar extends 3000-4000 feet southward and eastward, and about two miles westward into Lee Vining Canyon. In comparison to the relatively uniform and undisturbed vegetation that was found in 1992, the scars represent the likely most significant change – nearly two decades of ongoing contrast at the landscape level; the project area now has become isolated within a landscape where the altered vegetation cover's potential to provide resources and other ecological functions has become significantly reduced.

Pumice-dominated soils were encountered frequently along vegetation survey transects. No strictly pumice-associated plant communities occur (these types are considered uncommon). There are no scrub canopy openings that feature flats or internally drained basins, nor are there any species assemblages that are dominated by western needlegrass (*Stipa occidentalis*) or Parry rabbitbrush (*Ericameria parryi*), as would be expected if the Sensitive community Mono Pumice Flat occurs.

3.1.3.1 Big Sagebrush Scrub

Big sagebrush (*Artemisia tridentata* ssp. *vaseyana*) is dominant or co-dominant throughout the majority of the study area. Three Big Sagebrush Scrub alliances were mapped in June 2017 (Table 3), distinguishing stands where big sagebrush was the only dominant shrub in the canopy (CDFW alliance code #35.110.02) from stands that are co-dominated by antelope bitterbrush (*Purshia tridentata*, alliance #35.110.07) or by yellow rabbitbrush (*Chrysothamnus viscidiflorus*, alliance #35.110.12) at somewhat lesser frequencies. Big Sagebrush Scrub canopies on average are 2-3 feet tall and provide 20-30% absolute living cover. Absolute live cover provided where this community has re-established within the wildfire scar is a comparably patchier 1-10%. The community's height also is reduced, averaging 1-2 ft within the wildfire scar mainly due to the increased prevalence of low-statured yellow rabbitbrush. Big Sagebrush Scrub is a common and widespread plant community that occurs throughout Mono County and the Great Basin.

Within the study area, yellow rabbitbrush distribution as a canopy co-dominant is restricted to slopes that were devegetated by wildfire in 2000. Rubber rabbitbrush (*Ericameria nauseosa*) and desert peach (*Prunus andersonii*), which are typically minor shrub canopy components, also have become established at higher relative frequencies in burned areas. However, bitterbrush recruitment subsequent to burning has been consistently low, and this shrub's frequency within the wildfire scar is now consistently less than 1% of the total living shrub canopy.

Trees are a minor component of the native vegetation, occurring in Big Sagebrush Scrub as scattered Jeffrey pines (*Pinus jeffreyi*) or singleleaf pinyon (*P. monophylla*). The only other trees that were noted within the study area are the numerous sapling to mature-sized quaking aspen (*Populus tremuloides*) that have been planted into irrigated landscape areas around existing roads and buildings. Riparian zone dominant trees that are present within the nearby Lee Vining Creek

riparian zone are otherwise absent from the habitat occupied by Big Sagebrush Scrub, which is entirely upland in character. Native pines near 10% canopy closure only in one small patch north of the existing workforce housing, in a steeply sloping area where relatively high floral diversity including one special status plant species was observed (see Special Status Plant Species, below). The current project will not directly impact any native trees.

Table 3. Plant communities that were mapped within the Tioga Inn project area in 2017. The four parcels that may be affected by the project include 10.8 acres that have been converted to houses, roads, and other impervious or devegetated surfaces. Community names (after Holland, 1986) are cross-referenced to the CDFG (2010) classification and Sawyer, *et al.* (2009) Alliance classification. * are designated “sensitive” by CDFW (CDFG, 2010).

Holland name and CDFW classification number	Alliance and primary association names	acreage in study area
Big Sagebrush Scrub 35.110.02	Big Sagebrush Shrubland <i>Artemisia tridentata</i>	5.3
Big Sagebrush Scrub 35.110.07	Big Sagebrush Shrubland <i>Artemisia tridentata</i> - <i>Purshia tridentata</i>	41.6
Big Sagebrush Scrub 35.110.12	Big Sagebrush Shrubland <i>Artemisia tridentata</i> - <i>Chrysothamnus viscidiflorus</i>	11.0
Great Basin Mixed Scrub 35.200.00*	Bitterbrush Shrubland <i>Purshia tridentata</i> - <i>Artemisia tridentata</i> - <i>Salix exigua</i>	0.1
Great Basin Mixed Scrub 35.200.02*	Bitterbrush Shrubland <i>Purshia tridentata</i> - <i>Artemisia tridentata</i>	12.5

Herbaceous species were present in abundance throughout Big Sagebrush Scrub in 2017. The most conspicuous annuals were cryptanthas (several species, see Appendix B), bicolor phacelia (*Phacelia bicolor*), blazing stars (*Mentzelia* spp.), pussypaws (*Calyptridium* spp.), and summer snowflakes (*Gayophytum diffusum* ssp. *parviflorum*), adding cheatgrass in the wildfire scar. Native perennial herbs include scattered populations of rockcress (*Boechera* spp., including *B. cobrensis* – see Special Status Plant Species, below), and the upland habitat-adapted Douglas’ sedge (*Carex douglasii*) in pumice gravel soil. Hard fescue (*Festuca trachyphylla*), a non-native perennial grass, attains up to 70% cover among the shrubs nearest some existing roadways, but only under applied irrigation. It has spread relatively sparsely into nearby native scrub. Perennial grasses otherwise comprised no more than 5%, and most often less than 1% of total vegetative cover.

3.1.3.2 Great Basin Mixed Scrub

Shrublands elsewhere within the study area (Figure 3) were classified as Great Basin Mixed Scrub. This vegetation escaped wildfire in 2000. No examples of seral return to this type were found within the 14.8 acres of mapped fire scar. The presence of bitterbrush (*Purshia tridentata*) as the most important component of the cover distinguishes Great Basin Mixed Scrub

from the surrounding Big Sagebrush Scrub. In contrast to Big Sagebrush Scrub, it exhibits denser cover, greater height, and more uniform stand maturity. Great Basin Mixed Scrub and areas that are separated here as Big Sagebrush Scrub alliances were previously classified as Great Basin Sagebrush Scrub using an older system (Taylor, 1992); differences in naming do not indicate a known substantial change in stand characteristics since the 1993 EIR. Great Basin Mixed Scrub is considered Sensitive by CDFW (CDFG, 2010). There has been a regional trend toward loss of this community type due to wildfires within Mono County (Sawyer, *et al.*, 2009, Mono County, 2015).

Total living cover in Great Basin Mixed Scrub, which generally was classifiable as an antelope bitterbrush – big sagebrush alliance (#35.200.02) within the study area, was 30-40% in June 2017. Average height was 3-4 feet. Bitterbrush distribution is uniform, appearing dense, with individuals occasionally reaching a height of 10 feet. Ecotones with Big Sagebrush Scrub are diffuse but visibly evident, becoming abrupt only at fire scar edges. In 2017, native annual and perennial herbs and grasses observed to be abundant in Big Sagebrush Scrub were equally represented in the Great Basin Mixed Scrub understory, but the overall observed diversity was lower (Appendix B).

One isolated occurrence of Great Basin Mixed Scrub located between the site of the restaurant and the southern edge of Hwy 395 (Figure 3) is locally unusual due to the presence of sandbar willow (*Salix exigua*) in the shrub canopy. Sandbar willow and big sagebrush are the co-dominant species with antelope bitterbrush. This alliance (#35.200.00) is not found elsewhere within the study area. The occurrence is mid-slope within a large area (approximately 2.3 acres) that was devegetated and re-contoured to accommodate Hwy 395 widening in the early 2000's. Sandbar willow is considered to be facultatively (*i.e.*, not obligately) adapted to wetlands habitat conditions (U.S. Army Corps of Engineers, 2012). Its presence likely signals that an area of groundwater accumulation was intercepted during recontouring. The willow stems at this occurrence may represent a single, clonally reproducing individual, which in 2017 exhibited poor vigor and some dieback. There were no indications that would suggest this assemblage signals the presence of seasonal or even ephemeral artesian spring flow, as there were no surface moisture changes, ponding depressions, animal trails, or incised discharge and outflow areas indicating spring function, despite local precipitation prior to the survey that during October 2017 through May 2018 neared 200% of the normal annual amount.

3.1.4 Special Status Plant Species

Few-flowered woollystar (*Eriastrum sparsiflorum*) were detected at two locations north of Hwy 395, among extensive annual woollystar populations that included spotted woollystar (*E. signatum*), and also diffuse woollystar (*E. diffusum*). Plants bearing the stalked glands expected of *E. sparsiflorum* were not found among several that were checked south of Hwy 395. There is some possibility that the local population does not extend to the south of Hwy 395 in the study area. Recent separation of *E. signatum* from *E. sparsiflorum* has led to the formerly considered common *E. sparsiflorum* being added to CNPS' watchlist 4.3 (CNPS, 2018), meaning a species that currently is considered limited in distribution at least within California, having no current known threats to its continued existence in the state. Few-flowered woollystar, which apparently is secure from extinction in California (CDFW, 2018b), has no additional legal status under the state or federal Endangered Species Acts (Table 2).

One distinct population of Masonic rockcress (*Boechea cobrensis*) was found near the northern edge of the existing workforce housing, on the steep slope between the housing and the existing gas station (Figure 4). Individuals were found in relatively open Big Sagebrush Scrub as well as in partial shade cast by Jeffrey pines in denser Great Basin Mixed Scrub. It was possible to map the extents of this population with good accuracy, as the plants' rosettes are distinctive and most individuals were blooming at the time of survey. A total of 132 individuals were found in an area of 1.2 acres on May 19, 2018. Masonic rockcress identification and separation from other rockcress species occurring within the study area was based in large part on the plants exhibiting relatively small, white petals (consistently < 8 mm), and spreading-descending fruits borne on glabrous pedicels, a combination of characteristics that is not expected of other locally occurring *Boechea* species.

No other populations of special status plant species were found. Other species observed in 2017 are considered locally and regionally common in uplands habitats. No members of the distinctive genera *Allium*, *Chaetadelpa*, *Cusickiella*, *Eremothera*, *Streptanthus*, *Tetradymia*, or *Viola* were found during the May-June survey. Newberry's milkvetch (*Astragalus newberryi* var. *newberryi*) was separated from the potentially occurring Mono milkvetch (*A. monoensis*) by its densely caespitose growth form and cottonball-hairy fruits. Mono milkvetch would exhibit more open growth and fruits that appear much less hairy, as was observed at the reference population east of June Lake (blooming and setting fruit on June 4, 2017). The occurring silver lupines (*Lupinus argenteus* vars.) were readily separated from potentially occurring Mono Lake lupine (*L. duranii*) by growth form. Occurring lupines were invariably 2 dm or more in height, much taller than would be expected of Mono Lake lupine. Plants of the blazing star genus *Mentzelia* were relatively abundant in 2017, but Torrey blazing star (*M. torreyi*) was not seen. Populations seen within the study area were clearly annuals of relatively diminutive stature, not the relatively coarse perennial plants that would be expected if Torrey blazing star was present. In all, 86 species (Appendix B) including 8 non-native species (Table 4), representing 22 plant families, were encountered in 2017.

3.1.5 Non-Native Plants (Weeds)

Non-native plants (Table 4) are prominent within the study area, especially in areas that have been recently mechanically disturbed and within the wildfire scar. Non-natives that are restricted to roadsides and other highly disturbed areas are in the minority. Hard fescue (*Festuca trachyphylla*) is a perennial landscape grass that historically was applied near developed portions of the study area, likely for slope stabilization. In recent decades, it has spread only slightly out beyond the reach of overhead irrigation, and likely would not persist if irrigation ceased for one or two growing seasons. Hornseed buttercup (*Ranunculus testiculatus*), and common knotweed (*Polygonum aviculare* ssp. *depressum*) populations are currently abundant but their distributions are restricted to roadsides along SR 120 and Hwy 395. Except for hard fescue, these and all other non-native species present in the study area are considered to have become firmly established all along the alignment of Hwy 395 in the Lee Vining area and elsewhere in Mono County (Mono Co. Planning Dept., 2015). Because there is no foreseeable plan or method to control populations associated with the public transportation corridors that abut and cross through the study area, it is very likely that any control efforts applied to seek eradication of the existing weed populations within the study area would be ultimately frustrated by a constant and unmanageable restocking of the weed seedbank.

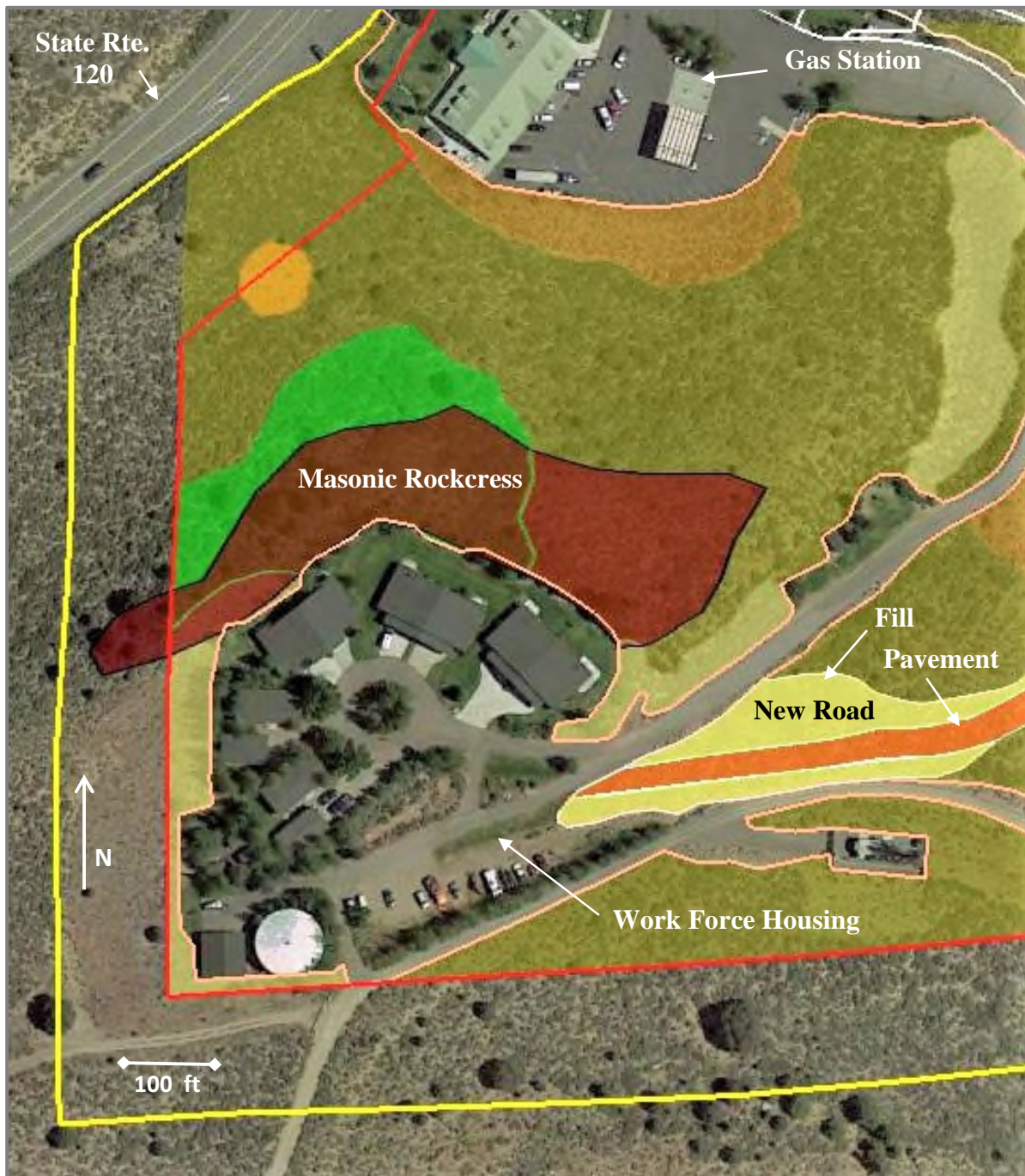


Figure 4. Extent of the single Masonic rockcress (*Boechea cobrensis*) population that was found at the Tioga Inn study area in 2017. The population occurs within the southwestern corner of the study area. 132 plants were counted within an area that totals 1.2 acres (red polygon). The project will approach to within 100 feet of the current population extent.

Five of the eight non-native species that were found in 2017 have already invaded into plant communities of the relatively less disturbed portions of the study area, and so are becoming members of the upland assemblage. The project has some potential to cause the further spread of tansy mustard (*Descurainia sophia*), Russian thistle (*Salsola tragus*), redstem filaree (*Erodium cicutarium*), and tumble mustard (*Sisymbrium altissimum*), which currently are present in sparse numbers generally near existing study area developments and the adjacent public transportation corridors. All are annual species that produce abundant, easily transported seed. Some of these species are considered noxious or invasive by the California Department of Food and Agriculture (USDA, 2010) or California Invasive Plant Council (2018). The naturalized annual cheat grass (*Bromus tectorum*) has invaded American West landscapes totaling millions of acres. This grass is associated with increased fire spread and frequency in native shrublands. Its abundance in the study area in 2017 was far greater than any other species, native or non-native, and it has locally attained a distribution that encompasses the entire study area and the nearby landscape.

Table 4. Non-native species observed within the survey area in 2017. † indicates species present only at roadsides and within other recently disturbed locations. Other species are found throughout the study area in native upland habitats or in irrigated (landscaped) habitats. Weed rating is potential invasiveness as rated by the California Integrated Plant Council (Cal-IPC, 2018), and federally recognized noxious weed rating (USDA, 2010).

Non-Native Species		Weed Rating
cheat grass	<i>Bromus tectorum</i>	Cal-IPC High
tansy mustard	<i>Descurainia sophia</i>	Cal-IPC Limited
redstem filaree	<i>Erodium cicutarium</i>	Cal-IPC Limited
† hard fescue	<i>Festuca trachyphylla</i>	
† hornseed buttercup	<i>Ranunculus testiculatus</i>	
† common knotweed	<i>Polygonum aviculare</i>	
Russian thistle	<i>Salsola tragus</i>	Cal-IPC Limited USDA Noxious list C
tumble mustard	<i>Sisymbrium altissimum</i>	

Vegetative return or succession to the condition of self-sustaining Big Sagebrush Scrub or Great Basin Mixed Scrub appears to be delayed or patchily arrested in areas with the heaviest cheat grass infestation. This condition was observed within much of the study area mapped here (Figure 3) as seral Big Sagebrush Scrub, especially where *Artemisia tridentata*-*Chrysothamnus viscidiflorus* alliance stands have developed. This species was present in 1992 at relatively low abundance (Taylor, 1992). In the 18th growing season following fire, the cheat grass population now remains far more robust than any other species that has colonized the burned area. The 2017 survey found that cheat grass forms nearly pure stands of up to 2 acres within the wildfire scar, which are assumed to be (slowly) transitioning to native scrub (studies describing long-term response monitoring of this problem in the Mono Basin could not be found). Such patches would be classifiable as Non-Native Annual Grassland in more permanent contexts in central California (Sawyer, *et al.*, 2009). Because upland plant communities are made more susceptible to wildfire

by the presence of cheatgrass (Cal-IPC, 2018), post-construction practices designed to minimize its prominence generally should be implemented wherever practical.

3.1.6 Project Impacts to Plant Communities and Species

Native vegetation that is typical of upland shrublands habitat in the Mono Basin will be impacted by the project. No apparently wetlands or riparian habitats occur within or immediately adjacent to the parcels that will be affected. The project will remove Big Sagebrush Scrub, a common and regionally widespread plant community type, and disturb a lesser area of Great Basin Mixed Scrub, a bitterbrush-dominated scrub that is limited in distribution and considered sensitive by the State of California (Table 5). The project in doing so may impact a local diffuse population of the annual plant few-flowered woollystar by removing potentially occupied habitat and disturbing topsoil in which the species' seedbank resides. Meanwhile, the risk of impact to an occurring Masonic rockcress population appears to be minimal, as the entire population extent falls outside the proposed project footprint (Figure 4). Because the project will create 5.0 acres of new, temporarily disturbed habitat, there is some potential that it will promote the spread of non-native weeds that currently are abundant within an adjacent fire scar and highway corridors.

Table 5. Acreage impacts to native plant communities that occur within the Tioga Inn study area are summarized. Percentages indicate the total available habitat that will be cumulatively removed or temporarily disturbed when the project is implemented, assuming that the already approved hotel and restaurant elements are also constructed.

	Big Sagebrush Scrub¹		Great Basin Mixed Scrub²	
	Permanent	Temporary	Permanent	Temporary
	(acres)	(acres)	(acres)	(acres)
Elements That Already Have Been Approved	4.0	1.2	0.8	0.2
Current Project	6.5 (18.0%)	3.9 (8.9%)	0 (6.0%)	1.1 (10.2%)
Total Currently Available (acres)	57.9		12.6	

1. Alliances are *Artemisia tridentata*, *A. tridentata* – *Purshia tridentata*, *A. tridentata* – *Chrysothamnus viscidiflorus*.

2. Alliances are *Purshia tridentata* – *Artemisia tridentata*, and *P. tridentata* – *A. tridentata* – *Salix exigua*

Permanent, direct removal of upland scrub vegetation and provided habitat values will total 6.5 acres for the footprints of buildings, landscaped areas, parking lots, and the new road. This will remove 11% of the remaining Big Sagebrush Scrub. Great Basin Mixed Scrub will not be impacted by permanent conversion related to the current project (Table 5). A total of 5.0 acres of current native vegetation will be disturbed for slope recontouring or wastewater treatment and subsurface irrigation field and pipeline installation, mainly in Big Sagebrush Scrub. The project includes restoration of all temporarily disturbed areas to approximate pre-project native shrublands conditions. When implementations of the currently approved and the new Tioga Inn

elements have been completed, the shrublands communities of the property (including those areas recovering from wildfire in 2000) will be permanently reduced to about 75% of their current distribution within the affected parcels. In addition, 20% of areas now dominated by native shrubs will have been temporarily devegetated. Overall, the already fragmented shrublands stands south of U.S. Highway 395 will be further divided, as all of the remaining vegetation will be situated in clearly isolated positions, either between the project and the highways or amid busy housing and road elements to the south of the gas station (Figure 3).

3.2 Study Area Wildlife

3.2.1 Literature Review – Special Status Animal Species

Based upon the available uplands scrub vegetation types identified within the Tioga Inn study area habitats, there are nine special status animal species that have some potential to den, nest or otherwise have a presence in the area and possibly be affected by the project (Table 6). Long-eared owl, although not listed in CNDDDB records for the region, was added due to recent reporting of an individual near the western shore of Mono Lake, about two miles north, where a young individual was seen perching in a mesic willow stand adjacent to Hwy 395 in June 2012 (Caltrans, 2012).

The Parker Meadows population of the greater sage grouse Bi-State DPS is known to use riparian meadow habitat within five miles of the study area for breeding and chick-rearing. Nest sites are chosen in scrub vegetation having isolation from human activity and predators, and sufficient density to provide concealing cover (Bi-State Technical Advisory Committee, 2012), a setting that currently is absent from the study area. Movement from Parker Meadows into on-site and nearby habitats in support of early chick-rearing (conservatively, mid-March through late August) is unlikely, as there are no moist, insect-filled meadows that chicks could utilize. No meadows that would be suitable for young chick maintenance occur between the project site and the nearest moist Parker Meadows habitat, a distance of 2.2 miles. Adult use of sagebrush that is exposed within the project area for foraging during winter months is possible.

Brewer's sparrows forage and nest in open sagebrush habitat, which is present within much of the undeveloped portion of the study area. While somewhat difficult to distinguish visually from other potentially occurring sparrows of the genus *Spizella*, their calls while establishing breeding territories in early spring are distinctive. Nests are constructed within larger, relatively densely foliated shrubs. The local nesting season for all bird species has been conservatively defined as the period February 15 – September 15 (Mono County Planning Department, 2015).

Pygmy rabbit, a CDFW Species of Special Concern due to limited distribution and loss of sagebrush habitat, are locally widespread and have been called “abundant” in the Mono Basin (Beauvais, *et al.*, 2008). Study area scrub vegetation averages 20-40% total cover, attaining the 50% or greater cover that is most likely to support pygmy rabbit in Mono County (Larrucea and Brussard, 2008) only in larger Great Basin Mixed Scrub stands near Hwy 395. Pygmy rabbits are distinguished from locally occurring mountain cottontail (*Sylvilagus nuttallii*) and black-tailed jackrabbit (*Lepus californicus*) by clear size differences both for individuals and for the fecal pellets they produce. While their colonial burrow systems are typically found within “islands” of suitably dense cover, pygmy rabbits are known to be adaptable to a wide variation in sagebrush cover and height, and can even occur in dense growth of willow, bitterbrush, or rabbitbrush-

dominated scrub in the Mono Lake area, as long as the soil is deep and loamy enough for burrowing (Collins, 1998, Paulus, 2016).

Table 6. Special status wildlife species that could potentially occur within the area of the proposed project at Tioga Inn. Species status is defined below, NL = not listed.

Species	Status		Habitat
	State	Federal	
Birds			
<i>Asio otus</i> long-eared owl (nesting)	SSC	NL	sagebrush scrub
<i>Centrocercus urophasianus</i> greater sage grouse (nesting, leks)	SSC	BLM = S USFS = S	sagebrush scrub
<i>Spizella breweri</i> Brewer's sparrow (nesting)	NL	BCC	sagebrush scrub
Mammals			
<i>Brachylagus idahoensis</i> pygmy rabbit	SSC	BLM = S USFS = S	dense sagebrush scrub, loamy soil
<i>Eumops perotis californicus</i> western mastiff bat	SSC	BLM = S	roosts in crevices, buildings
<i>Lepus townsendii townsendii</i> white-tailed jackrabbit	SSC	NL	sagebrush scrub
<i>Myotis yumaensis</i> Yuma myotis	NL	BLM = S	roosts in crevices, buildings near water
<i>Taxidea taxus</i> American badger	SSC	NL	sagebrush scrub
<i>Vulpes vulpes necator</i> Sierra Nevada red fox	Thr	USFS = S	all habitats

Rank or status, by agency:

State = Calif. Dept. of Fish and Wildlife listings under the state Endangered Species Act (CDFW, 2018a, 2018d).

Thr = Threatened

SSC = Species of Special Concern

Federal = U.S. Fish and Wildlife Service under the federal Endangered Species Act (CDFW, 2018d).

BCC = Birds of Conservation Concern,

BLM = S Species is considered Sensitive by Bureau of Land Management,

USFS = S Species is considered Sensitive by U.S. Forest Service.

Western mastiff bats forage over a wide variety of habitats. Yuma myotis bats are comparably restricted to habitats over and very near surface waters. Western mastiff bats have been detected over riparian habitat along Lee Vining Creek, less than four miles upstream from where it passes near the study area. Yuma myotis have been detected at the Mono Lake shore. These colonial bats may use structures with suitable crevices, especially buildings that are not regularly used by humans, for day roosting or natal colony establishment. It is possible that these bats pass over the project area while foraging. There are no caves or culverts within the study area that could harbor roosting or breeding bats, but there are existing structures that would be removed within the area where new work force housing is proposed. There is some possibility that bats may use suitable habitats within one or more of these structures for day-roosting or for colonial breeding.

Western white-tailed jackrabbit, American badger, and Sierra Nevada red fox are highly mobile animals. Western white-tailed jackrabbit populations are in serious decline throughout their distribution in North America (Duke and Hoeffler, 1988). Adult western white-tailed jackrabbits are generally solitary and, unlike pygmy rabbits, do not spend time underground in burrows and so are less vulnerable to construction-related soil disturbance. American badger are predators that characteristically excavate the burrows of small mammalian prey. Typical prey species include Beechey ground squirrel (*Otospermophilus beecheyi*), which were found to be widely present within the study area in 2017. While considered active all year, American badgers may also spend long periods in resting torpor underground, and also raise litters in underground dens (Helgen and Reid, 2016). Sierra Nevada red fox, which are state listed as Threatened, are often considered to be very rare animals restricted to high elevations, generally much higher than the 6940 feet average elevation of the study area (U.S. Fish and Wildlife Service, 2015). However, a relatively recent (20 year-old) occurrence documented within sight of the study area – an individual killed while trying to cross Hwy 395 near Lee Vining Creek (CDFW, 2018c) – is evidence that lower elevation habitats may be used in the local environment. Denning has been documented in rock fall settings (CDFW, 2018c), but it is possible that the poorly understood Sierra Nevada red fox sometimes uses enlarged earthen burrows.

The study area provides no aquatic habitat for regionally occurring special status fish, amphibians, or mollusks. Nesting riparian birds including willow flycatcher (*Empidonax traillii* ssp., state and federally listed as Endangered) and yellow warbler (*Setophaga petechia*, CDFW Species of Special Concern and USFWS Bird of Conservation Concern) would not be present. At its closest, riparian vegetation at Lee Vining Creek is located 900 ft from the area that will be disturbed by project construction. Bald eagles (*Haliaeetus leucocephalus*) have been known to winter in small numbers along the western shore of Mono Lake (Mono County Planning Dept., 2001) and have been observed perching at the mouth of Lee Vining Creek (USFS, 1988). While they may forage along Lee Vining Creek and over the study area's scrub vegetation, it is very unlikely that eagles or other large raptors would nest within the study area because the forested habitat and large trees where nests are typically built are absent. The nearest large trees occur in the overstory of the narrow Lee Vining Creek riparian forest corridor. Peregrine falcons (*Falco peregrinus*) were re-introduced to upper Lee Vining Creek Canyon in 1988 (USFS, 1988); however, none have subsequently appeared in CNDDDB records for the Mono Basin region, and there are no cliff habitats within the study area that could be used by this species or by prairie falcons (*Falco mexicanus*) for nesting.

3.2.2 Methods Used to Survey for Special Status Animal Species

Upland scrub throughout the survey area was surveyed for the presence of enlarged or networked (warren) burrows that potentially could be occupied by special status mammals. On May 17-21 and June 4-5, 2017, the GPS coordinates (± 1 meter) of all such burrows, apparently occupied or not, were recorded while walking widely wandering survey transects. Transects were spaced at intervals of 50 feet across the entire study area (Figure 2). Areas of dense vegetation were inspected closely for warrens and other sign of pygmy rabbit presence. Identifying signs and indications recent wildlife use were recorded at each burrow, wherever they were found. All species that were identified through sightings or by studying sign while walking transects were recorded.

Occurring birds were inventoried during plant and wildlife transect surveys. Directed surveys were also performed in order to determine which populations were using project area habitats for nesting. Beginning at dawn on the successive mornings of May 21- 24, 2017, on-site breeding populations were identified and mapped where possible, based upon observations of territorial display and calling, and repeated flight to a likely suitable nest site. All large trees, as well as the existing wireless telecommunications tower and power transmission poles in the area, were checked during the 2017 field surveys for large stick nest structures attributable to raptors. Existing buildings (some with bird feeding stations) that are located within and near the project area were checked for bird nests or exhibitions of nesting behavior.

During the evening hours of May 21, the aerial habitat where new work force housing has been proposed was surveyed for bat presence. Existing buildings in this area were subsequently checked for crevice habitat that could be occupied by day-roosting bats or used as natal sites, and guano accumulations that could signal current use.

3.2.3 Occurring Wildlife

A diverse assemblage of wildlife species was indicated by direct observation or inferred from sign found in native scrub habitats remaining within the study area (Appendix C). Highest native diversity was found among the birds, with 25 species total and four identified as breeding including the special status taxon Brewer's sparrow (*Spizella breweri*, see Special Status Species, below). Occurring lizards, which were consistently identified as the common species sagebrush lizard (*Sceloporus graciosus*), were abundant throughout the study area in 2017. Mammals were identified mainly through characteristic sign, and in the case of burrowing mammals by burrow size and configuration. Tracks indicated that mule deer continue to frequent the area, as reported by Taylor (1992) Mule deer have been regularly observed among the existing housing in spring and summer months, foraging at irrigated lawns (D. Dormaille, pers. comm. May 19, 2017).

Birds in particular have become adapted to the current availability of foraging "habitat" and nesting opportunities provided by the existing Tioga Inn food vending and housing facilities. Common ravens (*Corvus corax*) and California gulls (*Larus californicus*) spend much time on-site, especially within the western portion of the study area. Potential nesting sites for ravens occur within the study area in the form of scattered trees, a telecommunications tower with no deterrents installed, and power transmission poles, but no raven or raptor nests were found in 2017. House sparrow (*Passer domesticus*), a non-native species, was found only in the human-built environment, nesting there also in 2017 at both the store and the work force housing. One kestrel (*Falco sparverius*) pair was observed foraging within the study area, later using a nest box attached to a work force housing unit that overlooks the gas station.

3.2.4 Special Status Animal Species

The locally extensive destruction of sagebrush by wildfire, with only sparse re-growth of sagebrush scrub during the last two decades, has altered much of the terrain abutting the study area with regard to utility for nesting birds in general, and for greater sage grouse in particular. Scattered pine trees, as well as relatively lofty buildings, light poles, and overhead power poles, are present in the western and northwestern portions of the affected parcels. They currently function to provide potential perch positions for birds (ravens, hawks and other raptors) that are predators of small mammals, Brewer's sparrows, and sage grouse. Brewer's sparrows were the only special status birds that were observed during biological resources surveys conducted in May and June 2017. No owls were seen during evening surveys and no owl packets were seen upon searching structures and trees. Sage grouse were absent on all survey dates.

Brewer's sparrows exhibited territorial behavior throughout the eastern and northeastern portions of the property, including the areas where new housing and a road have been proposed. Aggressively calling birds responded to recorded call playbacks by approaching or calling, and the boundaries of individual territories could be roughly mapped (Figure 5) after observation of

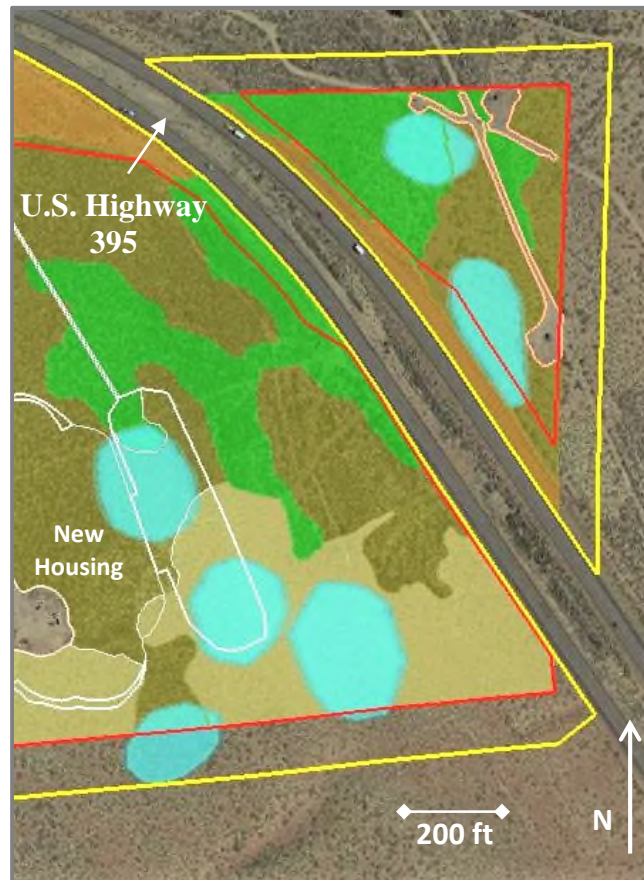


Figure 5. Approximate arrangement of dense Brewer's sparrow breeding territories detected within the Tioga Inn study area on May 21-24, 2017. Green-tailed towhee were also observed exhibiting territorial breeding behaviors within this same general area, where the vegetation is dominated by sparse to dense sagebrush and other upland shrubs. Seven separate potential Brewer's sparrow nesting locations were mapped (blue polygons).

site fidelity and patterned posting. On May 21-24, the observed breeding behaviors did not include definite patterns of return flights that would suggest nest construction or brooding had begun. It appeared that breeding territories were being established within or overlapping into every scrub vegetation type (Table 3) that was identified within the study area. Some included areas of wildfire scar where native shrubs remain sparse. Green-tailed towhee (*Pipilo chlorurus*) were the only other birds that exhibited typical breeding territorial behaviors during surveys of native scrub habitats in the study area.

The density and abundance of potential nesting sites identified in 2017 within and near where the native vegetation will be removed indicates that a population of nesting Brewer's sparrows may be negatively affected by the project. Other nesting birds including green-tailed towhee may be negatively affected as well. Construction could cause nest abandonment or failure prior to fledging due to mechanical nest destruction. There may be substantial increases in parent harassment and nest predation if construction occurs during the breeding season. There could be substantially increased breeding adult and nest predation rate through the lifetime of the project if domestic pets are introduced to the habitat remaining near the project, or if the project attracts or subsidizes locally occurring native predators such as coyotes, ravens and raptors.

American badger were the only special status mammals that were evidenced as recently or currently using project area habitats. Burrowing activity was observed in Big Sagebrush Scrub and Great Basin Mixed Scrub habitats within and very near where the project will cause soil and vegetation disturbance (Figure 6).

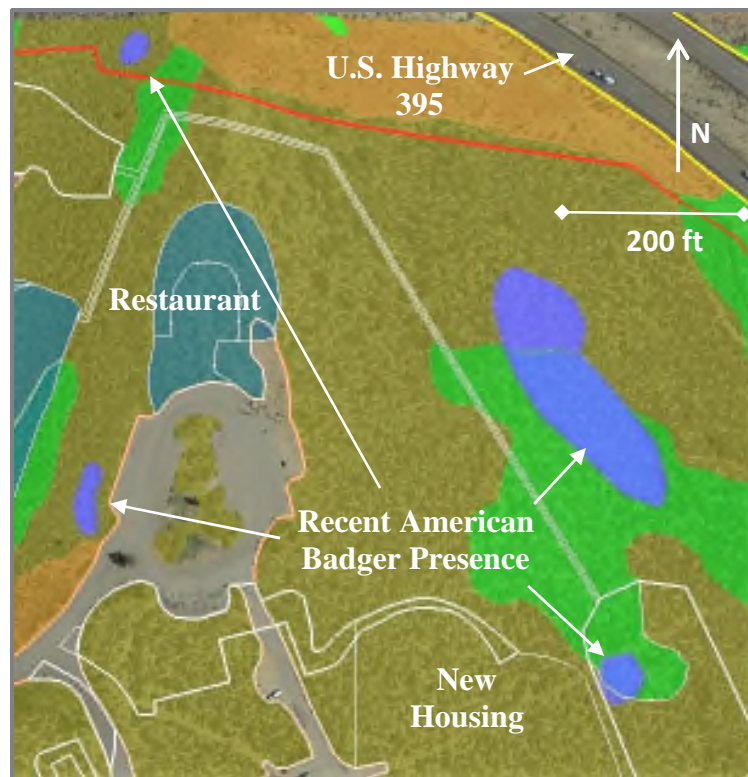


Figure 6. Four locations where recent widening of Beechey ground squirrel burrows was attributed to foraging activity by American badger. The activity is thought to have occurred during the period 2016 to as recently as early 2017.

Burrows found on the property with larger diameter openings were invariably ascribed to Beechey ground squirrel digging. A few had subsequently been widened by predatory digging, which likely had occurred during both 2016 and 2017. Due to the presence of large, parallel claw marks made while widening squirrel burrow openings, the predatory activity was assigned to American badger. Signs at these burrows did not include tracks, neonatal scat, or other indications of recent occupation for denning by larger mammalian predators such as badger or Sierra Nevada red fox. Rockfall habitat that may be more typical for special status fox denning does not occur within the study area or nearby.

Bats were commonly observed foraging over the project area during early morning and evening surveys. However, no evidence of bat colony roosting or the establishment of satellite roosts was found when the existing structures within the project area were searched for habitable crevices and guano accumulations. Very limited potential roosting habitat (currently unoccupied) was found at structures that the project will directly impact in order to construct new housing.

No rabbit warren areas that would indicate pygmy rabbit presence, or subcanopy forms that would indicate larger lagomorph presence were detected during transect surveys. Friable, loamy soils that are generally present where warrens have been found locally (Larrucea and Brussard, 2008) are not present except the lowest elevations of the study area near Hwy 395. Large stands with greater than 50% cover are not present, and patch-sized areas of such density are very uncommon, so searching each dense area thoroughly was possible. Rabbit pellets that were observed at accumulations in the study area were consistent with the presence of mountain cottontail rabbit (*Sylvilagus nuttallii*), a common species. The sizes of these pellets, measured as ranging from 9 to 10 mm diameter on average at each of more than 20 sample sites, was not consistent with the 4-6 mm diameter that would be expected if pygmy rabbit were present, or with the 10-11 mm diameter that would be expected of western white-tailed jackrabbit (Ulmschneider, 2004).

American badger are highly mobile and adaptive animals. It is unlikely that the removal of a small area of potential foraging habitat will significantly affect the local population. Direct impact to a new residence burrows and to badgers that may be day-denning in enlarged rodent burrows can be avoided if the project footprint and corridors for construction equipment access are checked for newer rodent burrows excavation or other signs of predatory digging. The holes and excavated dirt piles created by badgers are large and conspicuous, so impact to individuals due to ground disturbance can be readily avoidable if the pre-survey is conducted immediately prior to the start of soil disturbance.

3.2.5 Mule Deer

Mule deer (*Odocoileus hemionus*) are considered important harvest species by the CDFW. Mule deer herds in Mono County are defined by their pattern of movement between summer and winter ranges. Lee Vining Canyon in the vicinity of the Tioga Inn project site is used for migration by a significant fraction of the Casa Diablo Herd (Taylor, 1988). Detailed, repeated-measures study of the magnitude and spatial patterns of deer movement both within and near the project area has identified a traditional migration corridor that passes within one-half mile to the south (Taylor, 1992). The project area and nearby slopes are not within an identified migrational holding area, but it is known that summer residency is normal in lower Lee Vining Canyon. It is possible that some deer use the remaining habitat at Tioga Inn for spring and fall migration during the periods April to June and October to November, and for foraging during

summer residency. Studies in support of the original environmental impacts analysis for Tioga Inn found that the project area, in contrast to the identified migration corridor, is not highly used and itself “is of little importance” as a migration corridor (Taylor, 1992). At that time, the perception of a diminished pattern of deer use within the project area was speculatively attributed to disturbance caused by on-site tourist visits and the site’s lack of required concealing cover.

It is reasonable to assume that deer use of the project area has not increased either for migratory passage or for summer residency in the interval since the prior on-site study. As in 1992, deer trails were not found during thorough survey of the entire property in 2017. Deer sign was scattered, and only one individual was seen within the project area. More generally, negative impacts to the available habitat have brought about changes that do not favor deer use. Uniform scrub dominated by bitterbrush, as described on-site in 1992 (Bagley, 1992), has been displaced and has become highly fragmented due to prior phases of Tioga Inn development. Habitat that has become degraded due to wildfire extends well off-site, and concealing cover provided by the pinyon woodland of upper slopes adjacent to the project has not recovered. The grouping of occupied residences located near Hwy 395 at a distance of 2500 ft outside of the study area has expanded, potentially creating new restrictions for wildlife access to the project site from the south. Hwy 395 has been expanded and widened, now presenting a divided, four-lane barrier to wildlife movement to and from the study area. The disturbed and increasingly isolated habitat within and immediately adjacent to the project site appears now to only marginally provide for the requirements of mule deer that reside in the area or that pass through during migration.

It is possible that the mortality of deer that enter the property could be increased as a result of project effects that increase crossings of the highways, especially the 4-lane Hwy 395, where collisions can occur. Collision, especially along Hwy 395, is considered one of the main causes of deer mortality in Mono County (Mono County Planning Dept., 2001). CDFW has developed specific plans for management of deer herds that emphasize the importance of designing projects so that a minimum of new barriers to migration are emplaced. The proposed project will create a significant new physical barrier to deer movement. Housing and tourism-based facility operations will increase daily human activity, and generate noise and new night lighting. Domestic dogs off-leash will tend to harass wildlife and drive deer onto roadways.

4 Recommended Mitigations

4.1 Special Status Plant Communities and Species

The project will temporarily disturb 1.1 acres of Great Basin Mixed Scrub shrublands dominated by bitterbrush with a lesser presence by co-dominant big sagebrush, a plant community type that is considered sensitive by the State of California. This disturbance will be required in order to install a leach field for the proposed new housing. Permanent conversion of native vegetation (6.5 acres) will occur only where the regionally common community type Big Sagebrush Scrub is dominant. In addition, 3.9 acres temporary disturbance will occur in Big Sagebrush Scrub.

Recommendation 1: Direct impacts to the project area plant communities can be minimized if proponent prepares a revegetation plan for all areas that are temporarily disturbed by the project. Mono County would review the plan for approval within 60 days of the start of construction. The revegetation plan will, at a minimum, include a planting palette that emulates remaining Great Basin Mixed Scrub on-site, methods and timing for planting and supplemental inputs including plant protection and irrigation

using treated sewage effluent, success criteria that include a return to at least 50% of pre-project native vegetation cover within five years, and a monitoring and reporting program that includes annually collected revegetation progress data, demonstrates and summarizes trends, and presents photographic evidence of such, for transmittal to Mono County prior to December 1 of each of the first five years following project construction (or until all success criteria have been attained.)

Construction-related direct impacts to the occurring Masonic rockcress population are very unlikely, but the emplacement of the new road will approach to within 100 feet. The annual few-flowered woollystar population is very unlikely to be affected by the removal of a small area of potential habitat (in 2017, plants were found near but not within the area where vegetation will be displaced by the project).

Recommendation 2: Direct impact to Masonic rockcress during project construction if the construction contractor installs temporary fencing along the western edge of the existing roadway where it approaches the Masonic rockcress population, in order to prevent accidental damage due to incursion by equipment.

4.2 Special Status Wildlife Species

The project area currently supports nesting birds, very likely including a portion of a locally dense nesting population of Brewer's sparrows. Nesting birds are protected under CDFW code and by Migratory Bird Treaty provisions, and construction can be routinely halted in order to avoid nest destruction or abandonment if it is scheduled to occur during the locally recognized nesting period. Surveys that would be intended to minimize or avoid the potential for impacts to nesting birds would be effective only if they are performed immediately prior to the start of the disturbance, by a biologist who is qualified and knowledgeable of local avifauna.

Recommendation 3: Negative impacts upon nesting success can be minimized if occurring nests are discovered and avoided during project construction. A pre-disturbance nesting bird survey would be scheduled and performed within seven days prior to the start of vegetation and ground-disturbing project activities, by a qualified biologist, if construction is scheduled to begin during the period March 15 – August 15. All potential nesting habitat within 200 feet (passerine birds) or 600 ft (raptors) from the project-related disturbance limits would need to be included in the survey. Positive indications of nesting will be reported to CDFW, Bishop Office, and to the construction foreperson within 24 hours of survey completion, in order to formulate and implement avoidance measures. Appropriate measures (at a minimum including nest buffering and monitoring) will be decided in consultation with CDFW on a nest-by-nest basis.

Domestic pets, especially dogs and cats, are expected with the new housing tenancy. It is unrealistic to expect that these animals will be restrained, and wandering pets potentially will be an important new predatory limitation that is imposed on the environment reaching for some distance beyond the project footprint. Domestic cats, for example, could extirpate the breeding Brewer's sparrow population that currently utilizes scrub just outside the project area to the north and east. Pet dogs could harass terrestrial wildlife including American badger and mule deer, and thereby cause increased crossings and potential for collision at U.S. Highway 395.

Recommendation 4: It will be possible to minimize negative impacts including avoiding possible extirpation of the local breeding population of Brewer's sparrow, and similar impacts to other birds breeding near the project area, only if domestic pet predators are

diligently prevented from entering their habitat. To meet this intent, tenants wishing to have pets must prepare a design kennel or other fenced enclosure that excludes pets from entering undeveloped portions of the property and (unfenced) adjacent lands, and pay for professional enclosure installation as approved by property management. The tenancy agreement for all units must include a common rule requiring leashing of pets whenever they exit the housing units or fenced enclosure.

Surveys conducted in 2017 found recent sign of burrowing by American badger, which is a CDFW Species of Concern. It is possible that individuals will den temporarily or while raising young within the project area, occupying enlarged squirrel burrows such as those found in 2017. Badgers are highly mobile animals as adults, and can escape construction-related direct impacts. Burial of dens occupied by individuals in a state of torpor, as well as burial of natal dens, would be fatal to badgers, especially young badgers, and should be avoided.

Recommendation 5: Direct mortality to American badger due to project construction can be avoided if occurring badgers are located prior to the start of construction. The pre-disturbance survey to locate denning mammals including badger would be scheduled within three days prior to the start of vegetation and ground-disturbing project activities, and must be performed by a qualified biologist. The survey will include the entire area where disturbance will occur, as well as buffers of 100 feet in all directions. Indications of denning will be reported to CDFW, Bishop Office, and to the construction foreperson within 24 hours of survey completion, in order to formulate and implement avoidance measures. Unless modified in consultation with CDFW, active dens will be buffered by a minimum distance of 100 feet, until the biologist finds that the occupation has ended.

4.3 Mule Deer

Mule deer were observed on-site, and their tracks or droppings were seen in all habitat types. The project incrementally narrows one possible route that deer of the Casa Diablo Herd could use to move into and out of Lee Vining Canyon during migration. Effective closure will be somewhat more extensive, given that the new housing and increased tourist visits will add noise, necessitate night lighting, and introduce free-roaming pet dogs to habitat that has been available for relatively unobstructed deer use. Meanwhile, forage and concealing cover availabilities have declined since 1992, when detailed study concluded that on-site deer use is generally low and ancillary to a major movement corridor that is located well off-site to the south and east.

Recommendation 6: Mule deer crossings of the highways adjacent to the project and resultant mortality due to collisions can be minimized if the project as built and operated does not cause deer to be driven into traffic. Specifically, deer that cross roads in a southward direction towards the built environment of the project (*e.g.*, spring migrants) should not be directed or chased back in the opposite direction, rather they should find safe passage through the remaining shrublands habitat to open lands east and south of the project (Figure 7). To this end, night lighting should be shielded to maintain the corridor of undeveloped vegetation between Tioga Inn developments and U.S. Highway 395 in the darkest state possible. Deer movements away from the highways will be facilitated by keeping this corridor open (no linear barriers, no brightly lit signs, no future revegetation or project development). With incorporation of this recommended mitigation and also recommended mitigation 4, above, movements will be deflected/directed to the east and south of the new housing area rather than back across highways.

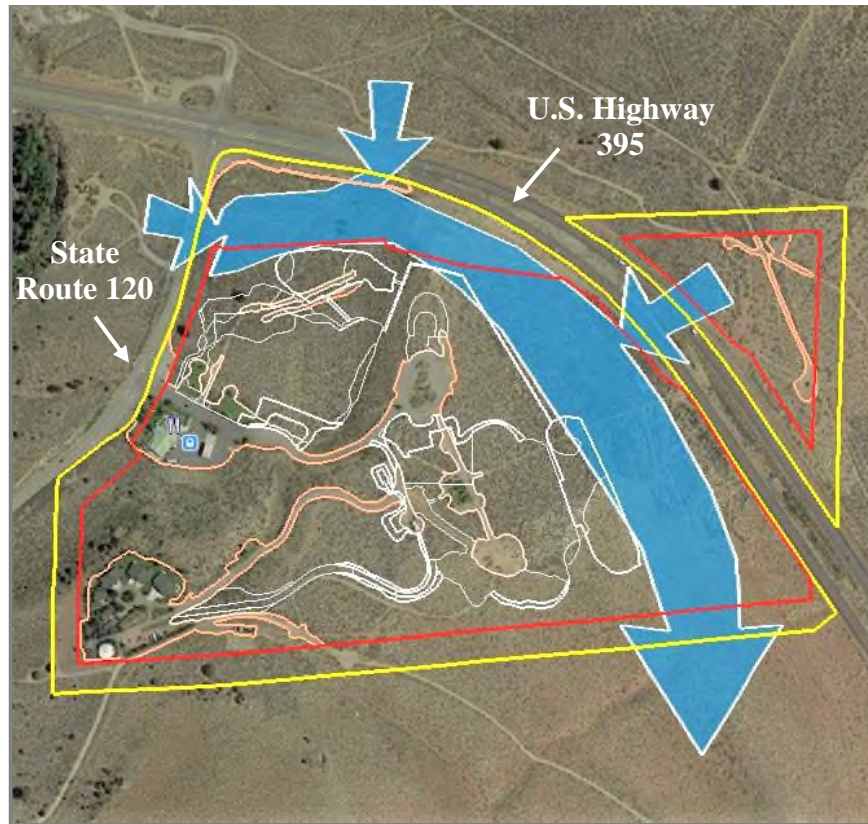


Figure 7. Corridor that should be maintained so that deer moving southward into Lee Vining Canyon are not directed onto the highways that are adjacent to the project.

The project will permanently remove 6.5 acres of shrublands habitat that may otherwise be used by migrating, holding, and resident mule deer to meet forage and cover requirements. Much of this area, and extensive off-site lands to the east and south, have failed to recover dense native vegetation following wildfire in 2000. Habitat of good utility for mule deer hence is now relatively scarce, at least to the south of U.S. Highway 395.

Recommendation 7: Impacts to mule deer habitat can be mitigated by restoring suitable habitat to areas that were damaged by wildfire. All areas burned in 2000 within the property (14.8 acres, minus 1.5 acres that will be permanently converted to new housing and road facilities) should be added to the revegetation plan as prepared by the proponent (see Recommendation 1, above). Treatment will specify seeding using locally collected bitterbrush across the entire area, at a rate of 4 pounds/acre pure live seed. In addition, diverse shrubs and grasses with available locally collected seed will be spread, bringing the total application rate to 10 pounds/acre. Seeding will be performed just prior to the onset of winter snows in the same year that project construction is initiated. In addition, at least 350 container-raised bitterbrush will be purchased, introduced into areas near the new housing, and provided with irrigation using treated sewage system effluent. Success criteria for this measure will include, at a minimum, an increase in total live cover provided by native shrub and grasses to 20% above that measured at adjacent (unseeded) burn scar areas.

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Appendix A. CNDDDB search results for the USGS Lee Vining, Negit Island, Lundy, Mount Dana, Koip Peak, June Lake, Crestview, Mono Mills, and Sulphur Pond quadrangles conducted in November 2018. The Tioga Inn study area supports upland montane scrub habitats. The average elevation of the project area is 2115 m (6940 ft). The elevation range is 2070-2160 m (6800-7080 feet). Status codes are defined following the table.

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Plants Federal Listed or State Listed							
<i>Astragalus monoensis</i> Mono milkvetch	BLM sensitive USFS sensitive	Rare	1B.2	2100-3400	sagebrush scrub, roadsides, open flats, always with gravelly pumice soils	open sagebrush scrub and roadside, pumice soils near June Lake Junction 7680 ft (2340 m), 9.9 miles south	pumice flat openings in the scrub canopy are not present, but some likelihood exists due to broad soil and vegetation similarity
Plants Not Federal or State Listed							
<i>Agrostis humilis</i> mountain bent grass			2B.3	2600-3200	alpine slopes, subalpine coniferous forest, meadows	meadow-like on outcrops, near Upper Sardine Lake at Mono Pass, 10,350 ft (3140 m), 6.5 miles southwest	very unlikely due to lack of suitable habitat

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Plants							
Not Federal or State Listed (cont.)							
<i>Allium atrorubens</i> var. <i>atorubens</i> Great Basin onion			2B.3	1200-2150	sandy or rocky upland fans, washes, granitic or volcanic soils, scrub or woodland	juniper woodland and sagebrush scrub near Conway Summit, 7600 ft (2320 m), 9.1 miles north	some likelihood exists due to soil and scrub vegetation similarity
<i>Boechea bodiensis</i> Bodie Hills rockcress	BLM sensitive USFS sensitive		1B.3	2400-2900	Great Basin scrub or pinyon-juniper woodland, rocky, crevices, often igneous	rocky near-stream riparian in Lower Lee Vining Canyon, 7085 ft (2160 m), less than 0.5 miles southwest	some likelihood exists due to close proximity of known population and soil and scrub vegetation similarity
<i>Boechea cobrensis</i> Masonic Mtn rockcress			2B.3	1370-3100	Great Basin scrub or pinyon-juniper woodland, often sandy	sagebrush scrub near West Portal, gravelly pumice soil, 6980 ft (2130 m), 5.0 miles south (Paulus, 2013)	some likelihood exists due to soil and scrub vegetation similarity
<i>Boechea tiehmii</i> Tiehm's rockcress	USFS sensitive		1B.3	2970-3590	alpine rocky slopes	rock crevices on open slope above Ellery Lake near Tioga Pass, 9950 ft (3020 m), 6.4 miles west	very unlikely due to lack of suitable habitat

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Plants							
Not Federal or State Listed (cont.)							
<i>Boechea tularensis</i> Tulare rockcress	USFS sensitive		1B.3	1825-3350	open subalpine to alpine coniferous forest, often rocky slopes	granitic sand at Lundy Lake, 7870 ft (2400 m), 8.9 miles northwest	very unlikely due to lack of suitable habitat
<i>Botrychium crenulatum</i> scalloped moonwort	USFS sensitive		2B.2	1250-3300	seeps, bogs, moist and shaded subalpine forest and meadows	mossy talus at Nunatak Nature Trail near Tioga Pass, 9800 ft (2970 m), 7.5 miles west, occurs also at lower elevations in Mono Co.	very unlikely due to lack of suitable habitat
<i>Botrychium lunaria</i> common moonwort	USFS sensitive		2B.3	1980-3400	seeps, bogs, moist and shaded subalpine forest and meadows	shaded riparian woodland at Lee Vining Creek, 6500 ft (1980 m), 1.3 miles north	very unlikely due to lack of suitable habitat
<i>Carex davyi</i> Davy's sedge			1B.3	1500-3200	subalpine and upper montane coniferous forest, west of Sierra Nevada crest (no Mono County occurrences)	alpine zone near Summit Lake at Mono Pass (1944), 10,600 ft (3200 m), 8.6 miles southwest, possibly extirpated	very unlikely due to lack of suitable habitat and large ecological distance to nearest known population

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Plants Not Federal or State Listed (cont.)							
<i>Carex praticola</i> northern meadow sedge			2B.2	500-3200	mesic forest, meadow edges, streambanks	moist forest above Tioga Lake, 9,950 ft (3030 m), 7.4 miles west	very unlikely due to lack of suitable habitat
<i>Carex scirpoidea</i> ssp. <i>pseudoscirpoidea</i> western single- spiked sedge			2B.2	2900-3700	alpine meadows and seeps, mesic forest	meadow among outcrops, west slope of Mount Dana, 10,650 ft (3250 m), 8.0 miles west	very unlikely due to lack of suitable habitat
<i>Carex tiogana</i> Tioga Pass sedge	USFS sensitive		1B.3	3100-3530	meadows and seeps, lake margins	meadow-like among rocks, Upper Sardine Lake near Mono Pass, 10,350 ft (3140 m), 7.8 miles southwest	very unlikely due to lack of suitable habitat and large elevation difference between study area and all known populations
<i>Carex vallicola</i> western valley sedge			2B.3	1520-2950	meadows and seeps, scrub at margins of meadows	moist streamside meadow margin, Lee Vining Creek above Ellery Lake, 9600 ft (2930 m), 7.0 miles west	very unlikely due to lack of suitable habitat

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Plants Not Federal or State Listed (cont.)							
<i>Chaetadelpha wheeleri</i> Wheeler's dune- broom			2B.2	800-1800	sandy scrub and dunes, often alkaline, playas, greasewood scrub	sandy, saline dunes with sparse scrub vegetation, northern Mono Basin, 6400 ft (1950 m), 11 miles northeast	some likelihood exists due to broad soil and scrub vegetation type similarity
<i>Cusickiella quadricostata</i> Bodie Hills cusickiella	BLM sensitive		1B.2	2000-2800	sagebrush scrub, pinyon-juniper woodland, clay soils, often rocky	open slopes with clay soil and sparse scrub vegetation, northern Mono Basin, 7280 ft (2220 m), 8.5 miles north	some likelihood exists due to broad soil and scrub vegetation type similarity
<i>Draba asterophora</i> Tahoe draba	USFS sensitive		1B.2	2500-3500	alpine rocks and scree	alpine zone at Mount Gibbs (in 1916), 11500 ft (3490 m), 6.6 miles southwest	very unlikely due to lack of suitable habitat
<i>Draba cana</i> canescent draba			2B.3	3000-4100	alpine meadows, crevices and scree, usually granite	crevices in granite near Tioga Peak, 9980 ft (3040 m), 6.0 miles west	very unlikely due to lack of suitable habitat and large elevation difference between study area and all known populations

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Plants Not Federal or State Listed (cont.)							
<i>Draba praealta</i> tall draba			2B.3	2500-4100	subalpine and alpine meadows and seeps	moist alpine meadow, west slope of Mount Gibbs, 11,500 ft (3490 m), 6.8 miles southwest	very unlikely due to lack of suitable habitat
<i>Eremothera boothii</i> ssp. <i>boothii</i> Booth's evening primrose			2B.3	900-2400	Joshua tree woodland, fire scars, pinyon-juniper woodland, scrub, often sandy	sagebrush scrub near Rush Creek confluence with Mono Lake, 6450 ft (1970 m), 2.8 miles east	some likelihood exists due soil and scrub vegetation similarity
<i>Erythranthe utahensis</i> Utah monkeyflower			2B.1	610-1950	moist lakeshore, meadow margins, riparian, sandy	moist meadow near shore of Mono Lake, 6400 ft (1950 m), 2.4 miles north	very unlikely due to lack of suitable habitat
<i>Festuca minutiflora</i> small-flowered fescue			2B.3	3200-4150	alpine rocks and scree	alpine moist, open slope near Mount Dana summit, 11,500 ft (3510 m), 6.6 miles west	very unlikely due to lack of suitable habitat and large elevation difference between study area and all known populations

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Plants Not Federal or State Listed (cont.)							
<i>Ladeania lanceolata</i> lance-leaved scurf pea			2B.3	1220-2070	open sandy scrub, dunes, often saline	dry meadow near Kirkwood Spring, northern Mono Basin, 6650 ft (2030 m), 13 miles northeast	very unlikely due to lack of suitable habitat
<i>Lupinus duranii</i> Mono Lake lupine	BLM sensitive USFS sensitive		1B.2	2000-3000	montane sagebrush scrub, coniferous forest, gravelly pumice soil	Mono Pumice Flats habitat, pumice soil, base of Mono Craters, 6800 ft (2070 m), 3.3 miles east	pumice flat openings in the scrub canopy are not present, but some likelihood exists due to soil and vegetation similarity
<i>Lupinus pusillus</i> var. <i>intermontanus</i> intermontane lupine			2B.3	1220-2060	sagebrush scrub, greasewood scrub, dunes, usually sandy	greasewood scrub, usually on active dunes, northeastern Mono Basin, 6400 ft (1940 m), 11 miles northeast	very unlikely due to lack of suitable habitat
<i>Mentzelia torreyi</i> Torrey's blazing star			2B.2	900-2100	sandy or alkaline scrub, pinyon-juniper woodland	pumice soil, sagebrush scrub near Black Point, northern Mono Basin, 6400 ft (1940 m), 5.5 miles north	some likelihood exists due to broad similarity of scrub vegetation

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Plants							
Not Federal or State Listed (cont.)							
<i>Minuartia stricta</i> ¹ bog sandwort			2B.3	2450-3950	alpine, rocky or very coarse soils, meadows	wet rock crevices at seep zone near Ellery Lake, 10,380 ft (3160 m), 6.0 miles west	very unlikely due to lack of suitable habitat
<i>Potamogeton robbinsii</i> Robbins' pondweed			2B.3	1530-3300	aquatic habitats, marshes, lake margins	shallow submerged margin of Walker Lake, 7930 ft (2400 m), 5.8 miles southwest	very unlikely due to lack of suitable habitat
<i>Ranunculus hydrocharoides</i> frog's-bit buttercup			2B.1	1200-2800	wet meadows and streambed margins, emergent at pond edges, lakes	perennial streambed of Mill Creek, 7440 ft (2270 m), 7.1 miles northwest	very unlikely due to lack of suitable habitat
<i>Salix brachycarpa</i> var. <i>brachycarpa</i> short-fruited willow			2B.3	3200-3500	meadows, seeps, alpine scrub, subalpine mesic coniferous forest	moist meadow habitat near Gardisky Lake, 10,500 ft (3200 m), 7.2 miles west	very unlikely due to lack of suitable habitat and large elevation difference between study area and all known populations

1. syn. *Sabulina stricta*

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Plants Not Federal or State Listed (cont.)							
<i>Salix nivalis</i> snow willow			2B.3	3100-3500	alpine scrub, seeps	moist habitat near Mount Gibbs summit (in 1949), 11,500 ft (3510 m), 6.7 miles southwest	very unlikely due to lack of suitable habitat and large elevation difference between study area and all known populations
<i>Silene oregana</i> Oregon campion			2B.2	2250-2820	subalpine coniferous forest and scrub	subalpine forest with scrub understory, Warren Canyon, 9300 ft (2820 m), 6.8 miles west	very unlikely due to lack of suitable habitat
<i>Streptanthus oliganthus</i> Masonic Mtn. jewelflower	BLM sensitive USFS sensitive		1B.2	1980-3050	pinyon-juniper woodland, steep, rocky slopes	scrub on open, rocky slope near Lundy Canyon mouth, 7400 ft (2260 m), 7.1 miles north	some likelihood exists due to broad soil and vegetation type similarity
<i>Stuckenia filiformis</i> ssp. <i>alpina</i> slender-leaved pondweed			2B.2	300-2150	shallow freshwater, lake margins	shallow lake margin at June Lake Marina (in 1972), 7630 ft (2310 m), 11 miles south	very unlikely due to lack of suitable habitat

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Plants							
Not Federal or State Listed (cont.)							
<i>Tetradymia tetrameres</i> dune horsebrush			2B.2	1200-2140	sagebrush scrub, greasewood scrub, dunes, sandy, often saline	sandy sagebrush scrub, northern Mono Basin, 6600 ft (2010 m), 5.1 miles north	some likelihood exists due to broad soil and vegetation type similarity
<i>Thelypodium integrifolium</i> ssp. <i>complanatum</i> foxtail thelypodium			2B.2	1100-2500	sagebrush scrub, pinyon-juniper woodland, often alkaline	roadside at Conway Ranch, northern Mono Basin (in 1937), 6750 ft (2060 m), 5.6 miles north	some likelihood exists due to broad soil and vegetation type similarity
<i>Thelypodium milleflorum</i> many-flowered thelypodium			2B.2	1300-2500	sagebrush scrub, often sandy	sagebrush scrub, rocky volcanic soil in Cottonwood Canyon, 7000 ft (2130 m), 12 miles north	some likelihood exists due to broad vegetation type similarity
<i>Viola purpurea</i> ssp. <i>aurea</i> golden violet			2B.2	1000-2300	pinyon-juniper woodland, sagebrush scrub, often sandy	sandy sagebrush scrub in Lee Vining Creek Canyon, 6700 ft (2040 m), 1.1 miles north	some likelihood exists due to soil and vegetation similarity and proximity of known population

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Lichens Not Federal or State Listed							
<i>Peltigera gowardii</i> aquatic felt lichen	USFS sensitive		4.2	1310-2380	submerged rocks or streamside, possibly open sunny meadows	atypical meadow habitat near Mount Dana summit, 12,800 ft (3900 m), 6.6 miles west	very unlikely due to lack of suitable habitat

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Wildlife Federal Listed or State Listed							
Amphibians							
<i>Anaxyrus canorus</i> Yosemite toad	Thr USFS sensitive	SSC		1220-3410	ponds, streams, and adjacent meadows, usually subalpine to alpine	Tioga Lake, upper Lee Vining Creek watershed, 9680 ft (2950 m), 7.5 miles west	very unlikely due to lack of suitable habitat
<i>Rana sierrae</i> Sierra Nevada yellow-legged frog	Endang USFS sensitive	Thr WL		620-3720	ponds, streams, and adjacent meadows, usually subalpine to alpine	possibly isolated tarns near Dana Meadow, Yosemite National Park, 10,000 ft (3050 m), 7.9 miles west, CDFW finds no extant populations in Lee Vining Creek watershed (in 2013)	very unlikely due to lack of suitable habitat and large ecological distance to nearest known population
Birds							
<i>Buteo swainsoni</i> (nesting) Swainson's hawk	BLM sensitive USFWS BCC	Thr		0 - 2500	nesting in grasslands with scattered trees, riparian forest	nesting (in 1985) at riparian scrub with wet meadow at Parker Creek, 7100 ft (2150 m), 4.7 miles south	very unlikely due to lack of suitable habitat

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Wildlife							
Federal or State Listed (cont.)							
Birds (cont.)							
<i>Empidonax traillii</i> (nesting) willow flycatcher	Endang (ssp. <i>extimus</i>)	Endang (all ssp.)		600-2400	nesting in extensive willow riparian scrub stands, often near wet meadow habitat	may be nesting at Lee Vining Creek riparian zone between Lee Vining and Mono Lake (possibly extirpated 2000), 6430 ft (1960 m), < 1 mile north, also Lee Vining Creek upstream from Lee Vining	very unlikely due to lack of suitable habitat
<i>Riparia riparia</i> (nesting) bank swallow	BLM sensitive	Thr		0-2170	colonies nest in cavities in cliffs, river banks, road cuts	active colony nesting along shore of DeChambeau Ranch pond, 6430 ft (1960 m), 6.9 miles north	very unlikely due to lack of suitable habitat
Mammals							
<i>Gulo gulo</i> wolverine	Proposed Thr USFS sensitive	Thr FP		2040-4300	many habitats, high elevation Sierra Nevada and northern Coast Ranges	subalpine coniferous forest near Ellery Lake (in 1974), 10,200 ft (3110 m), 6.6 miles west	very unlikely due to lack of suitable habitat and large elevation difference between study area and all regional known occurrences

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Wildlife							
Federal or State Listed (cont.)							
Mammals (cont.)							
<i>Pekania pennanti</i> West Coast DPS fisher	BLM sensitive USFS sensitive	Thr SSC		1500-3660	expansive mature and dense forest with snags or downed logs and adjacent riparian area	subalpine coniferous forest and lakeshore near Ellery Lake, 9800 ft (2990 m), 6.5 miles west	very unlikely due to lack of suitable habitat
<i>Vulpes vulpes necator</i> Sierra Nevada red fox	Candidate (Thr or Endang) USFS sensitive	Thr		1800-3170	forest and forest gaps, high elevation central Sierra Nevada, recent sightings indicate may use lower elevations in Eastern Sierra Nevada	Lee Vining Creek Canyon at U.S. Hwy 395 (in 1989), 6830 ft (2080 m), 0.3 miles northwest	some likelihood exists due to proximity of historical known occurrence

Wildlife							
Not Federal Listed or State Listed							
Mollusks							
<i>Pyrgulopsis wongi</i> Wong's springsnail	USFS sensitive			450-2900	freshwater perennial springs and along outflow streams	spring outflow near Conway Summit, 8130 ft (2480 m), 10 miles north	very unlikely due to no records from Lee Vining Creek drainage

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Wildlife Not Federal or State Listed (cont.)							
Fish							
<i>Catostomus fumeiventris</i> Owens sucker		SSC		1200-2780	Owens River drainage in Mono and Inyo Counties	Marsh and pond at East Portal, Long Valley, 7000 ft (2120 m), 18 miles southeast	very unlikely due to lack of suitable habitat (no records of occurrence in Lee Vining Creek drainage)
Amphibians							
<i>Hydromantes platycephalus</i> Mount Lyell salamander		WL		1200-3500	rocky soil or talus in moist to wet habitat very near surface water	Upper Rush Creek near Marie Lakes (in 1973), 9650 ft (2940 m), 15 miles southwest	very unlikely due to lack of suitable habitat.
Birds							
<i>Accipiter gentilis</i> (nesting) northern goshawk	BLM sensitive USFS sensitive	SSC		300-3290	nesting in expansive stands of relatively closed coniferous forest	eyries (in 1981) in montane coniferous forest near Lee Vining Creek, 8400 ft (2560 m), 4.3 miles west	very unlikely due to lack of suitable habitat. May forage transiently in study area.

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Wildlife Not Federal or State Listed (cont.)							
Birds (cont.)							
<i>Centrocercus urophasianus</i> Bi-State DPS (nesting, leks) greater sage grouse	BLM sensitive USFS sensitive	SSC		2100-3200	foraging, nesting in sagebrush scrub, leks at openings in scrub, brood raising at fields and meadows with adjacent sagebrush scrub	active lek area at Parker Meadows, 6900 ft (2100 m), 4.8 miles south, year-long use of sagebrush scrub west of Grant Lake, 7150 ft (2170 m), 5.5 miles south	Some likelihood due to proximity of known population and broad similarity of sagebrush habitat
<i>Circus hudsonius</i> (nesting) northern harrier		SSC		<0 - 3050	nesting on ground in expansive meadows, marshes, marshland scrub, foraging same habitats	nesting at lakeside meadows near riparian forest at lower Lee Vining Creek, 6400 ft (1940 m), 1.9 miles north	nesting and foraging very unlikely due to lack of suitable habitat
<i>Coturnicops noveboracensis</i> (nesting) yellow rail	USFWS BCC	SSC		0 - 2600	nesting on ground in marshes, meadows, foraging same habitats	nesting at lakeside meadow near shoreline of Mono Lake, 6400 ft (1950 m), 4.8 miles north	nesting and foraging very unlikely due to lack of suitable habitat
<i>Falco mexicanus</i> (nesting) prairie falcon	USFWS BCC	WL		120-2870	nesting on vertical cliffs, foraging over open grasslands, open scrublands	nesting 9-10 miles south of study area (exact locations are sensitive), 8000-8160 ft (2440-2490 m)	very unlikely due to lack of suitable habitat

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Wildlife Not Federal or State Listed (cont.)							
Birds (cont.)							
<i>Larus californicus</i> (nesting) California gull		WL		0-1980	nesting on small islands, freshwater lakes	nesting colonies on islands in Mono Lake, 6400 ft (1950 m), 4.3 miles northeast	very unlikely due to lack of suitable habitat.
<i>Pandion haliaetus</i> (nesting) osprey		WL		0 - 2460	nests in large trees, forages at aquatic and riverine habitats	nesting on tufa towers at Mono Lake, 6400 ft (1950 m), 1.6 miles northeast	very unlikely due to lack of suitable habitat
<i>Setophaga petechia</i> (nesting) yellow warbler	USFWS BCC	SSC		0 - 2600	nesting and foraging in riparian scrub/forest, may nest in shrubby montane forest gaps	nesting population in riparian zone at lower Lee Vining Creek, 6400 ft (1940 m), 1.1 miles north	very unlikely due to lack of suitable habitat
<i>Spizella breweri</i> (nesting) Brewer's sparrow	USFWS BCC			1900-2000	nesting and foraging in sagebrush scrub	nesting in brushy riparian zone at Lee Vining Creek, 6400 ft 1950 m), 1.2 miles north	some likelihood exists due to habitat similarity and local connectivity, and proximity of known population

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Wildlife Not Federal or State Listed (cont.)							
Birds (cont.)							
<i>Xanthocephalus xanthocephalus</i> (nesting) yellow-headed blackbird		SSC		0 - 2100	nests in freshwater emergent marsh, may nest in riparian forest	nesting in marsh at Lee Vining Creek confluence with Mono Lk., 6400 ft (1950 m), 1.9 miles north	very unlikely due to lack of suitable habitat
Mammals							
<i>Aplodontia rufa californica</i> Sierra Nevada mountain beaver		SSC		1950-2300	coniferous and riparian forest, areas of dense understory, near water	wet meadow and lakeshore near Mono Lake, 6500 ft (1980 m), 4.1 miles north	very unlikely due to lack of suitable habitat
<i>Brachylagus idahoensis</i> pygmy rabbit	BLM sensitive USFS sensitive	SSC		1830-2560	sagebrush, pinyon-juniper woodland with sagebrush understory, dense sagebrush "island" patches	tall, dense sagebrush scrub on both sides of U.S. 395 near Walker Creek, 6800 ft (2060 m), 2.3 miles south ²	some likelihood exists due to vegetation and elevation similarity
<i>Euderma maculatum</i> spotted bat	BLM sensitive	SSC		<0 - 3230	roost and natal colonies in crevices, caves, forages at aquatic and riverine habitats	detected foraging over shoreline meadow habitat at Mono Lake, 6450 ft (1970 m), 4.8 miles north	roosting is very unlikely due to lack of suitable habitat, but may forage over the study area

- Two active warrens recently confirmed in willow scrub near Mono Lk. shoreline, 6420 ft (1960) m, 3.4 miles north, possibly extirpated 2016 (Paulus, 2016).

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Wildlife Not Federal or State Listed (cont.)							
Mammals (cont.)							
<i>Eumops perotis californicus</i> western mastiff bat	BLM sensitive	SSC		0 - 2600	nests in crevices, trees, buildings, forages at a wide variety of habitats, western U.S.	detected foraging over aquatic habitat at Poole Power Plant, Lee Vining Cr., 7850 ft (2380 m), 3.6 miles west	some likelihood of roosting or nesting and foraging due to broad habitat similarity
<i>Lepus townsendii townsendii</i> western white-tailed jackrabbit		SSC		1950-3350	sagebrush scrub, open coniferous forest	likely sagebrush scrub near Wilson Butte (in 1916), 6900 ft (2090 m), 2.8 miles south	documented local occurrence is old, but some likelihood due to similar habitat and elevation
<i>Martes caurina sierrae</i> Sierra marten	USFS sensitive			550 – 3660	closed-canopy forest with snags and downed tree boles, usually old growth coniferous, Cascades and Sierra Nevada ranges	subalpine coniferous forest near Ellery Lake (in 1929), 10,200 ft (3110 m), 6.6 miles west	very unlikely due to lack of suitable habitat
<i>Myotis evotis</i> long-eared myotis	BLM sensitive			10-2930	roost in rock outcrops, dead trees, sometimes mines, forages over dense vegetation or water	detected foraging over aquatic habitat at Poole Power Plant, Lee Vining Cr., 7850 ft (2380 m), 3.6 miles west	roosting is very unlikely due to lack of suitable habitat, but may forage over the study area

Species	Federal	State	CNPS	elevation range (m)	habitat range	nearest occurrence	likelihood of occurrence at project
Wildlife Not Federal or State Listed (cont.)							
Mammals (cont.)							
<i>Myotis yumanensis</i> Yuma myotis	BLM sensitive			0-2930	roosting colonies in caves, mines, buildings, under bridges, always near water, forages over open water	detected foraging over shoreline meadow habitat at Mono Lake, 6450 ft (1970 m), 4.8 miles north	some likelihood of roosting or nesting and foraging due to proximity of aquatic habitat
<i>Sorex lyelli</i> Mount Lyell shrew		SSC		2000-3260	moist, grassy meadows with riparian willows, central Sierra Nevada	likely meadow habitat near Wilson Butte (in 1915), 6900 ft (2090 m), 2.8 miles south	very unlikely due to lack of suitable habitat
<i>Taxidea taxus</i> American badger		SSC		< 0 - 3600	variety of relatively dry and open scrub, forest and grassland habitats	sagebrush scrub near U.S. Highway 395 at West Portal, 6980 ft (2120 m), 5.1 miles south	some likelihood due to similar habitat and elevation

Federal = U.S. Fish and Wildlife Service under the Endangered Species Act (CDFW, 2018a, 2018d). Candidate (Cand.) = designated Candidate for Listing

Endang = Endangered

Thr = Threatened

BCC = Birds of Conservation Concern

State = California Department of Fish and Wildlife listings under the California Endangered Species Act (CDFW, 2018a, 2018d).

Endang = Endangered

Thr = Threatened

SSC = Species of Concern, FP = Fully Protected, WL = Watchlist

CNPS = California Native Plant Society listings (CNPS, 2001, 2018)

1B = rare and endangered in California and elsewhere

2B = rare, threatened or endangered in California, but more common elsewhere

4 = watchlist species of limited distribution Threat Code extensions:

.1 is Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2 is Fairly endangered in California (20-80% of occurrences threatened)

.3 is Not very endangered in California (< 20% of occ's threatened or no current threats known).

Appendix B. List of plant species that were observed to occur at the Tioga Inn project in April-May 2017. The study area totals 93.4 acres and ranges in elevation between 6800 feet (2070 meters) and 7080 feet (2160 meters). Presence noted within each occurring available habitat type (Big Sagebrush Scrub/Great Basin Mixed Scrub/disturbed) is indicated. Growth form (Habit) codes are defined below.

Plant Families and Species		Habit	Habitat Type		
			BSS ¹	GBMS	Dist.
Gnetophyta					
Pinaceae					
<i>Pinus jeffreyi</i>	Jeffrey pine	NT	x	x	
<i>Pinus monophylla</i>	singleleaf pinyon	NT	x		
Anthophyta (Dicotyledones)					
Apiaceae					
<i>Lomatium nevadense</i>	Nevada desert parsley	NPH		x	
Asteraceae					
<i>Ambrosia acanthicarpa</i>	annual bur-sage	NAH	x	x	x
<i>Artemisia tridentata</i>	big sagebrush	NS	x	x	
<i>Chaenactis stevioides</i>	desert pincushion	NAH	x	x	
<i>Chaenactis xantiana</i>	fleshy pincushion	NAH	x		
<i>Chrysothamnus viscidiflorus</i>	yellow rabbitbrush	NS	x	x	
<i>Dieteria canescens</i>	hoary aster	NPH	x	x	x
<i>Ericameria nauseosa</i>	rubber rabbitbrush	NS	x	x	x
<i>Ericameria parryi</i>	Parry rabbitbrush	NS	x		
<i>Erigeron aphanactis</i>	rayless fleabane	NPH	x		
<i>Pleicanthus spinosus</i>	spiny wire lettuce	NPH	x		
<i>Tetradymia canescens</i>	spineless horsebrush	NS	x	x	
Boraginaceae					
<i>Cryptantha circumscissa</i> var. <i>circumscissa</i>	cushion cryptantha	NAH	x	x	x
<i>Cryptantha echinella</i>	prickly cryptantha	NAH	x	x	x
<i>Cryptantha muricata</i> var. <i>denticulata</i>	prickly-nut cryptantha	NAH	x		
<i>Cryptantha torreyana</i> var. <i>torreyana</i>	Torrey's cryptantha	NAH	x	x	
<i>Cryptantha watsonii</i>	Watson's cryptantha	NAH	x		

Plant Families and Species		Habit	Habitat Type		
			BSS ¹	GBMS	Dist.
Boraginaceae (cont.)					
<i>Nama densa</i> var. <i>densa</i>	dense purple mat	NAH	x		x
<i>Phacelia ramosissima</i>	branching phacelia	NPH	x		
<i>Phacelia vallis-mortae</i>	Death Valley phacelia	NAH	x		x
<i>Plagiobothrys kingii</i> var. <i>harknessii</i>	Northern Great Basin popcorn flower	NAH	x		x
<i>Tiquilia nuttallii</i>	Nuttall's tiquilia	NAH	x	x	x
Brassicaceae					
<i>Boechea cobrensis</i>	Masonic rockcress	NPH	x		
<i>Boechea inyoensis</i>	Inyo rockcress	NPH	x		
<i>Boechea pulchra</i>	beautiful rockcress	NPH	x		
<i>Boechea retrofracta</i>	reflexed rockcress	NPH	x		
<i>Boechea sparsiflora</i>	sicklepod rockcress	NPH	x		
<i>Caulanthus pilosus</i>	chocolate drops	NBH	x		
<i>Descurainia pinnata</i> ssp. <i>brachycarpa</i>	western tansy mustard	NAH	x	x	
<i>Descurainia sophia</i>	flix-weed	IAH	x	x	x
<i>Erysimum capitatum</i> var. <i>capitatum</i>	Douglas' wallflower	NPH	x	x	
<i>Phacelia bicolor</i>	bicolored phacelia	NAH	x	x	x
<i>Phacelia vallis-mortae</i>	Death Valley phacelia	NAH		x	
<i>Phacelia</i> sp.	phacelia	NAH	x		
<i>Sisymbrium altissimum</i>	tumble mustard	IBH	x	x	x
Chenopodiaceae					
<i>Chenopodium atrovirens</i>	dark goosefoot	NAH	x	x	x
<i>Chenopodium</i> sp.	goosefoot	NAH	x	x	
<i>Grayia spinosa</i>	spiny hopsage	NS	x	x	
<i>Salsola tragus</i>	Russian thistle	IAH			x
Fabaceae					
<i>Astragalus newberryi</i> var. <i>newberryi</i>	Newberry's milkvetch	NPH	x		
<i>Lupinus argenteus</i> var. <i>argenteus</i>	silver lupine	NPH	x	x	
<i>Lupinus argenteus</i> var. <i>montigenus</i>	silver lupine	NPH	x		

Plant Families and Species			Habit	Habitat Type		
				BSS ¹	GBMS	Dist.
Geraniaceae						
<i>Erodium cicutarium</i>	redstem filaree	IAH	x			x
Grossulariaceae						
<i>Ribes velutinum</i>	desert currant	NS	x			
Loasaceae						
<i>Mentzelia albicaulis</i>	white-stem blazing star	NAH	x			x
<i>Mentzelia congesta</i>	clustered blazing star	NAH	x		x	
<i>Mentzelia montana</i>	mountain blazing star	NAH	x			
Montiaceae						
<i>Calyptridium monandrum</i>	common pussypaws	NAH	x			x
<i>Calyptridium roseum</i>	rosy pussypaws	NAH	x			
Onagraceae						
<i>Camissonia pusilla</i>	little wiry suncup	NAH	x		x	
<i>Gayophytum diffusum</i> ssp. <i>parviflorum</i>	summer snowflakes	NAH	x		x	x
Orobanchaceae						
<i>Castilleja applegatei</i> ssp. <i>pallida</i>	Applegate's paintbrush	NPH			x	
Papaveraceae						
<i>Argemone munita</i>	chicalote	NPH	x			
Phrymaceae						
<i>Mimulus nanus</i> var. <i>nanus</i>	dwarf purple monkeyflower	NAH	x		x	
Polemoniaceae						
<i>Aliciella leptomeria</i>	sand aliciella	NAH	x			
<i>Collomia tinctoria</i>	staining collomia	NAH	x		x	x
<i>Gilia brecciarum</i> ssp. <i>brecciarum</i>	Nevada gilia	NAH	x			
<i>Eriastrum diffusum</i>	diffuse woollystar	NAH				x
<i>Eriastrum signatum</i>	spotted woollystar	NAH	x		x	
<i>Eriastrum sparsiflorum</i>	few-flowered woollystar	NAH	x		x	

Plant Families and Species		Habit	Habitat Type		
			BSS ¹	GBMS	Dist.
Polemoniaceae (cont.)					
<i>Linanthus pungens</i>	granite gilia	NPH	x	x	
<i>Phlox stansburyi</i> var. <i>brevifolia</i>	Stansbury phlox	NPH	x		
Polygonaceae					
<i>Chorizanthe brevicornu</i> var. <i>spathulata</i>	Great Basin brittle spineflower	NAH	x	x	
<i>Chorizanthe watsonii</i>	Watson's spineflower	NAH	x		
<i>Eriogonum microtheca</i> var. <i>laxiflorum</i>	Great Basin wild buckwheat	NS	x		
<i>Eriogonum spergulinum</i> var. <i>reddingianum</i>	Redding's wild buckwheat	NAH	x		
<i>Eriogonum umbellatum</i> var. <i>nevadense</i>	Nevada sulphur flower	NS	x		
<i>Eriogonum</i> sp.	wild buckwheat	NAH	x		
<i>Oxytheca dendroidea</i> var. <i>dendroidea</i>	puncture bract	NAH	x	x	
<i>Polygonum aviculare</i> ssp. <i>depressum</i>	common knotweed	IPH			x
Ranunculaceae					
<i>Delphinium andersonii</i>	Anderson's larkspur	NPH	x		
<i>Ranunculus testiculatus</i>	hornseed buttercup	IAH			x
Rosaceae					
<i>Cercocarpus ledifolius</i> var. <i>intermontanus</i>	curl-leaf mountain mahogany	NS	x	x	
<i>Prunus andersonii</i>	desert peach	NS	x	x	x
<i>Purshia tridentata</i> var. <i>tridentata</i>	antelope bitterbrush	NS	x	x	
Salicaceae					
<i>Salix exigua</i>	sandbar willow	NS	x		
Anthophyta (Monocotyledones)					
Cyperaceae					
<i>Carex douglasii</i>	Douglas' sedge	NPGL	x		
Poaceae					
<i>Bromus tectorum</i>	cheat grass	IAG	x	x	x
<i>Elymus cinereus</i>	basin wildrye	NPG	x		

Plant Families and Species	Habit	Habitat Type		
		BSS ¹	GBMS	Dist.
Poaceae (cont.)				
<i>Elymus elymoides</i> squirreltail grass	NPG	x	x	x ²
<i>Festuca trachyphylla</i> hard fescue	IPG	x ²		
<i>Stipa comata</i> var. <i>comata</i> needle-and-thread grass	NPG	x	x	
<i>Stipa hymenoides</i> sand rice grass	NPG	x	x	
<i>Stipa occidentalis</i> western needle grass	NPG	x		

1. Includes recovering burn areas classified here as Curl-leaf Rabbitbrush Scrub.

2. Occurs only with irrigation for slope stabilization near roads.

Habit: A = annual I = introduced
 B = biennial N = native
 G = grass P = perennial
 GL = grass-like T = tree
 H = herb

Appendix C. List of wildlife species that were observed to occur or inferred to occur due to distinctive sign at the Tioga Inn project in April-May 2017. The study area totals 93.4 acres and ranges in elevation between 6800 feet (2070 meters) and 7080 feet (2160 meters). Presence was observed at native habitat types (generally, sagebrush scrub, including areas recovering from wildfire) and disturbed areas (devegetated or converted to developed facilities) of the study area.

Families and Species		Habitat Type	
		Native Scrub	Disturbed
Birds			
Galliformes - Odontophoridae			
<i>Callipepla californica</i>	California quail	x	
Columbiformes - Columbidae			
<i>Zenaida macroura</i>	mourning dove	x	x
<i>Streptopelia decaocto</i>	Eurasian collared dove		x
<i>Columba livia</i>	rock pigeon		x
Charadriiformes - Laridae			
<i>Larus californica</i>	California gull	x ^f	x
Accipitriformes - Cathartidae			
<i>Cathartes aura</i>	turkey vulture	x ^f	
Accipitriformes - Accipitridae			
<i>Buteo jamaicensis</i>	red-tailed hawk	x ^f	
Falconiformes - Falconidae			
<i>Falco sparverius</i>	American kestrel	x	x ^{nl}
Passeriformes - Tyrannidae			
<i>Tyrannus verticalis</i>	western kingbird	x	
Passeriformes - Corvidae			
<i>Cyanocitta stelleri</i>	Steller’s jay	x	x
<i>Nucifraga columbiana</i>	Clark’s nutcracker	x	
<i>Corvus corax</i>	common raven	x	x
Passeriformes - Alaudidae			
<i>Eremophila alpestris</i>	horned lark	x	
Passeriformes - Hirundinidae			
<i>Tachycineta bicolor</i>	tree swallow	x ^f	x ^f
<i>Tachycineta thalassina</i>	violet-green swallow	x ^f	x ^f

Families and Species			Habitat Type	
			Native Scrub	Disturbed
Birds (cont.)				
Passeriformes - Turdidae				
<i>Turdus migratorius</i>	American robin		x	x
Passeriformes - Fringillidae				
<i>Haemorhous cassinii</i>	Cassin's finch			x
Passeriformes - Passerelidae				
<i>Spizella breweri</i>	Brewer's sparrow		x ⁿ	
<i>Zonotrichia atricapilla</i>	golden-crowned sparrow		x	x
<i>Zonotrichia leucophrys</i>	white-crowned sparrow		x	x
<i>Pipilo chlorurus</i>	green-tailed towhee		x ⁿ	
<i>Junco hyemalis</i>	dark-eyed junco (Oregon)		x	
Passeriformes - Icteridae				
<i>Euphagus cyanocephalus</i>	Brewer's blackbird		x	x
Passeriformes - Cardinalidae				
<i>Pheucticus melanocephalus</i>	black-headed grosbeak		x	x
Passeriformes - Passeridae				
<i>Passer domesticus</i>	house sparrow		x	x ⁿ
Reptiles				
Iguanidae				
<i>Sceloporus graciosus</i>	sagebrush lizard		x	
Mammals				
Rodentia - Geomyidae				
<i>Thomomys bottae</i>	pocket gopher		x ^s	
Rodentia - Heteromyidae				
<i>Perognathus parvus</i>	Great Basin pocket mouse		x ^s	
<i>Dipodomys</i> sp.	kangaroo rat		x	
Rodentia - Cricetidae				
<i>Peromyscus maniculatus</i>	deer mouse		x ^s	x ²
<i>Neotoma</i> sp.	woodrat		x	
Rodentia - Sciuridae				
<i>Otospermophilus beecheyi</i>	Beechey ground squirrel		x	x

Families and Species	Habitat Type	
	Native Scrub	Disturbed
<i>Mammals</i> (cont.)		
Lagomorpha - Leporidae		
<i>Sylvilagus nuttallii</i> Nuttall's cottontail rabbit	x	x
Artiodactyla - Cervidae		
<i>Odocoileus hemionus</i> mule deer	x	
Carnivora - Mephitidae		
<i>Mephitis mephitis</i> striped skunk	x	
Carnivora - Canidae		
<i>Canis latrans</i> coyote	x	
Carnivora - Mustelidae		
<i>Taxidea taxus</i> American badger	x ^{s2}	

1. pair nesting in nest box provided at existing housing.

2. presence noted by Dennis Dormaille, personal communication, May 19, 2017.

x^s = presence identified through observation of sign,

x^f = present only during site flyover,

xⁿ = presence includes observation of nesting or breeding territory establishment behaviors.

APPENDIX J₁

Archaeological Report

By Trans Sierran Archaeological Research

An Archaeological Survey of the Tioga Workforce Housing Project Area, Lee Vining, California



Prepared by Mary Farrell
Trans-Sierran Archaeological Research, with
Bauer Planning and Environmental Services, Inc., for
Mono County Community Development Department

June 4, 2019

Management Summary

In cooperation with Bauer Planning and Environmental Services, Inc., Trans-Sierran Archaeological Research (TSAR) has conducted a records review and archaeological survey to determine whether the proposed Tioga Workforce Housing Project, located south of Lee Vining in Mono County, California, would have significant effects on cultural resources, per the California Environmental Quality Act. The project, originally approved and permitted in 1993, included construction of a convenience store and gas station, employee housing, a hotel, and a full-service restaurant, as well as associated roads, parking areas, and utilities. The gas station, the convenience store (which also houses the Whoa Nellie Deli), employee housing, and much of the infrastructure have been constructed, but some project components were not completed. Although Mono County requires no further analysis or review of the project components already approved, some new elements have been proposed to respond to evolving trends in tourism and tourist-centered activities and to support the 2012 Mono Basin Community Plan. The changes will require an updated Specific Plan and a supplement to the 1993 Environmental Impact Report (EIR).

This report describes the results of a records search, a review of the previous findings, and archaeological survey conducted for the Tioga Workforce Housing Project. Over 30 years ago, TSAR had surveyed the entire project area for the original proposal; one historic site and several isolates were recorded. Since that time, several additional archaeological investigations have included parts of the project area, most for the environmental analysis prepared for the widening of US Highway 395, which goes through the project area. The historic site initially recorded by TSAR, a ditch system and associated trash scatters, was investigated further and assigned site number CA-MNO-2764H. The site was determined not eligible for the California Register of Historical Resources, and was partially obliterated by the highway widening project. The new survey verified the previous results: no archaeological sites eligible for the California Register of Historical Resources have been found in the project area, and no archaeological mitigation will be needed for the project.

Mono County also consulted with tribes who have traditional and cultural ties with the Mono Basin to assess potential impacts of the project on tribal cultural resources, under California's Assembly Bill 52. The Tribal Historic Preservation Officer of the Bridgeport Indian Colony indicated that ancestral burials are considered tribal cultural resources, and that there is a possibility that one or more, no longer marked, could be located in the project area. In further consultation, the Kuzadika'a Indian Community also requested a paid tribal monitor be present during ground disturbance associated with the project. Upon careful consideration, the County has developed a mitigation measure to address the tribes' concern, which will be included in the Draft Environmental Impact Report.

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Introduction

This report describes archaeological survey conducted as part of environmental studies to determine potential effects of the proposed Tioga Workforce Housing project, about ½ mile south of Lee Vining, California. The project area is located at 22 Vista Point Road, close to the intersection of SR 120 and US395. The project is in roughly the geographic center of Mono County, which covers an area of 3,132 square miles on the eastern slopes of the Sierra Nevada mountain range in east central California. The project parcel comprises the southeast quarter of the northwest quarter and the southwest quarter of the northeast quarter of Section 14, Township 1 North, Range 26 East (MDBM).

The Tioga Workforce Housing project proposal encompasses multiple elements, many of which were analyzed in a Final EIR and Specific Plan that was certified by the Mono County Board of Supervisors in 1993. The original concept, as reflected in the 1993 documents, was to provide a full range of services and facilities for tourists (visiting Yosemite National Park, the Mono National Scenic Recreation Area, the Lee Vining area, and the eastern Sierra Nevada generally), as well as meeting facilities, jobs and employee housing opportunities for area residents.

The current proposal retains the goals and concepts developed in 1993, with several newly added elements. Most significantly, the current proposal would provide up to 150 new workforce housing bedrooms. The current proposal also provides for a third gas pump island and overhead canopy, adds additional parking (to accommodate onsite guest vehicles as well as a general-use park-and-ride facility and bus parking for Yosemite transit vehicles), expands the existing onsite septic system to increase capacity and incorporate a subsurface irrigation system, replaces an existing water storage tank with a new tank on a nearby site, adds a new 30,000-gallon onsite propane tank (the new tank would eventually replace the existing five onsite tanks with a combined 2,500-gallon capacity), modifies the boundaries and acreage of designated open space, and modifies parcel boundaries.

Several of the uses approved in 1993 were constructed and placed into operation during the late 1990s. Construction of the hotel and restaurant elements was postponed due to a general economic downturn and other factors. The purpose of the current project proposal is to complement earlier-approved components with modifications and new elements that respond to evolving trends in tourism, resource conservation and employment.

Although Mono County requires no further analysis or review of the originally proposed project components, implementing the proposed changes to the previously approved project will require an updated Specific Plan and a supplement to the 1993 Environmental Impact Report (EIR). The Mono County Community Development Department has contracted with Bauer Planning and Environmental Services, Inc., to help prepare the Specific Plan and EIR supplement. This report describes the results of a cultural resources records search, a review of the previous findings, and archaeological survey to determine if there are historical resources that would be affected by the proposed project. The work was conducted for the EIR supplement by Trans-Sierran Archaeological Research, as part of the Bauer team.

Mono County also consulted with tribes who have traditional and cultural ties with the Mono Basin to assess potential impacts of the project on tribal cultural resources, under California's Assembly Bill 52. AB 52 requires that tribal cultural resources be considered under the California Environmental Quality Act: tribal cultural resources often include archaeological sites, but they can also include places, objects, sites, or landscapes that are not discernible to, or adequately evaluated by, archaeologists. Indian communities may have additional information and concerns that should be considered in the environmental analyses.

Under the provisions of AB 52, the Washoe Tribe of Nevada and California requested to be consulted about any projects that might affect Washoe cultural resources. The Bridgeport Indian Colony also requested to be consulted about the Tioga Workforce Housing project. Because of their proximity to the project area and their historical ties to Mono Basin, the Kutzedika'a Indian Community of Lee Vining and the Utu Utu Gwaitu Tribe of the Benton Paiute Reservation were also contacted. A previous draft of this report was shared with those four Tribes to provide them with information about the results of the archaeological investigations.



Figure 1. Overview of project area. View from approved hotel site looking toward Whoa Nellie Deli and Mobil Gas Station.



Project Location and Environmental Setting

The proposed project is located on the site of the existing Tioga Gas Mart and Whoa Nellie Deli near the town of Lee Vining in Mono County. The 74-acre parcel is located in the Mono Basin, just south of the intersection of State Route 120 and US Highway 395 (Figures 1-3). About 64 acres of the parcel lie west of US Highway 395, and 10 acres to the east. An archaeological survey was conducted of the entire project area (Burton 1984) as part of environmental studies undertaken to evaluate the potential effects of the original proposal, but a new survey was considered necessary for the current project for three reasons. First, archaeological site visibility can vary over the decades, due to erosion and sedimentation, changes in vegetative cover, or exposure from ground disturbance. Second, the original survey may have ignored cultural resources too young to be considered historic in 1984, but which now meet the age requirement for the California Register of Historical Resources. Third, changes to the California Environmental Quality Act that went into effect in 2016 require consultation with Tribes to determine if a proposed project could affect Tribal Cultural Resources, and consultation can benefit from a more-current archaeological survey.

Setting and background information is adapted from the previous survey report (Burton 1984), updated where there have been changes in the decades since that report was written. The project area is located just south of the small town of Lee Vining, California, and a little over a mile west of the present shore of saline Mono Lake, on the western margin of the Basin and Range province. The Sierra Nevada range rises steeply to the west, and the topography of the project area consists of a lateral glacial moraine and adjacent hillsides and flats. Elevations range from approximately 6800 to 6960 feet above sea level; soils are eroded glacial, lacustrine, and volcanic deposits.

In the rain shadow of the Sierra Nevada, the Lee Vining area receives an average of 15 inches of precipitation annually, with most of it falling as snow. Fresh water is available year-round in Lee Vining Creek just west of the project area, and a now-dry spring once flowed intermittently on the project's east-facing slope, along a geological fault (Jim Palus, personal communication 2016). Vegetation within the project area includes bitterbrush (*Purshia tridentata*), sagebrush (*Artemisia tridentata*), rabbitbrush (*Chrysothamnus nauseosus*), desert peach (*Prunus andersonii*), aster (*Aster* sp.), and various grasses, including Indian rice grass (*Oryzopsis hymenoides*). In addition, there are several isolated pinyon pine trees (*Pinus monophylla*), Jeffrey pine (*P. jeffreyi*), lodgepole pine (*P. murrayana*), wild rose (*Rosa* sp.), and willow (*Salix* sp.). Lawns, ornamental shrubs, and aspen have been planted as landscaping around the residences and parking lots.

Fauna of the area include mule deer (*Odocoileus hemionus*), bear (*Ursus americanus*), numerous small rodents and migratory waterfowl, and other birds. Antelope (*Antilocapra americana*) and possibly mountain sheep (*Ovis canadensis*) may have been present in earlier times. More details of the environmental setting will be available in other reports prepared for the EIR supplement.

Historical Background

The historical background of the area is discussed in several previous reports (for example, Gilreath 1995); the following brief summary is adapted from the original survey report (Burton 1984). When Euro-Americans first entered Mono Basin in the mid-nineteenth century, the area was occupied by the Kuzedika'a, also known as the Mono Lake Paiute. The Paiute and their ancestors and other Native American groups have lived in the area for thousands of years; archaeological evidence documents occupation at least 6,000 years ago. During the protohistoric and historic periods, the Kuzedika'a's economy was based on hunting, gathering, and trade; they moved seasonally through various environmental settings to collect a wide variety of resources (Davis 1965). Earlier economies may have depended more on specialized hunting and trade (Bettinger 1979:53). The project area is located near or adjacent to dryland seed sources, pinyon groves, a deer migration route, and Native American trade and travel routes (Burton 1984).

Lt. Tredwell Moore "discovered" Mono Basin in 1852 when he led a punitive expedition against the Yosemite Miwok who had fled over the crest (Fletcher 1982:22). Following Moore's entry into the basin, gold was discovered and three towns (Dogtown, Monoville, and Aurora) were built and abandoned as gold deposits were developed and depleted. By 1861 Leroy Vining had erected a sawmill along the creek that now bears his name to supply lumber to mining camps (Fletcher 1987:79).

In 1855-1857, A.W. Von Schmidt was commissioned to survey lands east of the Sierra, including Mono Basin and later Owens Valley to the south, in part to assess the region's agricultural potential (Fletcher 1987:24). In the 1860s Euro-American settlers began establishing farms and ranches along the lower stretches of eastern Sierran streams, growing hay, alfalfa, wheat, barley, and oats, and raising cattle, sheep, and horses (Fletcher 1987:38). The Kuzedika'a were forced out of favorite spring and summer camps, and the newcomers cut pinyon trees, a principle Paiute food source, for fuelwood. To survive, the Kuzedika'a adapted to the white farmers' and miners' economy, first trading traditional items like game and baskets, and eventually labor (Fletcher 1987:41,73). Nevertheless, the Kuzedika'a continued many of their food-gathering and other traditions well into the twentieth century (Hess 2014; LaBraque 2015).

A major gold strike at Bodie in 1877 brought new waves of miners to the basin. Numerous new mining districts were formed, including the Lundy/Homer (1879), Tioga (1878), Jordan (1879), Vernon (1882), and Lee Vining Creek (1882). By 1880 the Mono/Mammoth Toll Road, which probably followed an earlier Paiute route, was completed (Fletcher 1982:122). The alignment mapped by Fletcher may be the same as the dirt road that enters the northeast corner of the project area. Four thousand acres were being farmed in the Mono Basin by the 1890s, and Fletcher maps two farms, dating to ca. 1880 to 1930, to the east of the project area (Fletcher 1982:118-130). The 1901 Mt Lyell USGS topographic map depicts a ditch running through the project parcel; this ditch was part of the Lee Vining ditch system, recorded as historic site CA-MNO-2764H (Marvin and Costello 1993); its history is described below in the "Previous Investigations/Records Review" section. By the mid-1930s most of the farms of Mono Basin were bought up by the City of Los Angeles for water rights (Fletcher 1987:93-94).

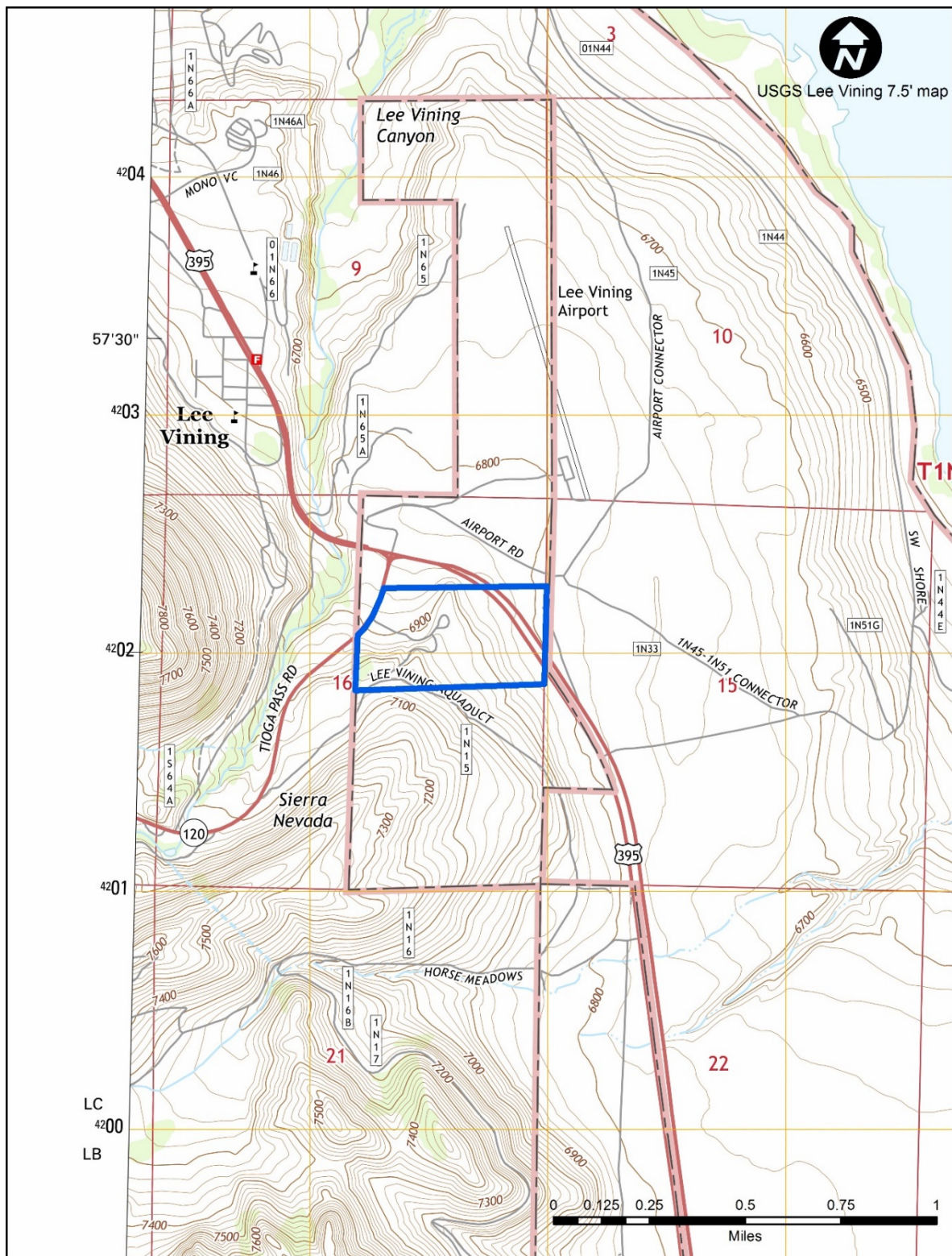


Figure 1. Tioga Workforce Housing Project Area location, adapted from 2012 USGS Lee Vining 7.5 minute topographic map. Project area outlined in blue.

The town of Lee Vining was founded in the 1920s by Chris Mattly, who subdivided his ranch (Hess 2014:25-30), and the first lots were sold in 1926 (LaBraque 2015:26). Town businesses served travelers using the recently completed road over Tioga Pass from Yosemite (Hess 2014:26). In the 1920s the alignment of the Tioga Pass road passed to the north of the project area, near the current Utility Road. Another historic route in the area is the “Old County Road,” recorded as CA-MNO-2761H; it ran from Bridgeport to Casa Diablo Hot Springs. In the project area, its alignment was east of the current US Highway 395, approximately following the earlier Mono Lake and Lake District Toll Road (Marvin and Costello 1993:24-25; see also Figure 4, a portion of the 1901 Mt Lyell USGS topographic map). US Highway 395 was built through what is now the Tioga Workforce Housing project area in 1936, and the Tioga Pass road was realigned to its current location, just west of the parcel, in 1970 (Marvin and Costello 1993).

Previous Investigations / Records Review

Trans-Sierran Archaeological Research had surveyed the entire project area for the original proposal (Burton 1984); one historic site and ten isolated artifacts were recorded. The site consisted of irrigation ditches and historic trash dumps. Historic information suggested the ditches could be late-nineteenth century or early-twentieth century, but the dumps were likely post-1900, based on the temporally diagnostic artifacts present. The isolates included other segments of the irrigation ditches, a cone-top beer can, two sun-colored amethyst glass fragments, two small trash deposits, two prospect pits, a pumice block, and an obsidian flake.

A records search conducted by the Eastern Information Center of the California Historical Resources Information System in December 2016 indicated that fifteen other cultural resources studies have been conducted within a half-mile radius of the project area. Although some of the cultural resources studies related to utility and hydroelectric projects proposed by Southern California Edison (e.g., Delu and Braco 2010), most of the studies were conducted for the US Highway 395 widening project, and included surveys, site recording, historic research, site testing, and evaluation (Grantham 1991; Laylander 1996; Leach-Palm et al. 2010; Marvin and Costello 1993; Wickstrom 1992; Wickstrom and Jackson 1993). Ten of these studies included portions of the project area; the ditch system first noted by Burton was recorded in more detail and given site number CA-MNO-2764H (Costello and Marvin 1993).

Thirteen cultural resources properties have been recorded within a half-mile radius of the project area. The properties include Native American and Euro-American artifact scatters and features, with temporally diagnostic artifacts indicating use from as early as ca. A.D. 600 into the twentieth century. Only one of these properties, the ditches first recorded by Burton in the original survey for the Tioga Workforce Housing project, extends into the project area. The ditches are part of a system that took water from Lee Vining Creek to irrigate agricultural fields



Figure 2. Portion of the USGS 1901 Mt Lyell topo map. Note that a ditch runs through project area, but the main road (indicated by solid lines) runs north-south a quarter-mile east. A secondary road (dotted lines) connecting the north-south route to the Tioga Road skirts the northeastern corner of the parcel.

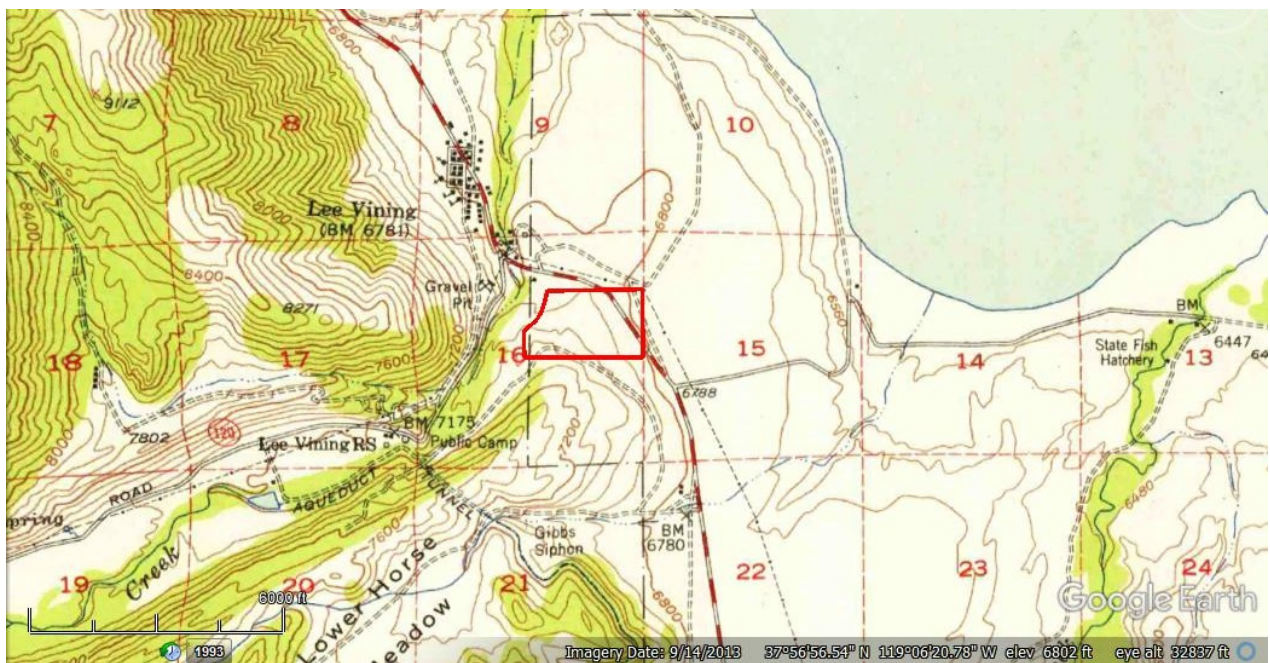


Figure 3. Portion of USGS 1953 Mono Craters topo map showing US Highway 395 through the project area. At this time, the lowest section of the Tioga Pass road's alignment was close to what is now Utility Road.

to the east and south of the Tioga Workforce Housing project area. Marvin and Costello (1993), as part of investigations conducted for the US Highway 395 widening project, recorded the ditch system as CA-MNO-2764H and researched its history:

The upper ditch (Ditch B) conveyed water from Lee Vining Creek northeasterly and then southerly along the hillside to the settlement of Crater, on the Jake Mattly Ranch, and fields further south. The ditch was apparently constructed in the 1890s, when it brought water to various ranches along its route (Mono County 1896; USGS 1901). It was apparently abandoned sometime after the Southern Sierras Power Company and its subsidiary, the Cain Irrigation Company, acquired the rights to the waters of Lee Vining Creek in a judicial decree in 1916 (Mono County Deed Book S:213; Kahrl 1982:332). Another ditch (Ditch A) also conveyed water southerly from Lee Vining Creek from a point slightly below Ditch B. This water was dispersed into fields east of present Highway 395 through a system of lateral irrigation ditches. This system was constructed sometime after 1901, probably in the early 1920s after the Cain Irrigation Company obtained control of most of the water rights in the area (Lane 1974:3). This ditch system appears on a 1934 map of the Cain Irrigation Company, which sold all its holdings and water rights to the City of Los Angeles in the mid-1930s (Mono County Deed Books, various). The ditch was abandoned ca. 1970 (personal communication, Andrews 1993) when the Second Los Angeles Aqueduct was completed (Lane 1974:9). The southern segment of the ditch, south of Gibbs Creek, was utilized until about four or five years ago [*i.e. ca. 1988*] (personal communication, Andrews 1993, Sam 1993). In this last period of use, this ditch was charged with water from the Gibbs Siphon and used to irrigate lands leased by the LADWP to the Mono Sheep Company (Jones & Stokes 1993:3G-14).

More segments of the ditch system and associated trash scatters were recorded as part of additional environmental studies undertaken for the widening of US Highway 395 (Delu and Braco 2010). Following the contours of the slopes, both Ditch A and Ditch B head to the northeast across the northwest corner of the project area. Both alignments crossed US Highway 395, then headed southeast paralleling the highway for 500 feet, re-entering the project area east of the highway and crossing back to the south side of the highway, into the west parcel. CA-MNO-2764H was determined ineligible for inclusion on the National Register of Historic Places in 1996 (Office of Historic Preservation Archaeological Determinations of Eligibility).

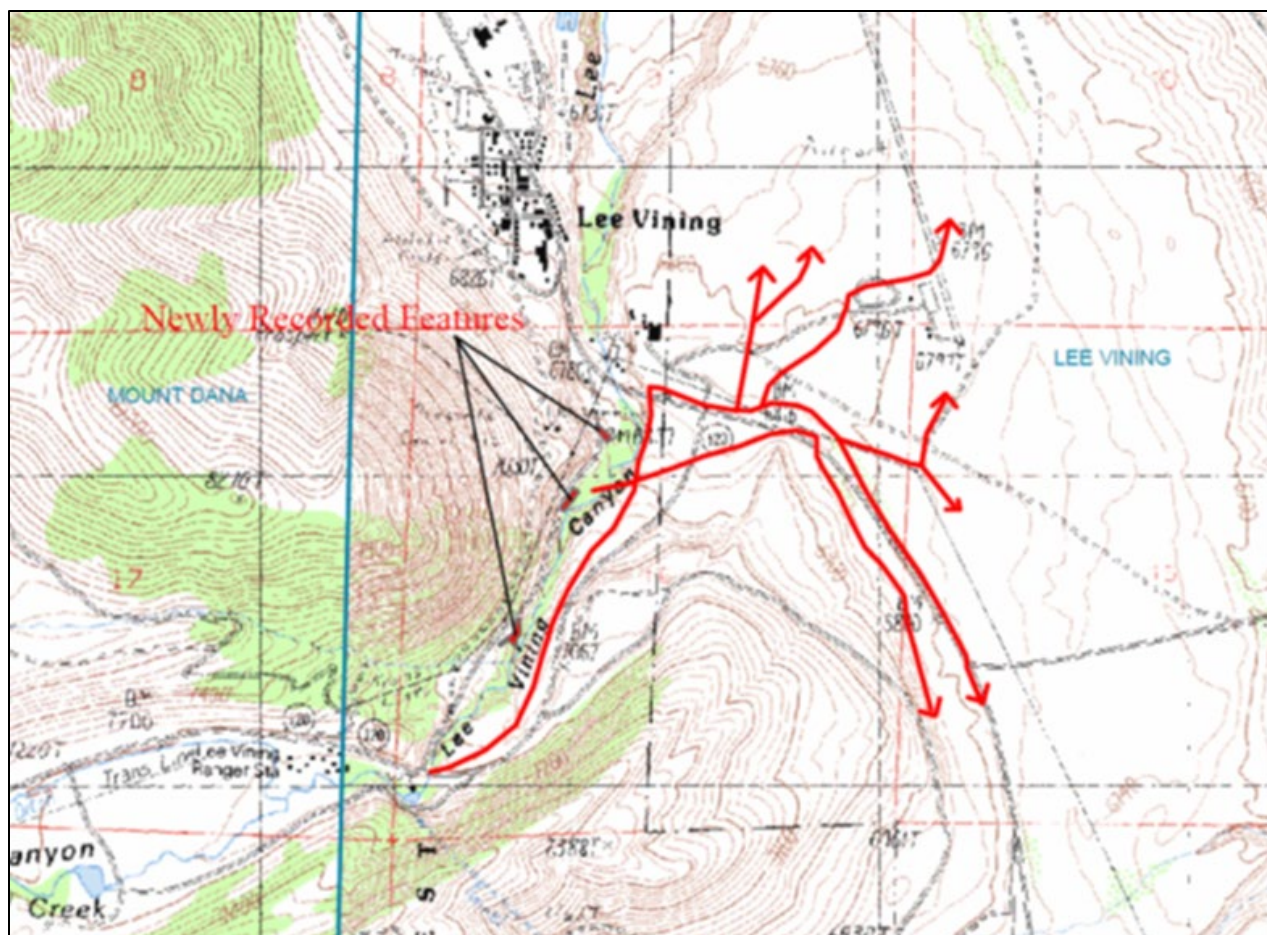


Figure 6. Alignment of Lee Vining ditch system, from CA-MNO-2764H site record supplement by Delu and Braco 2010.

Survey Methods and Results

Survey was conducted by the author on November 25, 2016, to assess whether additional archaeological sites had been exposed by ground disturbance associated with erosion or development, or if sites too young to have been considered historic in 1983 were present. Flat areas were inspected with parallel pedestrian traverses approximately 20m apart. Visibility of the ground surface was generally very good due to sparse vegetation, but limited at lawns, a boneyard or staging areas where employee housing would be constructed, and some small areas of dense brush.

When any artifact or feature was encountered, it was plotted with a Trimble Juno GPS receiver and photographed. The surrounding area was examined carefully to determine if the artifact or feature was part of an archaeological site. Eleven isolates were encountered, including four obsidian flakes (Table 1), and six historic-period artifacts and one historic-period feature (Table 2). Four of these artifacts (B, 1, 5, 6, and 7 in Tables 1 and 2 and Figures 6 and 7) were observed outside the project area. In addition, portions of the Lee Vining Ditch System and associated trash (CA-MNO-2764H) were noted (Table 3). These were not recorded in detail because the site

has already been recorded thoroughly and determined not significant, that is, not eligible for the California Register of Historical Resources or the National Register of Historic Places.

Table 1. Prehistoric/Indigenous Isolates (# in Fig. 7).

<i>No.</i>	<i>Description</i>	<i>Notes</i>
A	Biface retouch flake	Approx. 3 cm long and 2.5 cm wide, of banded black and translucent obsidian, with possible use wear
B	Biface retouch flake	3.5 cm long, of banded black and translucent obsidian, with possible use wear (microchips) on both lateral edges. North of project area, on LADWP land
C	Biface retouch flake fragment	Distal fragment, of opaque glassy obsidian. Possible retouch on one edge
D	Flake fragment	Opaque glassy obsidian, lateral fragment

Table 2. Historic (19th-20th century) Isolates (#, in Fig. 7).

<i>No.</i>	<i>Description</i>	<i>Notes</i>
1	White ceramic bowl	Approx. 6 inches in diameter, Embossed floral and fruit design on rim; basemark is “Vernon Ware / Made in California” in a circle; “By METLOX” in center and “574” below
2	Sanitary seal can	Approximately 4½ inches high, 2½ inches in diameter.
3	High stump	About 2 ft diameter, and 3 ft high
4	Rusty can lid	Roller-opened
5	Can	Sanitary seal, roller-opened; north of project area, on LADWP land
6	Asphalt fragments	Piled, as though pushed or dumped from road construction; north of project area, on LADWP land
7	Asphalt	Segment, about 15 ft long, partially buried; north of project area, on LADWP land.

Table 3. Artifacts and Features of CA-MNO-2764H (#, in Fig. 7).

<i>No.</i>	<i>Description</i>	<i>Notes</i>
8	Wooden gate, can	Associated with Lee Vining Ditch System
9	Ditch	Associated with Lee Vining Ditch System
10	Ditch and trash scatter	Associated with Lee Vining Ditch System (outside project area)
11	Rectangular meat can	Adjacent to Lee Vining Ditch System
12	Small ditch	Associated with Lee Vining Ditch System
13	Sun-Rise soda bottle	Adjacent to Lee Vining Ditch System

Figures 7 and 8 are redacted from the public version of this document



Figure 9. Isolate 1, Vernon Ware bowl. The base stamp indicates the bowl was made by Metlox Potteries, which was founded in 1927 in Manhattan Beach, California. Vernon Ware dates from 1958 to 1980 (Kovels 2016).



Figure 10. Similar Vernon Ware bowl for sale on eBay, identified as “Antigua” pattern. The Antigua design was manufactured in the 1960s (<http://metloxpottery.blogspot.com/2006/09/metlox-story.html>, accessed December 27, 2016).



Figure 11. Isolate 13, Sun-Rise soda bottle. The base mark indicates the bottle was made by the Owens-Illinois Glass Co. in 1959, at plant #20 (Oakland, CA).



Figure 12. Isolate 3, high-cut stump.

Context for Evaluation and Significance

The definition of "historical resources" is contained in Section 15064.5 of the CEQA Guidelines, and the California Office of Historic Preservation (2016) lists the criteria for designation:

1. Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.
2. Associated with the lives of persons important to local, California or national history.
3. Embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values.

4. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

In addition, any resource that is eligible for the National Register of Historic Places, which has very similar criteria, would be considered a historic resource under CEQA.

The Lee Vining ditch system (CA-MNO-2764H, which crosses the project area, has been determined not eligible for the California Register of Historic Places. None of the isolates meets the criteria for eligibility for listing on the California Register of Historic Resources, nor the criteria for the National Register of Historic Places.

In recognition of California Native American tribal sovereignty and the unique relationship of California local governments and public agencies with California Native American tribal governments, Assembly Bill 52 requires special consideration of tribal cultural resources in CEQA analyses. Public Resources Code Section 21074 defines “Tribal cultural resources” as either of the following:

1. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
 - a. Included or determined to be eligible for inclusion in the California Register of Historical Resources.
 - b. Included in a local register of historical resources as defined in subdivision (k) of §5020.1.
2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of §5024.1. In this instance, the lead agency must determine that the resource meets the criteria for listing in the state register of historic resources.

Tribes are recognized as having the expertise to identify tribal cultural resources. In preliminary discussions, Joseph Lent, the Tribal Historic Preservation Officer of the Bridgeport Indian Colony, indicated that ancestral burials are considered tribal cultural resources. Burials were generally located away from villages and camps, and after many decades or centuries, they are no longer marked. Mr. Lent noted that there is a possibility that one or more burials could be in the project area. Such burials, if present, would not be discernible in a pedestrian archaeological survey, but could be encountered during ground disturbance and excavation.

Recommendations

There are no significant archaeological sites within the proposed Tioga Workforce Housing Project area. Neither previously recorded site CA-MNO-2764H nor the isolates are significant resources that would require further consideration under the California Environmental Quality Act. No further archaeological work is recommended.

Because there is a possibility that one or more undocumented Native American burials could be encountered during grading and excavation, Bridgeport Indian Colony Tribal Historic Preservation Officer Joseph Lent recommended that initial excavation in the project area be

monitored by a trained tribal representative. In a meeting on January 22, 2019, the Kutzadika'a Indian Community also requested this mitigation measure.

Upon consideration, the County determined that to require tribal monitoring would be inconsistent with the treatment of other resources under CEQA, where monitoring is not required if a protected resource is not known to occur within the area of potential effect. It is expected that California laws regarding the treatment of human remains discovered during construction would provide adequate protection, if any are present. Health and Safety Code Section 7050.5 stipulates that if human remains are discovered during project work, the specific area must be protected, with no further disturbance, until the county coroner has determined whether an investigation of the cause of death is required. If the human remains are determined to be those of a Native American, the coroner must contact the Native American Heritage Commission by telephone within 24 hours. Per Public Resources Code Section 5097.98, the Native American Heritage Commission then notifies the most likely descendant community, who then inspects the find and makes recommendations to the landowner how to treat the remains. Both laws have proscribed time frames, and PRC 5097.98 outlines some potential treatment options. Both California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.98 are included as an Appendix to this report, for ease of reference.

To respect the identified concerns, however, the County developed mitigation measures that will ensure that interested Tribes are notified before grading or earthwork occurs. Further, all construction plans that require ground disturbance and excavation will contain an advisory statement that (1) there is potential for encountering human burials, (2) the Indian communities have been invited to observe the work at any time without compensation, (3) if human remains are encountered, all work shall stop immediately and the County shall be notified, and (4) that human remains must be treated with respect and in accordance with State laws and regulations.

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APPENDIX J2

Correspondence from Native American Heritage Commission (NAHC)

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone: (916) 373-3710
Email: nahc@nahc.ca.gov
Website: <http://www.nahc.ca.gov>



February 26, 2019

Michael Draper
Mono County Planning Analyst II
Community Development Department
Mammoth Lakes, CA 93546

Dear Mr. Draper,

Thank you for your follow up correspondence dated February 6, 2019. We appreciate your due diligence in respecting tribal cultural heritage and the protection of cultural resources.

Since the Bridgeport Indian Colony requested tribal monitoring during consultation for the project, Mono County is required to consider that option in the evaluation of the potential impacts. The Kuzedika'a Paiute Tribe is not on our consultation list, but nothing precludes the County from taking their concerns into consideration as public stakeholders.

The decision to include a Native American monitor on the project is wholly within the purview of the lead agency and can be based on all the information you have about the potential impacts to cultural resources. The Native American Heritage Commission does not get involved in monitoring decisions.

If you have any questions or need additional information, please contact me at my email address: gayle.totton@nahc.ca.gov.

Sincerely,

A handwritten signature in cursive script that reads "Gayle Totton".

Gayle Totton, B.S., M.A., Ph.D.
Associate Governmental Program Analyst

Attachment

APPENDIX J₃

Tribal Consultation Letters

Mono County Community Development Department

PO Box 347
Mammoth Lakes, CA 93546
760.924.1800, fax 924.1801
commdev@mono.ca.gov

PO Box 8
Bridgeport, CA 93517
760.932.5420, fax 932.5431
www.monocounty.ca.gov

April 26, 2018

Charlotte Lange, Chairperson
Mono Lake Kutzadika'a Paiute Indian Community
Post Office Box 237
Lee Vining, CA 93541

RE: NATIVE AMERICAN TRIBAL CONSULTATION FOR PROPOSED TIOGA INN WORKFORCE HOUSING PROJECT

Dear Mrs. Lange:

As lead agency, the Mono County Community Development Department (the County) is preparing a Subsequent EIR to analyze potential impacts associated with approval of up to 150 workforce housing bedrooms at the Tioga Mobile Station and Mini-Mart in Lee Vining. The proposed project also includes a third gas pump island with overhead canopy, adds substantial additional parking (to accommodate onsite guest vehicles as well as a general-use park-and-ride facility and bus parking for Yosemite transit vehicles), expands the existing onsite septic system to increase capacity and incorporate a greywater reclamation system, provides for a second water storage tank (adjacent to the existing water storage tank), and increases the number and capacity of the onsite propane tanks.

Tribal participation is very important in the local planning process, and we are sending this letter to the Kutzadika'a Tribe to comply with AB 52 and Senate Bill 18 (SB 18). Under AB 52, tribes have 30 days to request consultation. In keeping with this timeframe, please send us your request by **May 28, 2018**, for consultation as requested under AB 52.

The project proposal is described more fully in the attached Draft Project Description; note that project details are still being developed, and may change. The Draft Subsequent EIR is currently in preparation, and is expected to be ready for public review and comment late in the summer of 2018. No hearings have been scheduled, and no hearings or public meetings are expected until after the public review period ends later this year.

To respond, please contact Gerry LeFrancois, Principal Planner, Mono County Community Development Department, at 760.924.1800 or glefrancois@mono.ca.gov. We look forward to receiving your reply and any information you are able to share, and would welcome the opportunity to meet with you and other members of the Kutzadika'a Tribe. Thank you for taking the time to consider this invitation.

Sincerely,

Gerry LeFrancois
Principal Planner

ATTACHMENT TO AB 52 LETTER

TIOGA INN SPECIFIC PLAN AND DRAFT EIR

DRAFT PROJECT DESCRIPTION

3.1 PROJECT LOCATION AND SURROUNDING LAND USES

The proposed Tioga Inn project is located at 22 Vista Point Road, close to the intersection of SR 120 and US395 and about ½ mile south of Lee Vining. The project is located in the roughly the geographic center of Mono County, which covers an area of 3,132 square miles on the eastern slopes of the Sierra Nevada mountain range in east central California. Mono County is relatively long (108 miles at the longest point) and narrow (with an average width of 38 miles). The County seat is located in Bridgeport, and the only



incorporated town in Mono County is Mammoth Lakes, home to 57% of the county population. The site is located in the southeast quarter of the northwest quarter, and the southwest quarter of the northeast quarter of Section 14, Township 1 North, Range 26 East (MDBM). Figure 1 depicts the regional layout of Mono County.

As a whole, Mono County is dominated by lands owned by the public and managed by various federal, state and local entities. The *General Plan* estimates that 94% of the county land area is publicly owned, 88% of which is managed by federal agencies. The Tioga Inn project is located about 10 miles west of Yosemite National Park,

25 miles north of Mammoth and 1 mile east of the Mono Lake Tufa State National Reserve and the Mono Scenic National Forest (Figure 2).

Figures 3-1 (Regional Location) & 3-2 (Mono Lake public lands, right)

3.2. PROJECT HISTORY AND PURPOSE

The Tioga Inn project proposal encompasses multiple elements, many of which were analyzed in a Final EIR and Specific Plan that was certified by the Mono County Board of Supervisors in 1993 for the Tioga Inn project. That project, approved by the Board of Supervisors in 1993, included the existing gas station, convenience store, employee housing and ancillary support facilities (all of which have been constructed) as well as a 120-room hotel and a full-service restaurant (which are scheduled for near-term development).

The current proposal retains the goals and concepts developed in 1993, with several newly added elements. Most significantly, the current proposal would provide up to 150 new workforce housing bedrooms. The current proposal also provides for a third gas pump island and overhead canopy, adds substantial additional parking (to accommodate onsite guest vehicles as well as a general-use park-and-ride facility and bus parking for Yosemite transit vehicles), expands the existing onsite septic system to



increase capacity and incorporate a greywater reclamation system, provides for a second water storage tank (adjacent to the existing tank), and increases the number and capacity of the onsite propane tanks. Several of the uses approved in 1993 were constructed and placed into operation during the late 1990s. Construction of the hotel and restaurant elements was postponed due to a general economic downturn and other factors. The purpose of the current project proposal is to complement earlier approved components with modifications and new elements that respond to evolving trends in tourism, resource conservation and employment.

3.3 **PROJECT DISCRETIONARY ACTIONS**

The current proposal embodies concepts developed in 1993 with added elements, goals and refinements. A key task of the current Draft EIR and Specific Plan is to delineate between project elements that are, and those that are not, subject to discretionary action with the current project, as shown below:

Discretionary Status of Project Elements	
CATEGORY	STATUS
Actions approved in 1993 and subsequently constructed	No discretionary actions or approvals required
Actions approved in 1993, never constructed, and now proposed for implementation with no changes from 1993	No discretionary actions or approvals required
Actions approved in 1993 but never constructed, for which changes are now proposed	None of the proposed actions fall into this category
Newly proposed project elements and proposed modifications to existing project elements	Subject to Discretionary Approval with Current Project Proposal

3.3 **PROJECT ELEMENTS**

The project encompasses 4 parcels, all of which are listed in the table on the following page, along with existing and proposed uses. The applicant may sell or lease Parcel 1 (the hotel site) to an outside hotelier, and a portion of Parcel 2 (i.e., the full-service promontory restaurant site) to an outside restaurateur. The remaining uses and parcels are intended to stay under the ownership and management of the Domaille family. The table outlines approved elements and project elements now subject to discretionary approval. Only the newly proposed elements (shown in the 2 right-most columns) are subject to discretionary action as part of the current project.

TIOGA MART EXISTING, APPROVED & PROPOSED LAND USES AND ACREAGES					
PARCEL	ACRES APPROVED IN 1993	PROPOSED ACRES	EXISTING LAND USES	LAND USES APPROVED IN 1993	LAND USES NOW PROPOSED &
1	30.3	26.5	<ul style="list-style-type: none"> ▪ Open Space Monument Signs (2) 	<ul style="list-style-type: none"> ▪ 120-room 2-story hotel with coffee shop, banquet room & gift shop; ▪ Parking spaces for onsite uses 	<ul style="list-style-type: none"> ▪ Changed parcel boundary and acreage ▪ Realignment of main access & road serving the existing workforce housing units
2	36.0	32.1	<ul style="list-style-type: none"> ▪ Overflow parking ▪ Historical Marker ▪ 4-unit workforce housing ▪ Elec supply shed <ul style="list-style-type: none"> ▪ Water Well ▪ SCE powerlines ▪ Buried Utility Xing septic /leach field 	<ul style="list-style-type: none"> ▪ Full-service 100-seat restaurant atop promontory ▪ Restaurant parking ▪ Overflow/oversize vehicle parking ▪ Maintenance Building ▪ 30,000-gallon Propane Tank 	<ul style="list-style-type: none"> ▪ 150 bedroom housing area ▪ Reduction in Open Space (OS)/Facilities acreage ▪ Additional 30,000-gallon commercial propane tank ▪ Expanded sewage leach field <ul style="list-style-type: none"> ▪ New greywater reuse system ▪ Changed parcel boundary and acreage
3	2.4	2.4	<ul style="list-style-type: none"> ▪ 2 Gas Pump Islands/canopies ▪ Tioga Gas Mart ▪ Whoa Nellie Deli 	Reconfiguration of the 2 gas pump islands for added parking	<ul style="list-style-type: none"> ▪ 3 Gas pump islands with overhead canopies & lighting
4	5.0	6.8	<ul style="list-style-type: none"> ▪ 10 Workforce Housing Units ▪ 1 Water Tank ▪ 1 Cell Tower 	New water storage tank (the location was changed in SP amendment #1).	<ul style="list-style-type: none"> ▪ Construction of 2nd water storage tank ▪ Changed parcel boundary and acreage
SR 120 Easement	TBD	TBD	* 2-lane access to SR-120 * Park & Ride Area		<ul style="list-style-type: none"> ▪ Caltrans ROW acquisition
TOTAL PROPOSED ACRES 67.83 (reduced from 73.7 acres in 1993)					

APPENDIX K

Federal Aviation Administration Letter of Determination



Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2018-AWP-15708-OE

Issued Date: 12/07/2018

Dennis
Dennis Domaille
PO Box 2727
Mammoth Lakes, CA 93546

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Building Restaurant - NE Corner
Location:	Lee Vining, CA
Latitude:	37-56-54.89N NAD 83
Longitude:	119-06-37.53W
Heights:	6945 feet site elevation (SE) 20 feet above ground level (AGL) 6965 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does exceed obstruction standards but would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

____ At least 10 days prior to start of construction (7460-2, Part 1)
__X__ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 L Change 2.

The structure considered under this study lies in proximity to an airport and occupants may be subjected to noise from aircraft operating to and from the airport.

This determination expires on 06/07/2020 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within

6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

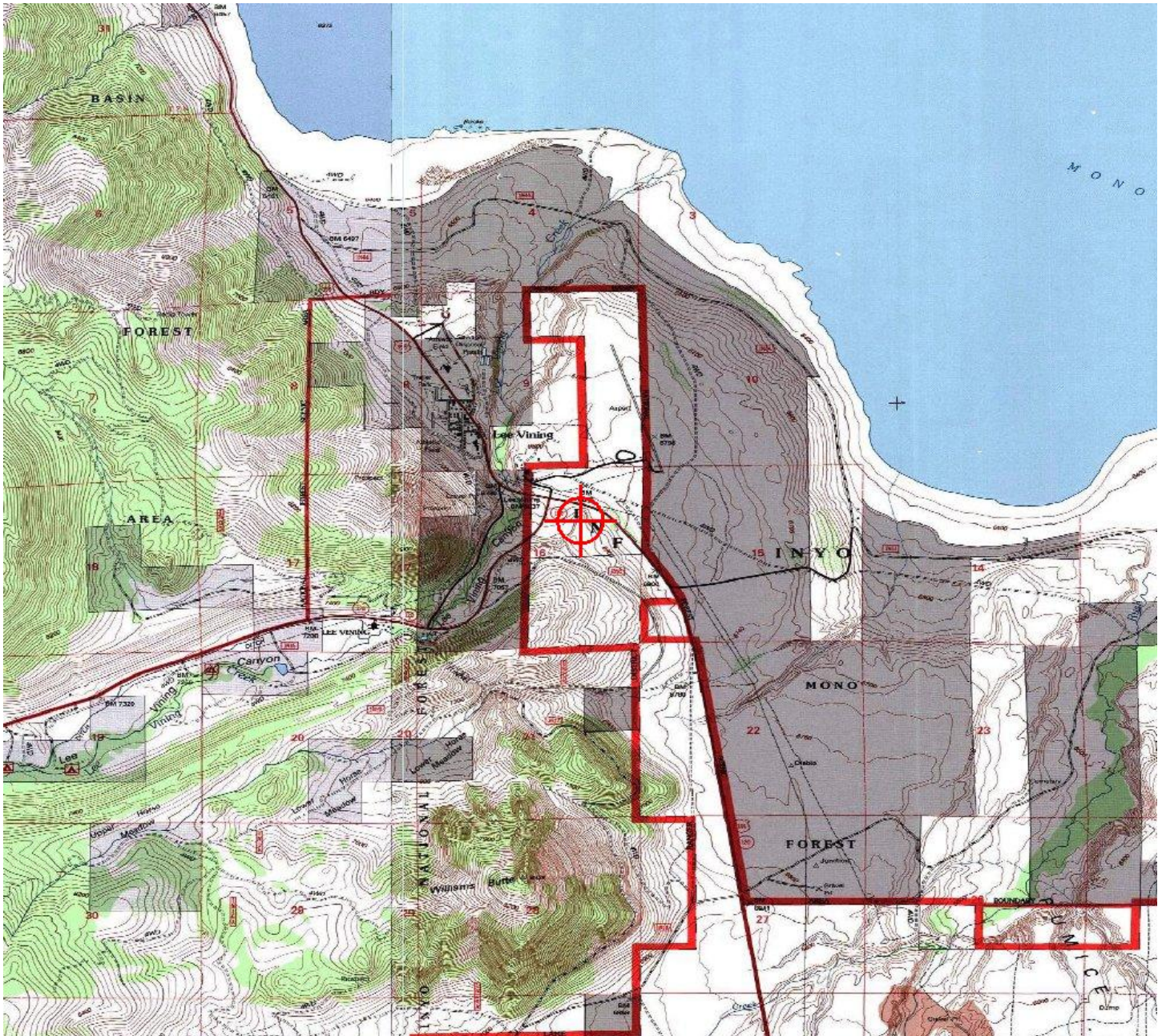
If we can be of further assistance, please contact our office at (424) 405-7643, or karen.mcdonald@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-AWP-15708-OE.

Signature Control No: 387392054-391752378

(EBO)

Karen McDonald
Specialist

Attachment(s)
Map(s)



APPENDIX L

**Traffic Impact Analysis
By MAT Engineering**

TIOGA INN WORKFORCE HOUSING PROJECT TRAFFIC IMPACT ANALYSIS

Mono County

Prepared for:

BAUER PLANNING & ENVIRONMENTAL SERVICES, INC.

Prepared by:



Mohammad A. Tabrizi, PE, TE



March 13, 2019

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1.0 Introduction

This study analyzes the forecast traffic conditions associated with the proposed Tioga Inn Workforce Housing project.

The proposed Tioga Workforce Housing project is located at 22 Vista Point Road, close to the intersection of Tioga Road (State Route 120 or SR-120) and Highway 395 (US-395). The project is located in the geographic center of Mono County, which covers an area of 3,132 square miles on the eastern slopes of the Sierra Nevada mountain range in east central California.

The project site is located about half a mile south of Lee Vining, 10 miles west of Yosemite National Park, 25 miles north of Mammoth and 1 mile east of the Mono Lake Tufa State National Reserve and Scenic National Forest.

Exhibit 1-1 shows the regional location of the project site. Exhibit 1-2 shows the project site location.

Access for the project site will continue to be provided via one unsignalized driveway located on Tioga Road (SR-120) approximately 950 feet west of the Highway 395 / Tioga Road (SR-120) intersection.

The existing bus stop serving the Yosemite Area Rapid Transit System (YARTS) located along the project site frontage on Tioga Road (SR-120) will remain in place.

The project site currently contains the following land uses:

- Approximately 16 units of workforce housing;
- Existing Whoa Nelli Deli; and
- Gasoline Station with Convenience Store and 8 vehicle fueling positions (4 two-sided fuel pumps).

Additionally, during summer Thursday evenings, concert-type events are held in the lawn area of the site.

Aside from the existing uses located on the project site, the site is currently approved for addition of the following traffic-generating land uses:

- 120-room hotel; and

- Restaurant use with 100 seats and a seating area of approximately 5,000 square feet (gross area of approximately 10,000 square feet).

The proposed project consists of the following additional traffic-generating land uses:

- Workforce housing with 100 units, which includes approximately 150 bedrooms with a total capacity of 300 residents; and
- An additional island to the existing gas station, adding a total of 4 vehicle fueling positions (2 two-sided fuel pumps).

Under current conditions, approximately 6 of the 37 total employees live on the project site; the remaining employees commute to and from the site.

Exhibit 1-3 shows the conceptual site plan.

The project is planned to open in 2023.

1.1 Study Area

The study area consists of the following study intersections in the vicinity of the project site:

1. Highway 395 (US-395) / Tioga Road (SR-120); and
2. Project Site Access / Tioga Road (SR-120).

Both of the study intersections are a part of the California State Highway system and are in the jurisdiction of Caltrans District 9 which holds jurisdiction over the State Highway system in the central-east portion of the State of California including Inyo, Mono, and eastern Kern Counties.

Study area traffic conditions are very seasonal in this area and vary by the time of the year. Tioga Road (SR-120) is generally closed during winter and peak traffic conditions generally occur in the summer time.

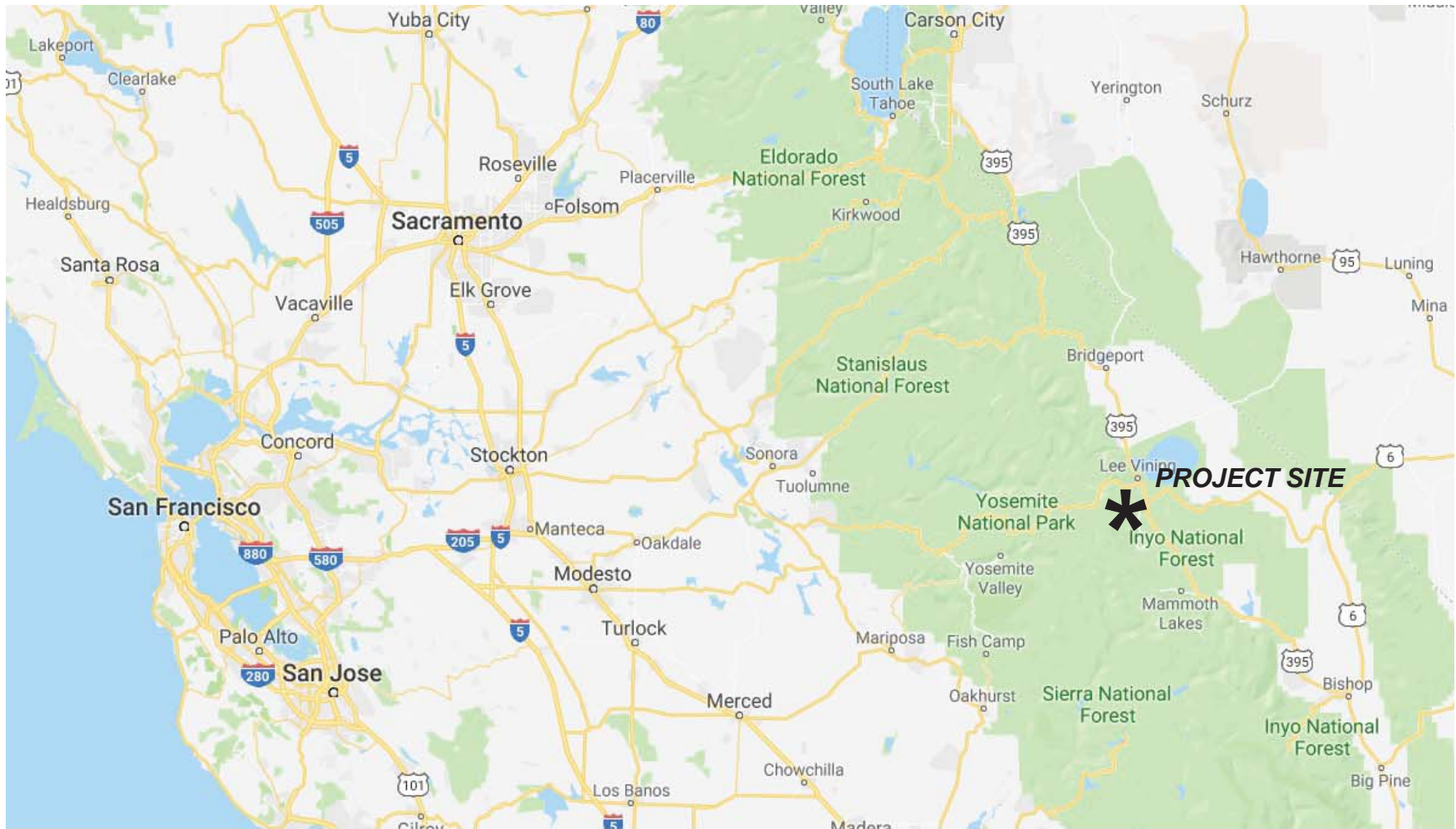
Hence, this study evaluates traffic conditions during the month of July, for the following time periods:

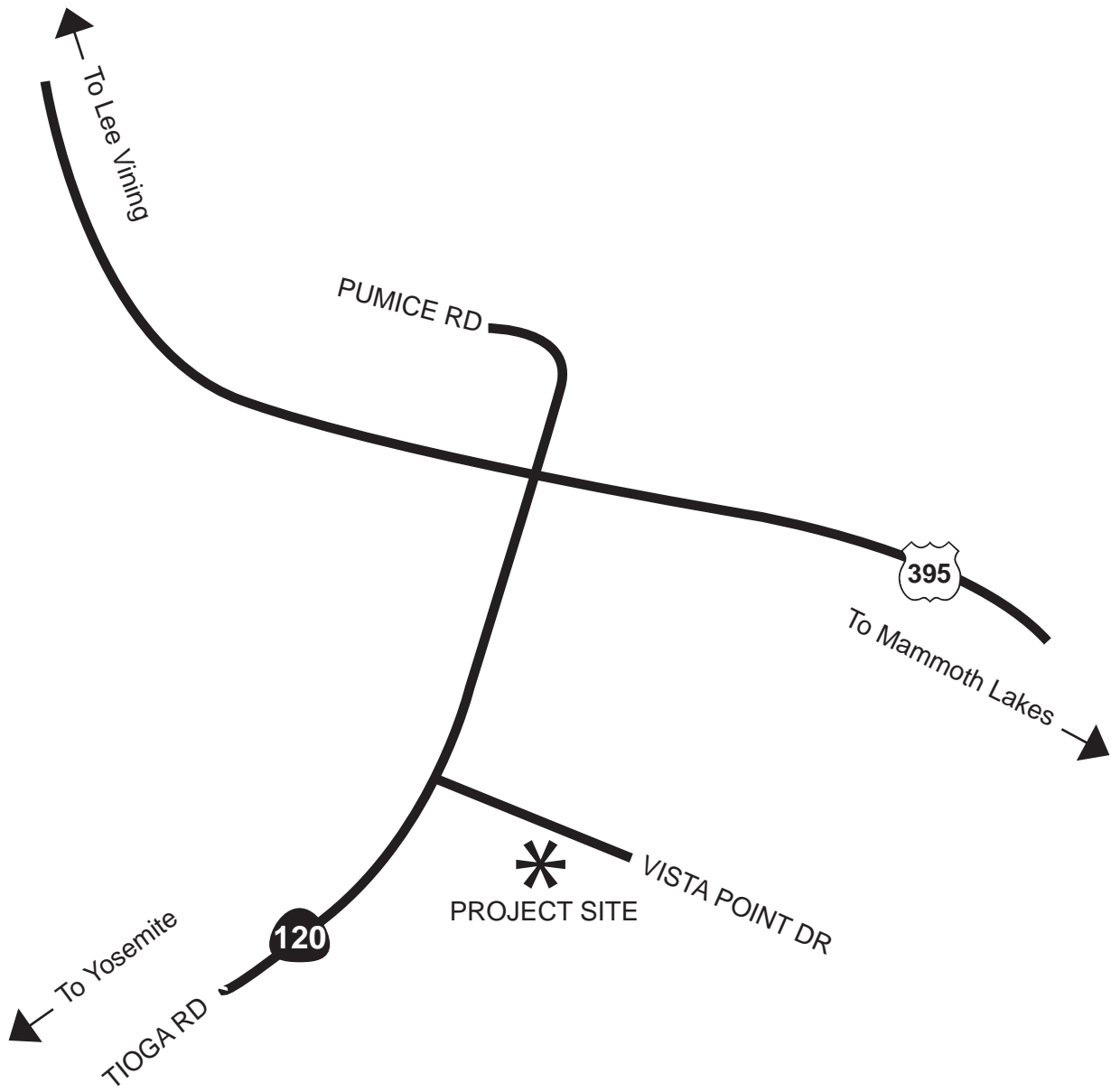
- AM: 8:00 AM to 10:00 AM;
- Mid-Day 12:00 PM to 2:00 PM; and
- PM: 4:00 PM to 6:00 PM.

Exhibit 1-4 shows the location of the study intersections which are analyzed for the following study scenarios:

- Existing Conditions;
- Existing Plus Project Conditions;
- Forecast Opening Year (2023) Without Project Conditions; and
- Forecast Opening Year (2023) With Project Conditions.

The analysis also evaluates vehicular queuing at the study intersections as requested by Caltrans.





Not to Scale



Project Site Location

PROPOSED ADDITIONAL SITE COVERAGE

PARCEL 1 - 26.5 AC
BUILDING FOOTPRINT (HOTEL) = 11,200 SF
ORIGINAL = 48,500 SF; PROPOSED = 38,300 SF
APPROVED SITE COVERAGE = 17.2%
PROPOSED SITE COVERAGE = 13.3%

PARCEL 2 - 32.1 AC
PROPOSED AND APPROVED RESTAURANT FOOTPRINT = NO CHANGE
PROPOSED WORKFORCE BUILDING FOOTPRINT = 50,000 SF ADDITIONAL
PROPOSED MANAGER'S UNIT FOOTPRINT = 1,400 SF ADDITIONAL
PROPOSED MAINTENANCE BUILDING FOOTPRINT = 2,800 SF ADDITIONAL
APPROVED SITE COVERAGE = 2.7%
PROPOSED SITE COVERAGE = 12.0%

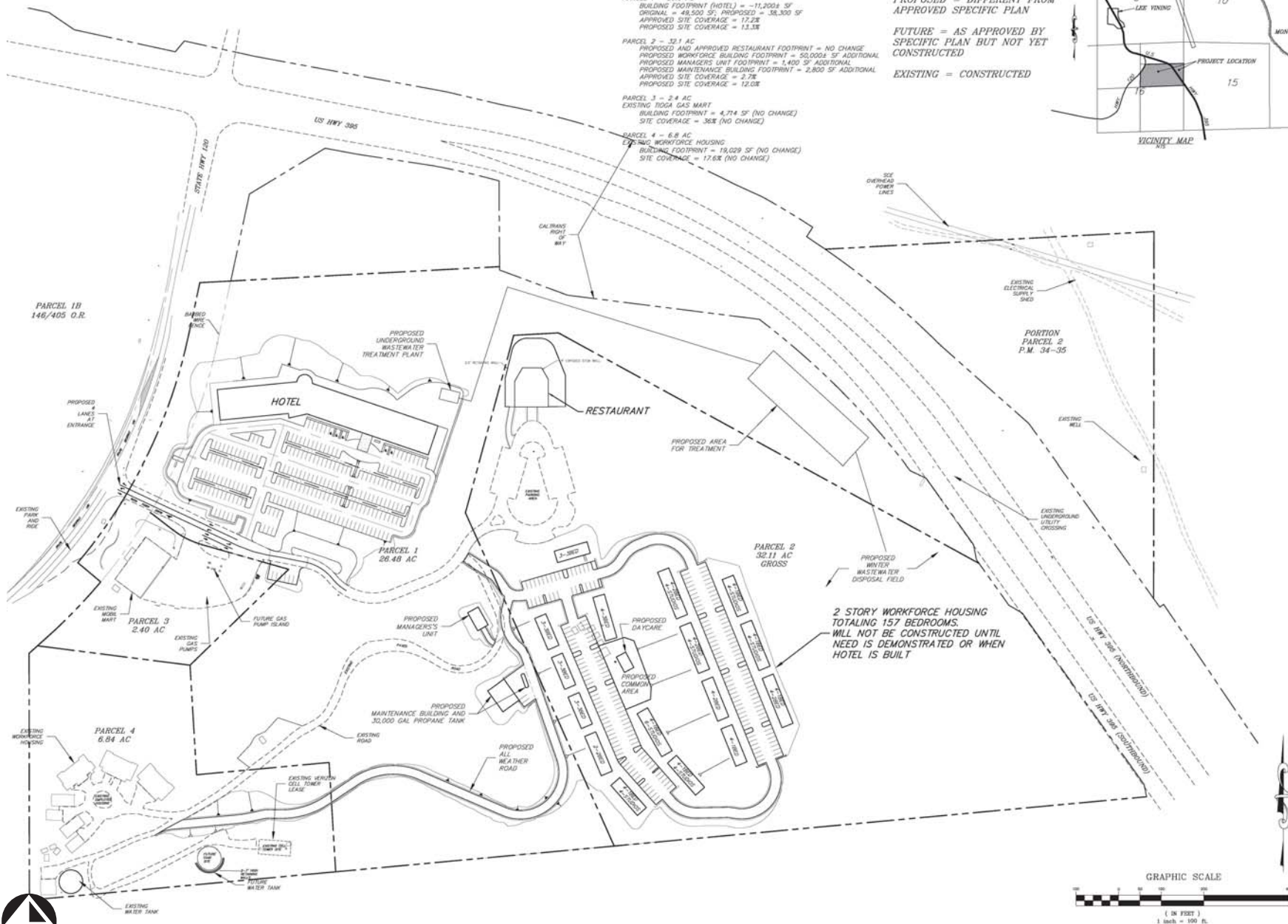
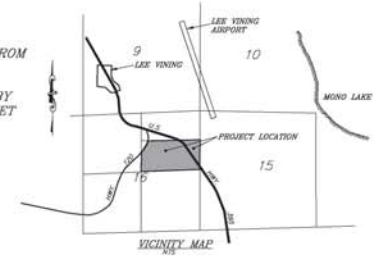
PARCEL 3 - 2.4 AC
EXISTING TODA GAS MART
BUILDING FOOTPRINT = 4,714 SF (NO CHANGE)
SITE COVERAGE = 36% (NO CHANGE)

PARCEL 4 - 6.8 AC
EXISTING WORKFORCE HOUSING
BUILDING FOOTPRINT = 19,029 SF (NO CHANGE)
SITE COVERAGE = 17.6% (NO CHANGE)

KEY
PROPOSED = DIFFERENT FROM
APPROVED SPECIFIC PLAN

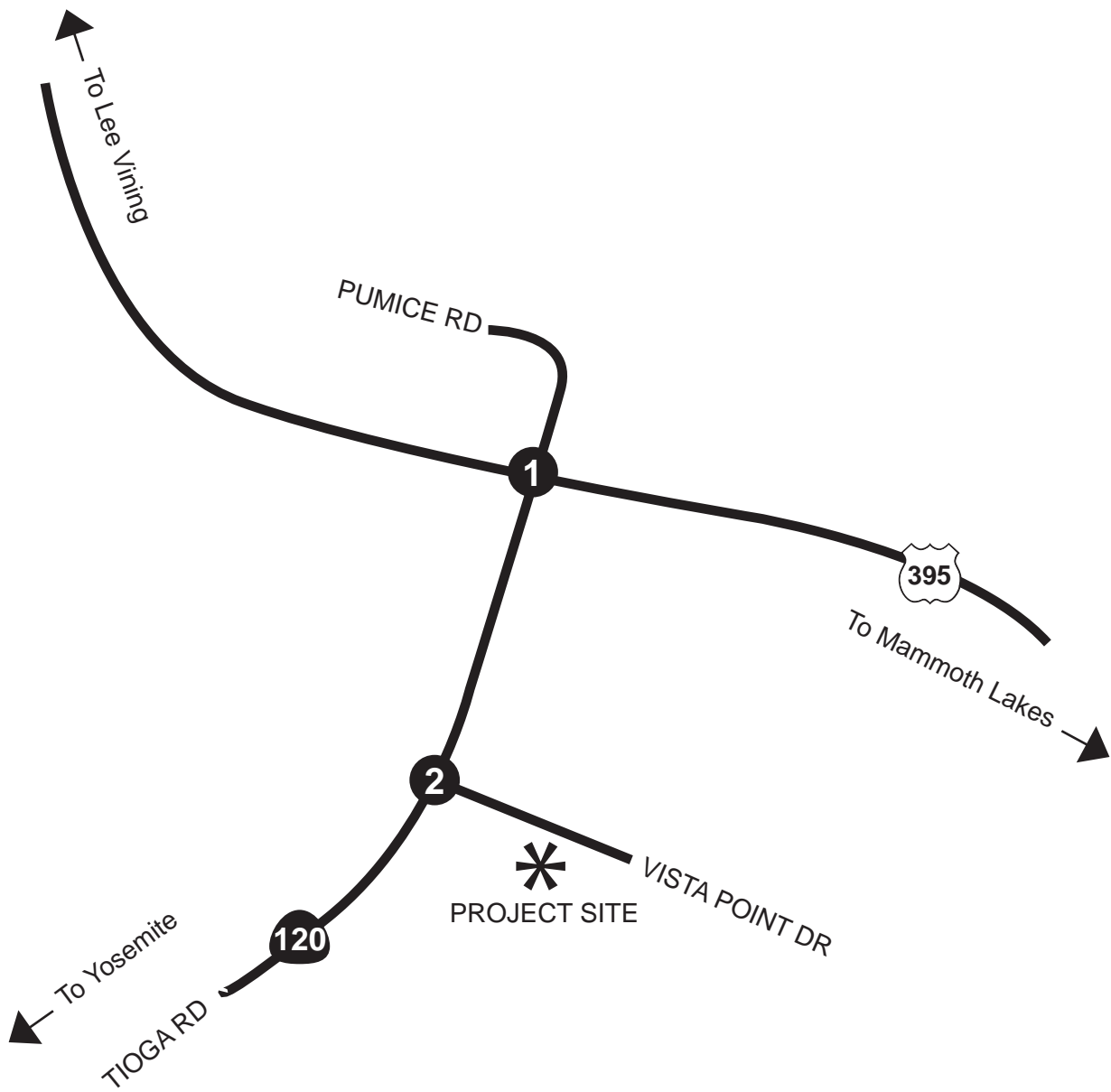
FUTURE = AS APPROVED BY
SPECIFIC PLAN BUT NOT YET
CONSTRUCTED

EXISTING = CONSTRUCTED




Not to Scale





Legend:

 Study Intersection



Not to Scale

2.0 Analysis Methodologies, Performance Criteria and Thresholds of Significance

This section of the report presents the methodologies used to perform the traffic analyses summarized in this report in accordance with the County of Mono and Caltrans requirements.

This section also discusses the agency-established applicable performance criteria and thresholds of significance for the study facilities.

2.1 Intersection Analysis Methodology

Level of service (LOS) is commonly used as a qualitative description of intersection operation and is based on the capacity of the intersection and the volume of traffic using the intersection.

The Highway Capacity Manual (HCM) analysis methodology is utilized to determine the operating LOS of the study intersections consistent with the County of Mono and Caltrans requirements for evaluating intersection operations.

The 2010 HCM analysis methodology describes the operation of an intersection using a range of LOS from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on the corresponding ranges of stopped delay experienced per vehicle for signalized and unsignalized intersections shown in Table 2-1.

**Table 2-1
Intersection LOS & Delay Ranges**

LOS	Delay (seconds/vehicle)	
	Signalized Intersections	Unsignalized Intersections
A	≤ 10.0	≤ 10.0
B	> 10.0 to ≤ 20.0	> 10.0 to ≤ 15.0
C	> 20.0 to ≤ 35.0	> 15.0 to ≤ 25.0
D	> 35.0 to ≤ 55.0	> 25.0 to ≤ 35.0
E	> 55.0 to ≤ 80.0	> 35.0 to ≤ 50.0
F	> 80.0	> 50.0

Source: 2010 Highway Capacity Manual

The definitions of level of service for uninterrupted flow (flow unrestrained by the existence of traffic control devices) are:

- LOS A represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream.
- LOS B is in the range of stable flow, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver.
- LOS C is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream.
- LOS D represents high-density but stable flow. Speed and freedom to maneuver are severely restricted, and the driver experiences a generally poor level of comfort and convenience.
- LOS E represents operating conditions at or near the capacity level. All speeds are reduced to a low, but relatively uniform value. Small increases in flow will cause breakdowns in traffic movement.
- LOS F is used to define forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount which can traverse the point. Queues form behind such locations.

Level of service is based on the average stopped delay per vehicle for all movements of signalized intersections and all-way stop-controlled intersections; for one-way or two-way stop-controlled intersections, LOS is based on the worst stop-controlled approach.

2.2 Study Intersection Peak Hour Performance Criteria

The study intersections are all part of the State of California Highway System and under the jurisdiction and control of Caltrans.

In accordance with the *Caltrans Guide for the Preparation of Traffic Impact Studies (State of California Department of Transportation, December 2002)*, Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on State Highway facilities.

Hence, consistent with the *Tioga Inn Draft Specific Plan Environmental Impact Report (The Company of Eric Jay Toll, AICP, Inc., May 24, 1993)*, this analysis assumes **LOS D** is the acceptable LOS for the study intersections evaluated in this study. Any study intersections operating at LOS E, or F will be considered deficient.

2.3 Study Intersection Thresholds of Significance

As previously noted, the study intersections are all part of the State of California Highway System and under the jurisdiction and control of Caltrans.

While Caltrans has not established traffic thresholds of significance, this traffic analysis utilizes the following traffic thresholds of significance:

- Any intersection operating at a deficient LOS (LOS E, or F) will be considered impacted and would require mitigation measures to achieve acceptable LOS operations (LOS A, B, C, or D).

3.0 Existing Traffic Volumes & Circulation System

This section provides a discussion of existing study area conditions and traffic volumes.

3.1 Roadway Description

The characteristics of the roadway system in the vicinity of the project site are described below:

Highway 395 (U.S. Route 395 or US-395) is a U.S. Route in the western United States. The southern terminus of the route is in the Mojave Desert at Interstate 15 near Hesperia. The northern terminus is at the Canada–US border near Laurier, where the road becomes Highway 395 upon entering British Columbia, Canada. At one time, the route extended south to San Diego. I-15 and I-215 replaced the stretch of 395 that ran from San Diego to Hesperia through Riverside and San Bernardino. "Old Highway 395" can be seen along or near I-15 in many locations before it branches off at Hesperia to head north.

US 395 runs along the Eastern Sierra in the Owens Valley and crosses through the Modoc Plateau along its route.

In the project vicinity, US-395 is a four-lane divided roadway (2 lanes in each direction of travel) traversing in the north-south direction.

Tioga Road (State Route 120 or SR-120) is located in central California. It runs from the San Joaquin Valley near Lathrop through Yosemite National Park, to its end at U.S. Route 6 in Mono County, eastern California. While the route is signed as a contiguous route through Yosemite National Park, the portion in park boundaries is federally maintained, and is not included in the state route logs. The portion at Tioga Pass is the highest paved through road in the California State Route system. This part is not maintained in the winter and is usually closed during the winter season. The road is a toll road through Yosemite National Park between the Big Oak Flats entrance and the Tioga Pass entrance. The National Park Service implemented the tolls along CA-120, along with the Central Yosemite Highway and Wawona Road to help restore funding after significant losses due to the Ferguson Fire and the construction of the rockshed underneath the site of the Ferguson Slide, which reopened the original alignment of the Central Yosemite Highway that had been closed since 2006.

In the project vicinity, SR-120 is a two-lane undivided roadway (1 lane in each direction of travel) traversing in the east-west direction.

3.2 Existing Traffic Controls & Intersection Geometrics

Exhibit 3-1 identifies existing roadway conditions for the study area roadways. The number of through traffic lanes for existing roadways and the existing intersection controls are identified.

3.3 Existing Conditions Traffic Volumes

As previously noted, study area traffic conditions are very seasonal by time of day, month and vary by the time of the year. Tioga Road (SR-120) is generally closed during winter and peak traffic conditions generally occur in the summer time.

As also previously noted, during summer Thursday evenings, concert-type events are held in the lawn area of the site.

To evaluate and capture existing traffic conditions and volumes during peak traffic conditions of the study area, traffic counts were collected on Thursday July 12, 2018 and Thursday August 9, 2018 when concert-type events were being held at the project site.

The counts were collected during the following time periods:

- AM: 8:00 AM to 10:00 AM;
- Mid-Day 12:00 PM to 2:00 PM
- PM: 4:00 PM to 6:00 PM.

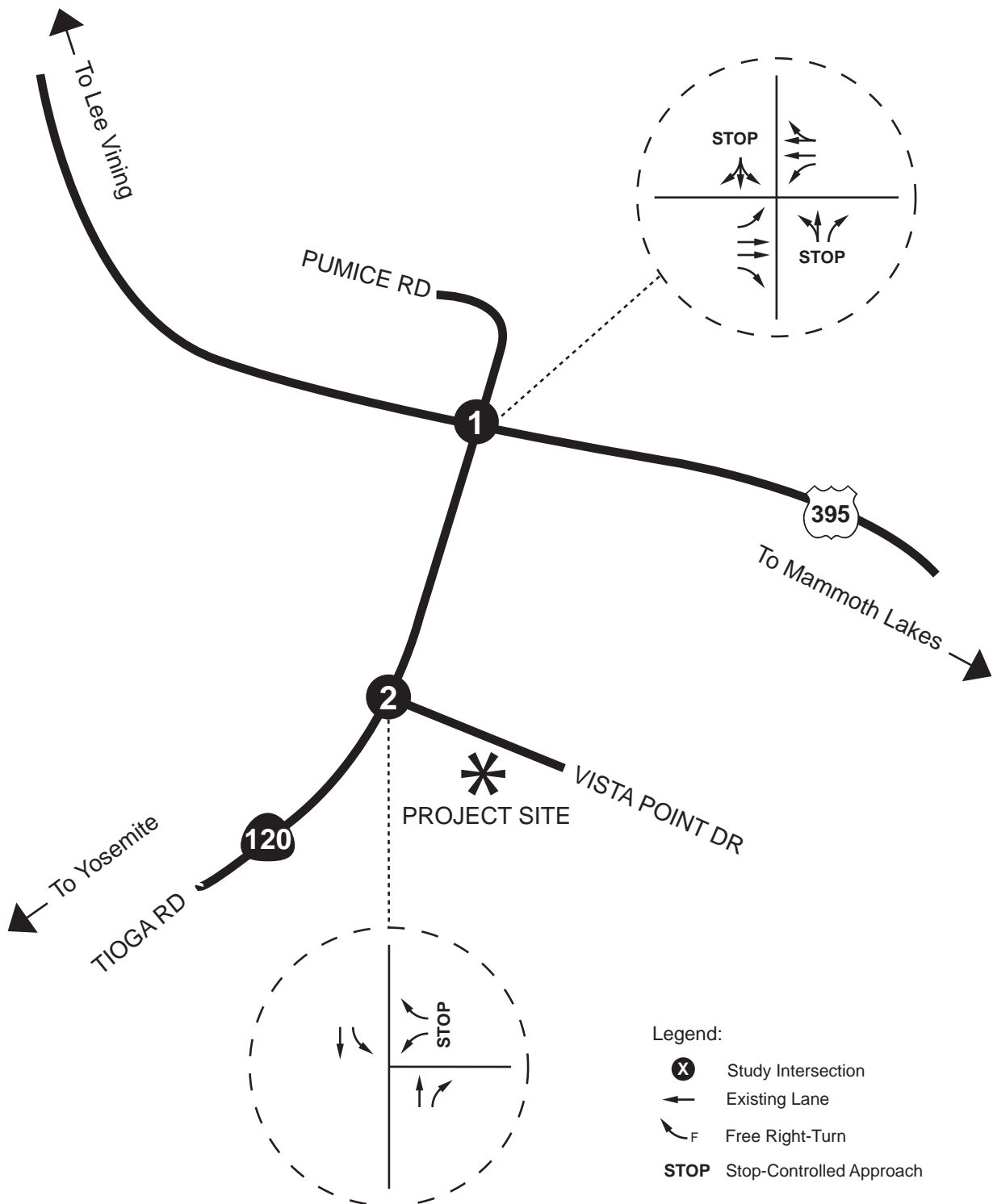
The counts used in this analysis were taken from the highest hour within the peak period counted.

Exhibit 3-2 show existing conditions traffic volumes at the study intersections; detailed traffic count data is contained in Appendix A.

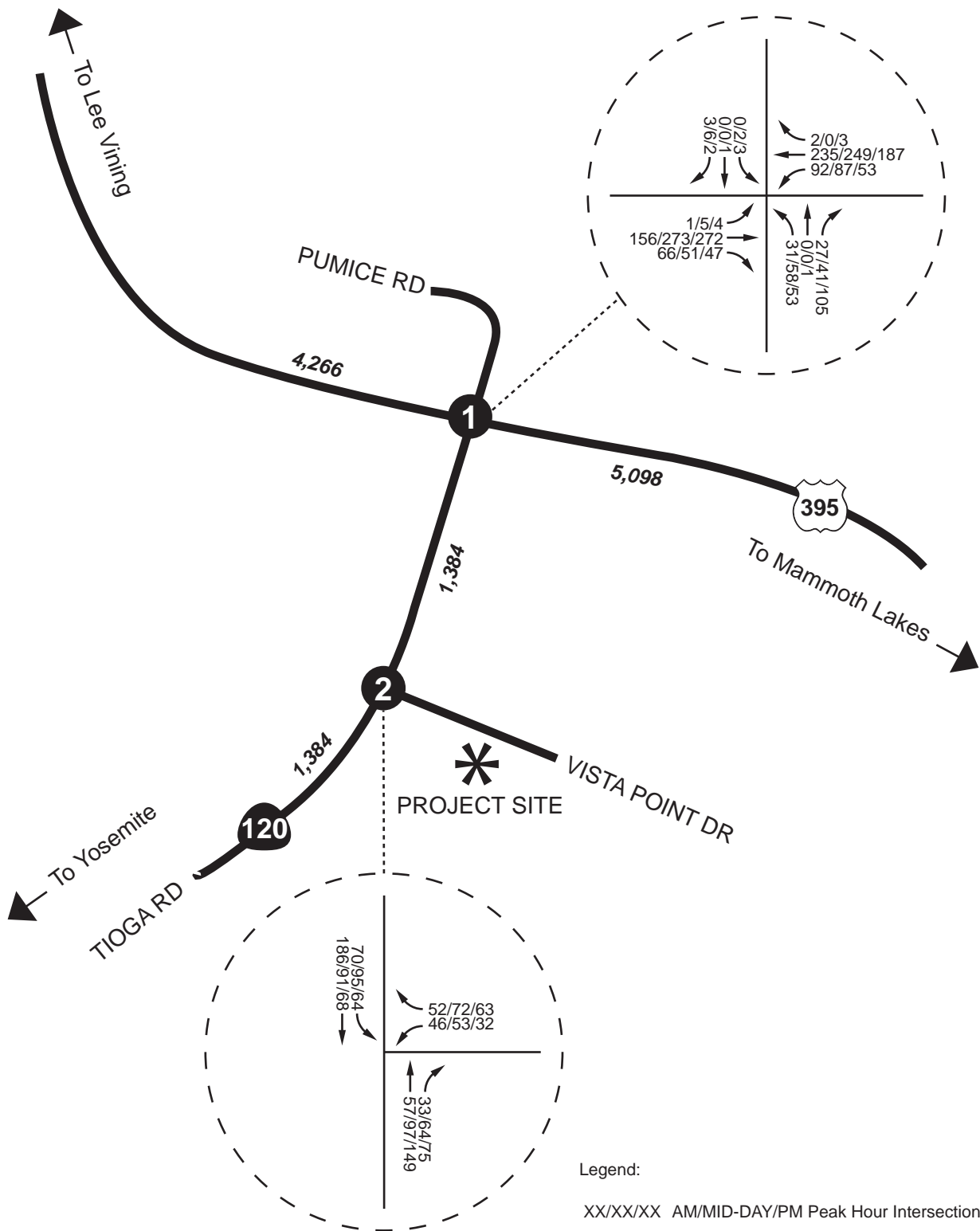
The analysis also utilizes the truck percentage mix of vehicles on Highway 395 and State Route 120 based on truck traffic information published by Caltrans.

Based on the Caltrans data, on a daily basis, the traffic volume on State Route 120 in the study area vicinity consists of 14 trucks and heavy vehicles. Similarly, the traffic volume on Highway 395 in the study area vicinity consists of 19 trucks and heavy vehicles.

The level of service analysis accounts for this parameter.



Not to Scale



Legend:

XX/XX/XX AM/MID-DAY/PM Peak Hour Intersection Volumes

XXX Roadway Segment Average Daily Traffic Volume



Not to Scale



Existing Conditions Traffic Volumes

4.0 Projected & Future Traffic Volumes

This section provides a discussion on methodologies utilized to derive future traffic volumes for the study area.

4.1 Project Traffic Conditions

This section provides a discussion on the methodologies utilized in determining the project's contribution of vehicular traffic to the study area.

4.1.1 Project ITE Trip Generation

Trip generation represents the amount of traffic that is attracted and produced by a development.

As previously noted, the proposed project consists of the following additional traffic-generating land uses:

- Workforce housing with 100 units, which includes approximately 150 bedrooms with a total capacity of 300 residents; and
- An additional island to the existing gas station, adding a total of 4 vehicle fueling positions (2 two-sided fuel pumps).

Trip generation for the proposed project is determined based on ITE 10th Edition trip generation rates for the proposed land uses as shown in Table 4-1.

Table 4-1
ITE Trip Generation Rates for Proposed Project Land Uses

Land Use (ITE Code)	Units	AM Peak Hour Trip Generation Rate			Mid-Day Peak Hour Trip Generation Rate			PM Peak Hour Trip Generation Rate			Daily
		In	Out	Total	In	Out	Total	In	Out	Total	
Multi-Family Housing - Low-Rise (220)	Residents	0.05	0.23	0.28	0.20	0.12	0.32	0.20	0.12	0.32	1.42
Gas Station (944)	VFP	5.27	5.26	10.53	7.21	7.20	14.41	7.21	7.20	14.41	172.01

Source: 2017 ITE Trip Generation Manual, 10th Edition.

Notes: Analysis utilizes the AM peak hour of generator rates for the AM Peak Hour and PM peak hour of generator rates for Mid-Day & PM Peak Hour.

VFP = Vehicle Fueling Positions

Utilizing the ITE trip generation rates shown in Table 4-1, Table 4-2 summarizes the daily and peak hour trip generation for the proposed project. It should be noted the trip generation for the proposed project has been reviewed by Mono County Department of Public Works staff prior to inclusion in this analysis.

Table 4-2
Trip Generation Summary for Proposed Project

Land Use	AM Peak Hour Trip Generation			Mid-Day Peak Hour Trip Generation			PM Peak Hour Trip Generation			Daily
	In	Out	Total	In	Out	Total	In	Out	Total	
300-Resident Workforce Housing	15	69	84	60	36	96	60	36	96	426
<i>Internal Trip Capture Adjustment (25%) *</i>	-4	-17	-21	-15	-9	-24	-15	-9	-24	-107
Subtotal – Workforce Housing	11	52	63	45	27	72	45	27	72	319
Addition of 4-Vehicle Fueling Positions of Gas Station	21	21	42	29	29	58	29	29	58	688
<i>Internal Trip Capture Adjustment (25%) *</i>	-5	-5	-10	-7	-7	-14	-7	-7	-14	-172
Subtotal – Gas Station	16	16	32	22	22	44	22	22	44	516
Total	27	68	95	67	49	116	67	49	116	835

Notes: * Consistent with the *Tioga Inn Specific Plan & Environmental Impact Report (The Company of Eric Jay Toll, AICP, Inc., May 24, 1993)*, the analysis assumes a 25% internal capture to account for the interaction between the compatible land uses on the site.

As shown in Table 4-2, the proposed project is forecast to generate approximately 835 daily trips which include approximately 95 AM peak hour trips, approximately 116 mid-day peak hour trips, and approximately 116 PM peak hour trips.

It should be noted the trip generation shown in Table 4-2 is considered conservative since it does not account for *ITE's* pass-by trip reduction which is applicable to gas station and retail-related uses located along busy arterial highways attracting vehicle trips already on the roadway; this is particularly the case when the roadway is experiencing peak operating conditions. For example, a motorist already traveling along State Route 120 or Highway 395 between other destinations may stop at the proposed project site to get fuel.

4.1.2 Project Trip Distribution

Trip distribution represents the directional orientation of traffic to and from the project. Trip distribution is heavily influenced by the geographical location of the site, the location of retail, employment, recreational opportunities, and the proximity to the regional freeway system.

The project's trip distribution has been developed through discussions and review by Mono County Department of Public Works staff and is based on review of existing land uses and roadway circulation system in the project site vicinity.

Exhibit 4-1 shows the trip distribution for the project's workforce housing element.

Exhibit 4-2 shows the trip distribution for the project's gas station element.

4.1.3 Modal Split

The site currently sits adjacent to an existing bus stop serving the Yosemite Area Rapid Transit System (YARTS) located along the project site frontage on Tioga Road (SR-120). Additionally, the Eastern Sierra Transit Authority (ESTA) provides weekday service between Lone Pine and Reno (1 trip each way) with regular stops in Bishop, Mammoth Lakes and Lee Vining (the bus drop-off in Lee Vining is located about 1 miles north of the project site).

Modal split denotes the proportion of traffic generated by a project that would use any of the transportation modes, namely buses, cars, bicycles, motorcycles, trains, carpools, etc. The traffic reducing potential of public transit and other modes is significant. However, the traffic projections in this study are conservative in that public transit and alternative transportation may be able to reduce the traffic volumes, but, no modal split reduction is applied to the projections since precise quantification of the reduction is not feasible. With the implementation of additional transit service and provision of alternative transportation ideas and incentives, such as the ones discussed later in Section 8.4 of this report under Transportation Demand Management (TDM), the automobile traffic demand can be reduced significantly.

4.1.4 Project Traffic Volumes/Assignment

The assignment of traffic from the project site to the adjoining roadway system has been based upon the project's trip generation, trip distribution, and arterial highway and local street systems that are in place.

Project traffic volumes are shown on Exhibit 4-3.

4.2 Existing Plus Project Conditions traffic Volumes

Existing Plus Project Conditions traffic volumes are derived by adding the project traffic volumes shown in Exhibit 4-3 to the existing traffic volumes shown in Exhibit 3-2.

Existing Plus Project Conditions traffic volumes are shown in Exhibit 4-4. The exhibit shows the project traffic added on top of the existing traffic volumes.

4.3 Background Traffic

4.3.1 Ambient Growth Method of Projection

To assess future conditions, project traffic is combined with existing traffic, area-wide growth, and cumulative projects' traffic.

For opening year (2023) conditions, to account for area wide/ambient growth in the study area, an annual growth rate of two percent (2%) has been applied to existing traffic volumes over a five-year period. This growth rate is based on review of past and present traffic volume data and traffic growth patterns in the study area as published by Caltrans through their annual traffic volume data and information for this area.

4.3.2 Cumulative Projects Traffic

The cumulative projects which are expected to affect the traffic conditions of the study area for project opening year (2023) consist of the currently approved but not yet constructed land uses on the project site which are as follows:

- 120-room hotel; and
- Restaurant use with 100 seats and a seating area of approximately 5,000 square feet (gross area of approximately 10,000 square feet).

Trip generation for the cumulative projects is determined based on ITE 10th Edition trip generation rates for the proposed land uses as shown in Table 4-3.

Table 4-3
ITE Trip Generation Rates for Cumulative Project Land Uses

Land Use (ITE Code)	Units	AM Peak Hour Trip Generation Rate			Mid-Day Peak Hour Trip Generation Rate			PM Peak Hour Trip Generation Rate			Daily
		In	Out	Total	In	Out	Total	In	Out	Total	
High Turnover Sit-Down Restaurant (932)	TSF	8.00	6.04	14.04	9.05	8.36	17.41	9.05	8.36	17.41	112.18
Hotel (310)	Rooms	0.29	0.25	0.54	0.35	0.26	0.61	0.35	0.26	0.61	8.36

Source: 2017 ITE Trip Generation Manual, 10th Edition.

Notes: Analysis utilizes the AM peak hour of generator rates for the AM Peak Hour and PM peak hour of generator rates for Mid-Day & PM Peak Hour.

TSF = Thousand Square Feet.

Utilizing the ITE trip generation rates shown in Table 4-3, Table 4-4 summarizes the daily and peak hour trip generation for the cumulative projects. It should be noted the trip generation for the cumulative projects has been reviewed by Mono County Department of Public Works staff prior to inclusion in this analysis.

Table 4-4
Trip Generation Summary for Cumulative Projects

Land Use (ITE Code)	AM Peak Hour Trip Generation			Mid-Day Peak Hour Trip Generation			PM Peak Hour Trip Generation			Daily
	In	Out	Total	In	Out	Total	In	Out	Total	
10,000 Square Feet – High Turnover Sit-Down Restaurant	80	60	140	91	83	174	91	83	174	1,122
<i>Internal Trip Capture Adjustment (25%) *</i>	-20	-15	-35	-23	-21	-44	-23	-21	-44	-281
Subtotal – High Turnover Restaurant	60	45	105	68	62	130	68	62	130	841
120-Room Hotel	35	30	65	42	31	73	42	31	73	1,003
<i>Internal Trip Capture Adjustment (25%) *</i>	-9	-7	-16	-11	-7	-18	-11	-7	-18	-251
Subtotal – Hotel	26	23	49	31	24	55	31	24	55	752
Total	86	68	154	99	86	185	99	86	185	1,593

Notes:

The cumulative projects consist of other currently-approved land uses planned to be constructed on the project site.

* Consistent with the *Tioga Inn Specific Plan & Environmental Impact Report (The Company of Eric Jay Toll, AICP, Inc., May 24, 1993)*, the analysis assumes a 25% internal capture to account for the interaction between the compatible land uses on the site.

As shown in Table 4-4, the cumulative projects are forecast to generate approximately 1,593 daily trips which include approximately 154 AM peak hour trips, approximately 185 mid-day peak hour trips, and approximately 185 PM peak hour trips.

It should again be noted the trip generation shown in Table 4-4 is considered conservative since it does not account for *ITE's* pass-by trip reduction which is applicable to restaurant and retail-related uses located along busy arterial highways attracting vehicle trips already on the roadway; this is particularly the case when the roadway is experiencing peak operating conditions. For example, a motorist already traveling along State Route 120 or Highway 395 between other destinations may stop at the restaurant to get food.

Cumulative Projects traffic volumes are shown on Exhibit 4-5.

4.4 Forecast Opening Year (2023) Without Project Conditions Traffic Volumes

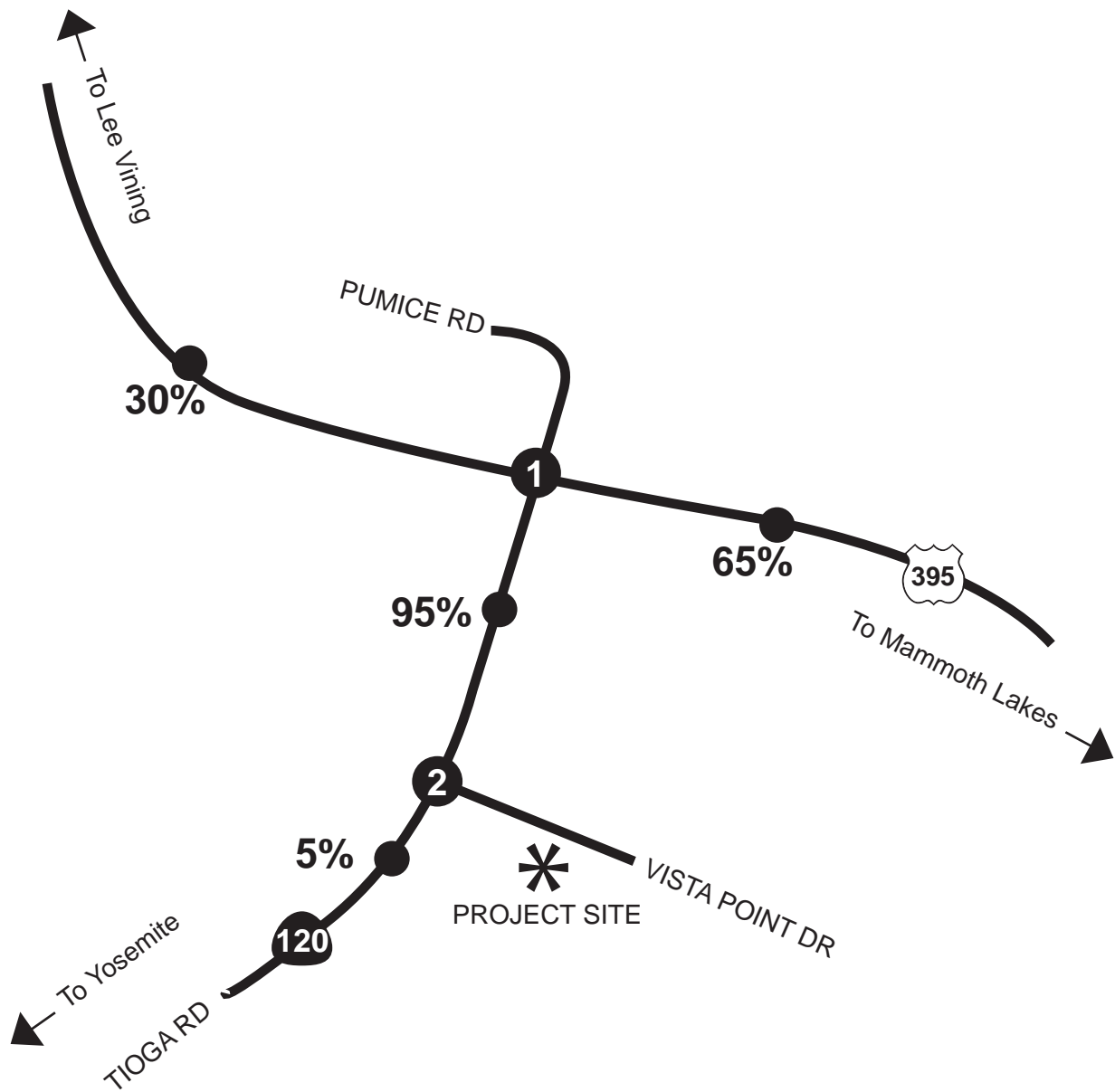
Forecast Opening Year (2023) Without Project Conditions traffic volumes consist of existing traffic volumes and a 10% growth rate (to account for five years of annual growth at a 2% rate) and also the traffic associated with cumulative projects in year 2023 as discussed in Section 4.3.2.

Forecast Opening Year (2023) Without Project Conditions traffic volumes are shown on Exhibit 4-6. The exhibit shows the traffic volumes for year 2023 after accounting for area-wide growth and background/cumulative projects, without the proposed project.

4.5 Forecast Opening Year (2023) With Project Conditions Traffic Volumes

Forecast Opening Year (2023) With Project Conditions traffic volumes are derived by adding project-generated traffic volumes to Forecast Opening Year (2023) Without Project Conditions traffic volumes.

Forecast Opening Year (2023) With Project Conditions traffic volumes are shown on Exhibit 4-7. The exhibit shows the traffic volumes for year 2023 after accounting for area-wide growth and background/cumulative projects, as well as the traffic associated with the proposed project.



Legend:

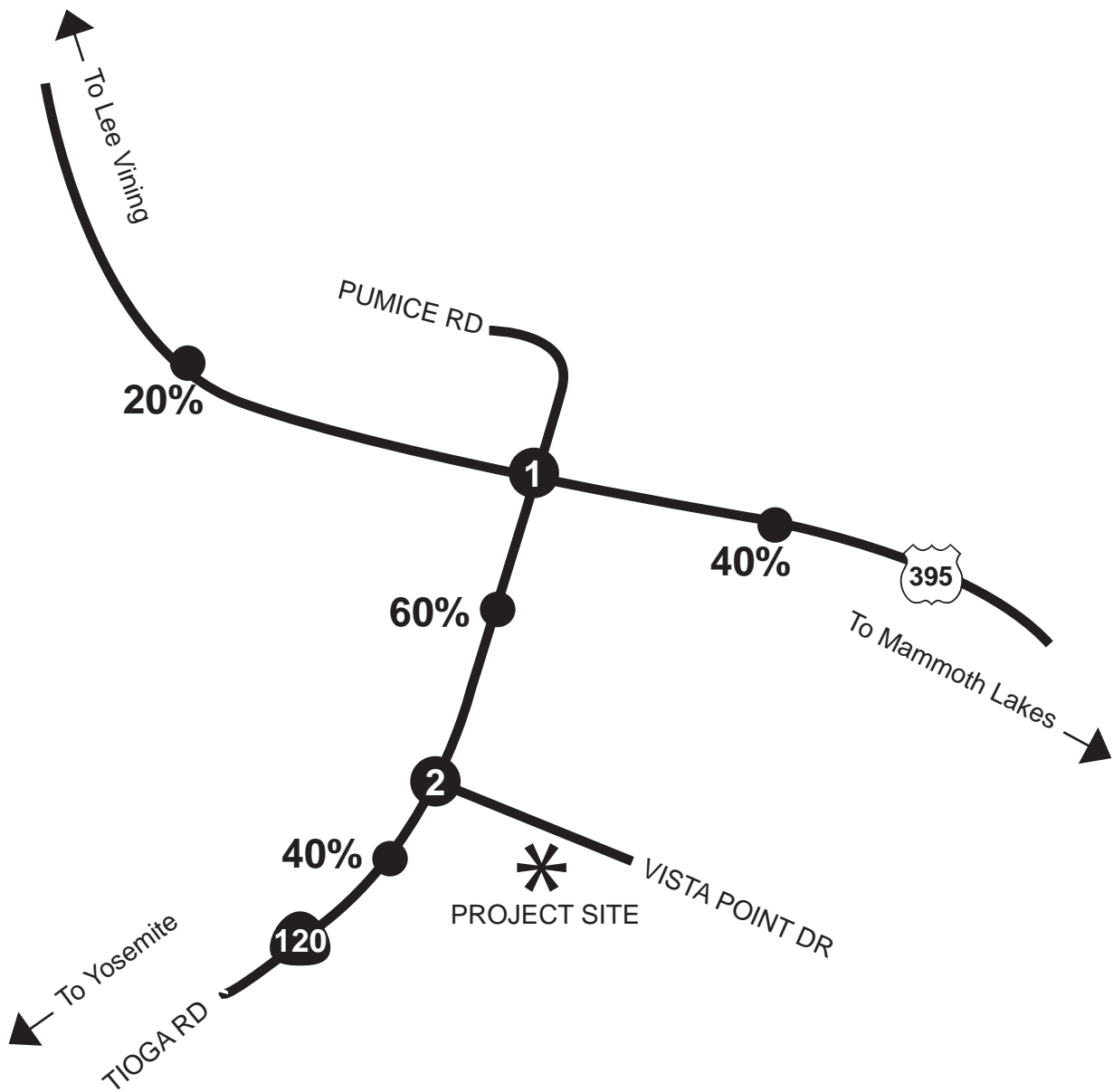
● XX% Percent Trip Distribution



Not to Scale



Forecast Trip Percent Distribution of Proposed Project (Workforce Housing Element)



Legend:

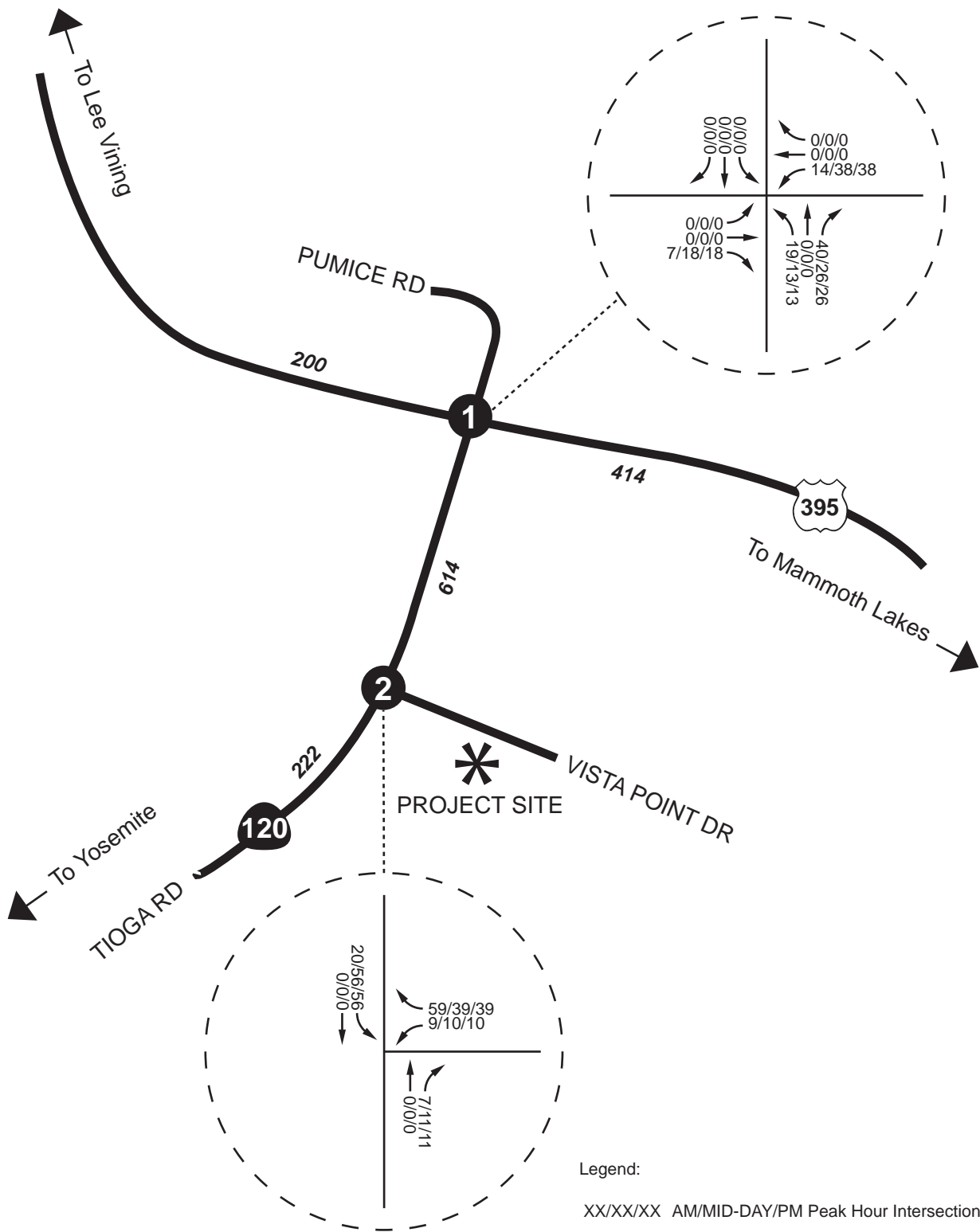
● XX% Percent Trip Distribution



Not to Scale

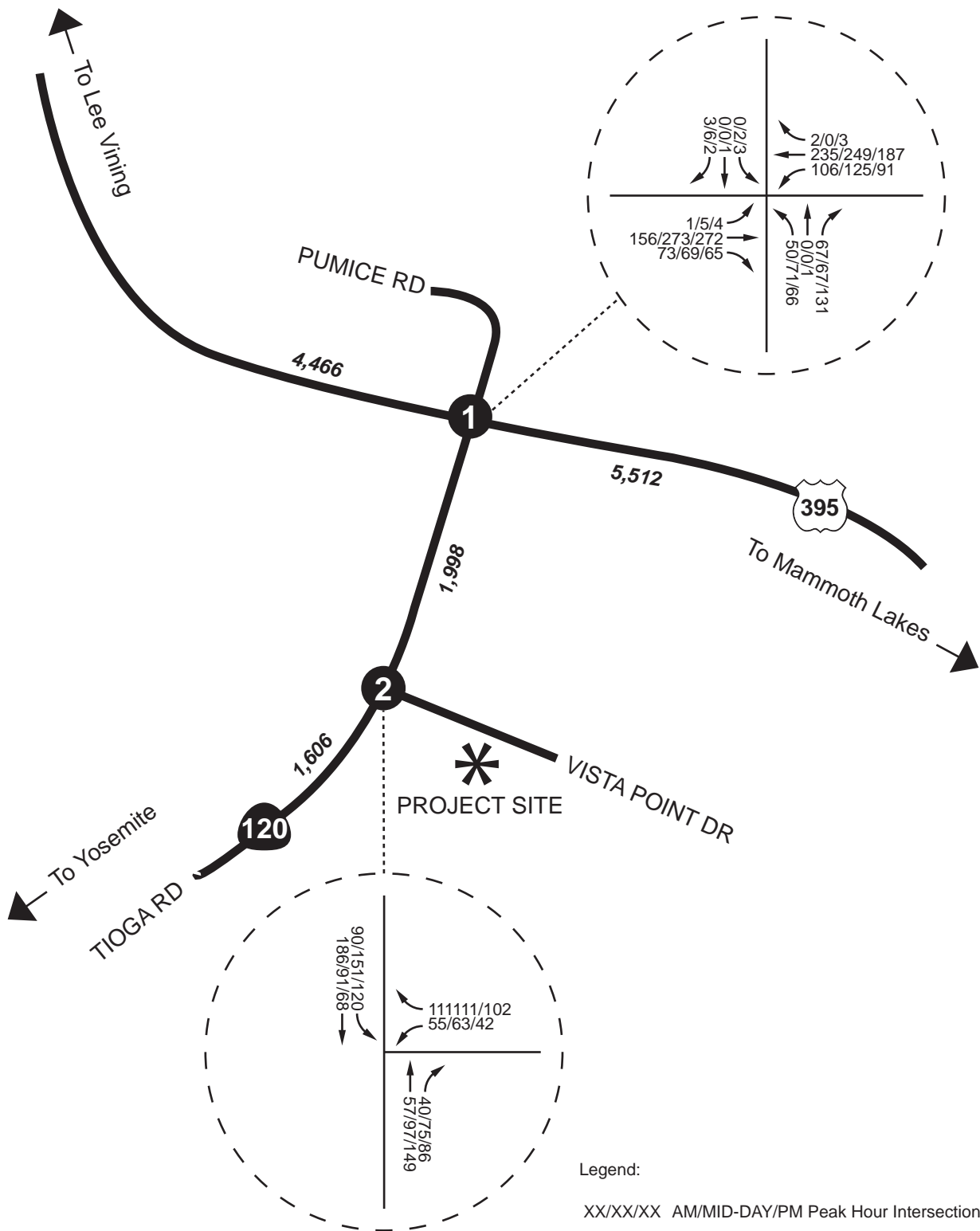


Forecast Trip Percent Distribution of Proposed Project (Gas Station Element)



Not to Scale

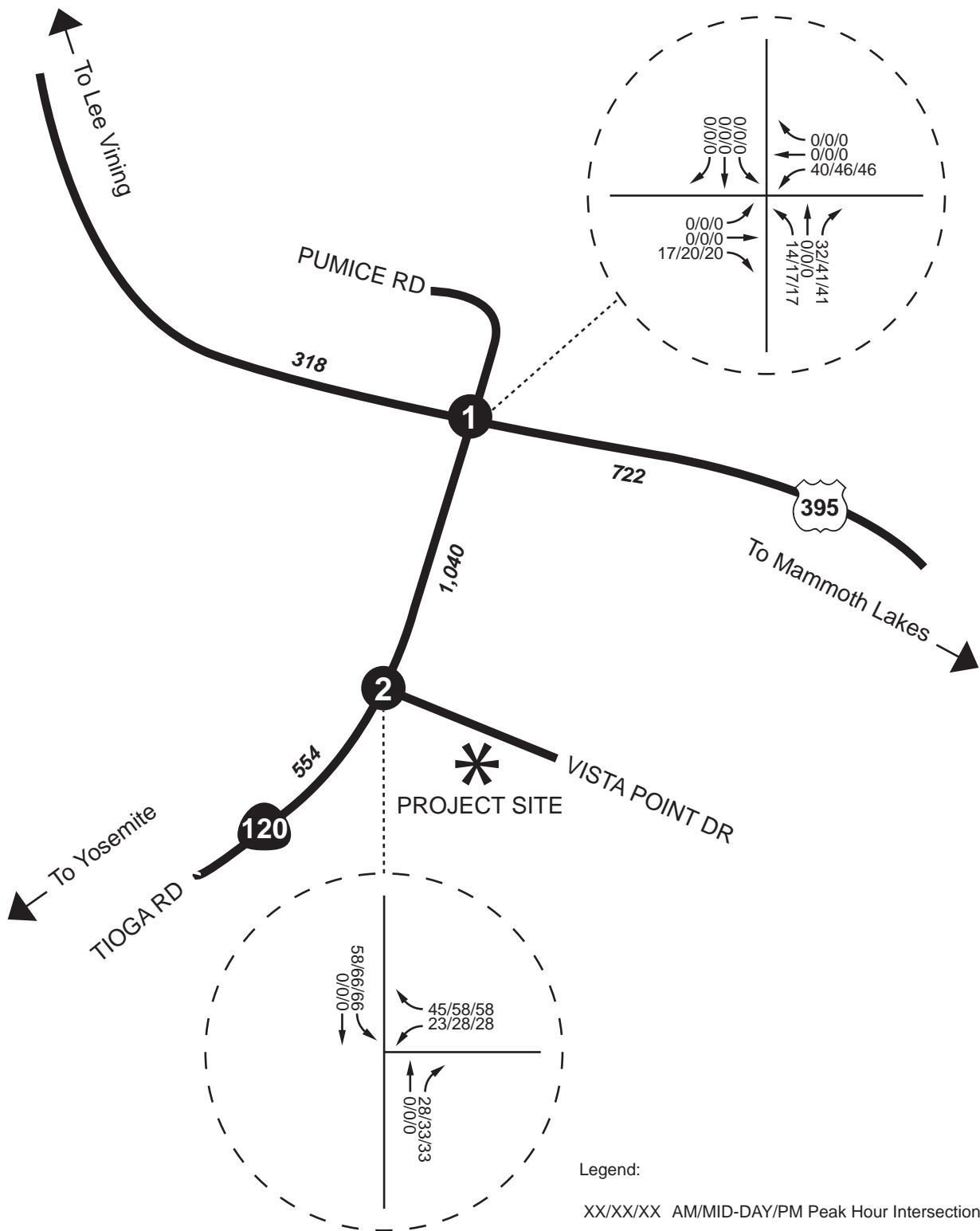




Not to Scale



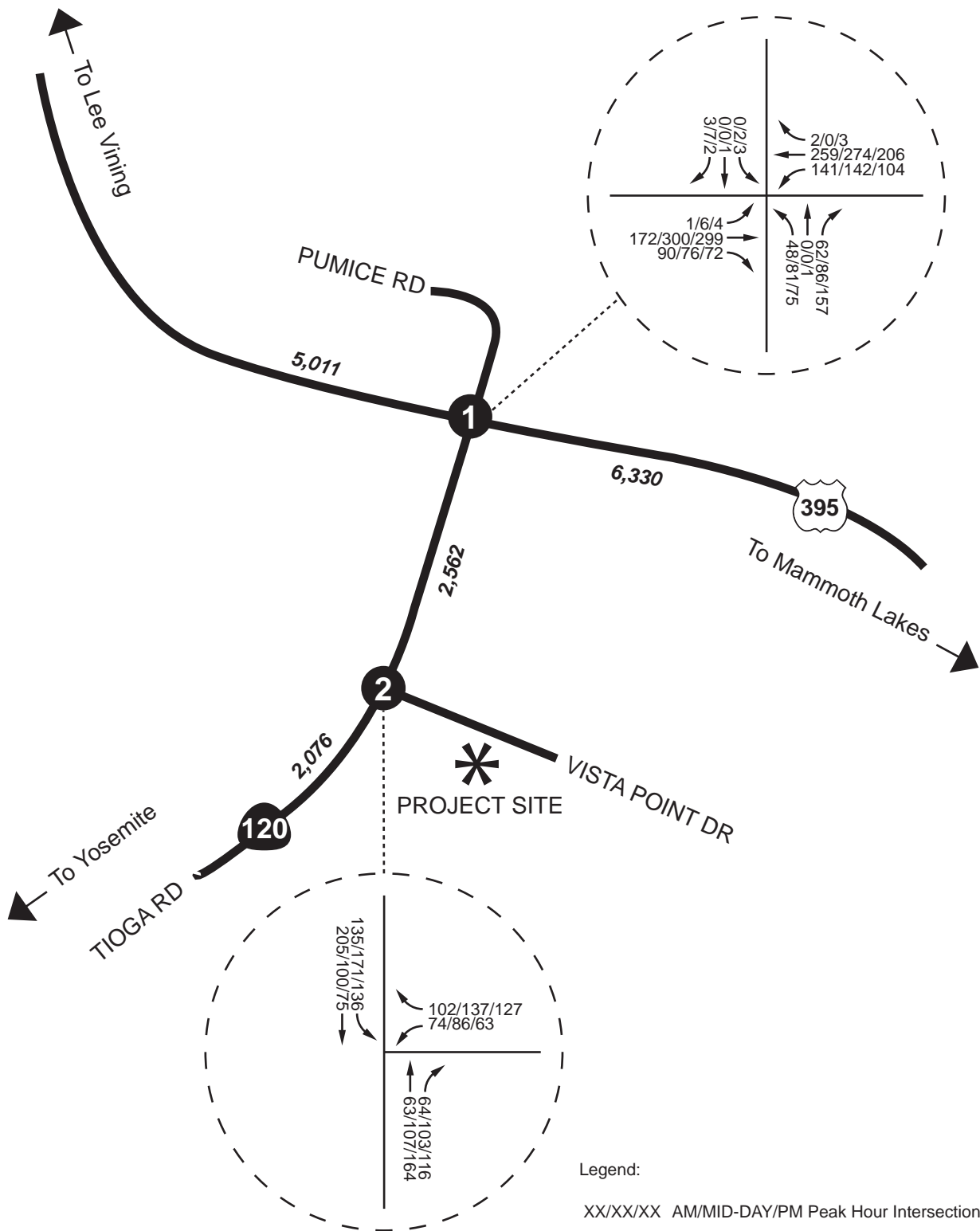
Existing Plus Project Conditions Traffic Volumes



Not to Scale



Cumulative Projects Traffic Volumes



Legend:

XX/XX/XX AM/MID-DAY/PM Peak Hour Intersection Volumes

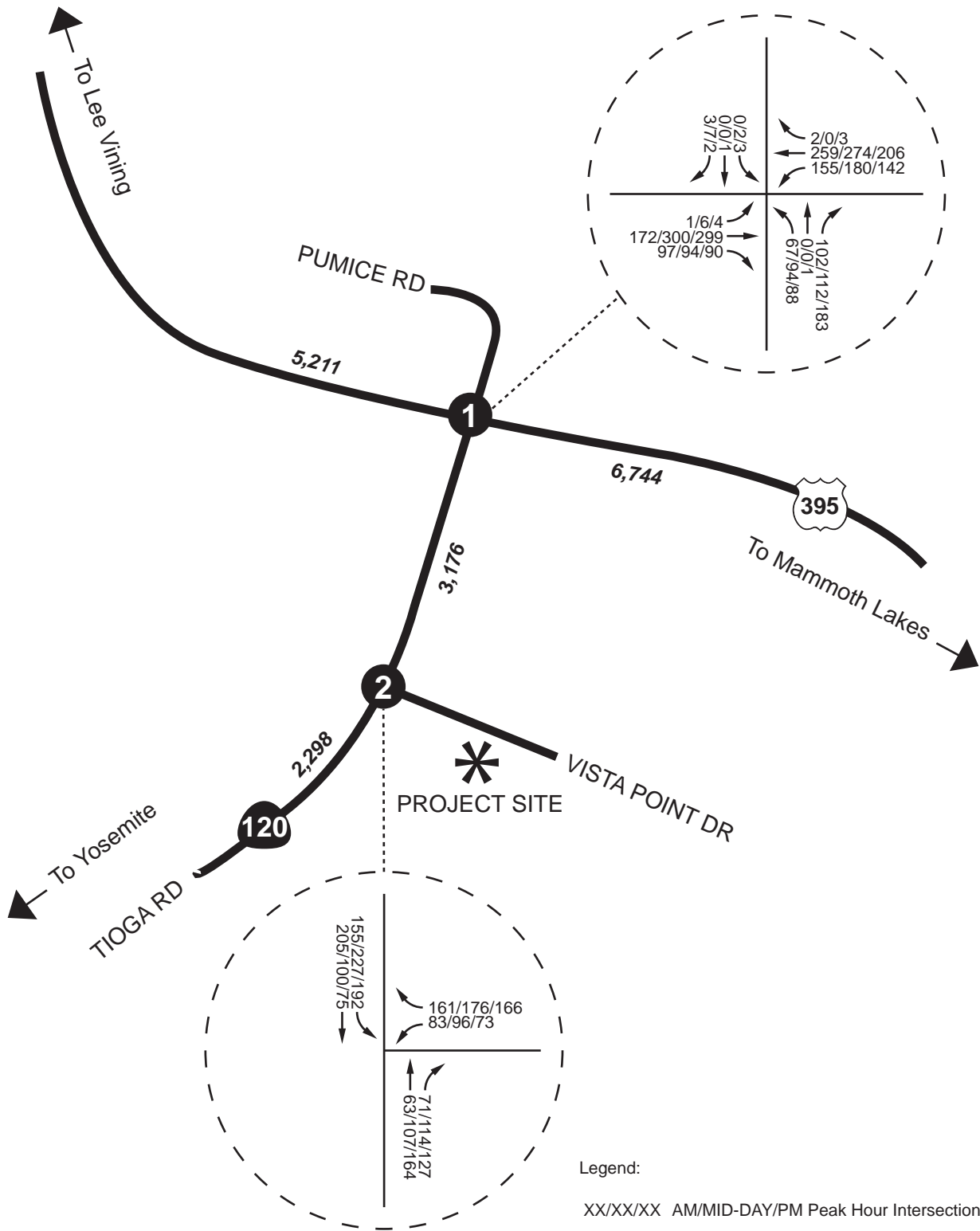
XXX Roadway Segment Average Daily Traffic Volume



Not to Scale



Forecast Opening Year (2023) Without Project Conditions Traffic Volumes



Legend:

XX/XX/XX AM/MID-DAY/PM Peak Hour Intersection Volumes

XXX Roadway Segment Average Daily Traffic Volume



Not to Scale



Forecast Opening Year (2023) With Project Conditions Traffic Volumes

5.0 MUTCD Traffic Signal Warrant Analysis

The existing Highway 395 / Tioga Road (SR-120) unsignalized study intersection has been evaluated for signalization based on the peak hour and daily warrants and procedures contained in the *California Manual on Uniform Traffic Control Devices (CA MUTCD)*. The MUTCD is utilized by Caltrans.

The *California Manual on Uniform Traffic Control Devices (CA MUTCD)* peak hour methodology for evaluation of signal warrants determines if a traffic signal is warranted based on the magnitude of the traffic entering the intersection during a single hour.

Table 5-1 summarizes the results of the *MUTCD* peak hour and daily signal warrant analysis at the Highway 395 / Tioga Road (SR-120) unsignalized study intersection for the analysis scenarios evaluated as part of this report; detailed *MUTCD* signal warrant analysis sheets are contained in Appendix B.

Table 5-1
Highway 395 / Tioga Road (SR-120) MUTCD Traffic Signal Warrant Analysis Summary

Analysis Scenario	Signal Warrant Satisfied?			
	AM Peak Hour	Mid-Day Peak Hour	PM Peak Hour	Daily
Existing Conditions	NO	NO	NO	NO
Existing Plus Project Conditions	NO	NO	NO	NO
Forecast Opening Year (2023) Without Project Conditions	NO	<u>YES</u>	<u>YES</u>	NO
Forecast Opening year (2023) With Project Conditions	NO	<u>YES</u>	<u>YES</u>	NO

As shown in Table 5-1, the Highway 395 / Tioga Road (SR-120) unsignalized study intersection is forecast to satisfy the MUTCD traffic signal warrants for the following conditions:

- Forecast Opening Year (2023) Without Project Conditions (Mid-Day Peak Hour and PM Peak Hour); and
- Forecast Opening Year (2023) With Project Conditions (Mid-Day Peak Hour and PM Peak Hour).

6.0 Peak Hour Level of Service Analysis

This section provides a discussion on the study intersection peak hour level of service analysis and findings.

6.1 Existing Conditions Level of Service Analysis

Existing Conditions Level of Service (LOS) calculations for the study intersections are shown in Table 6-1 and are based upon peak hour turning movement manual counts compiled in July and August 2018; results are shown in Exhibit 3-2 and the existing geometry shown in Exhibit 3-1.

**Table 6-1
Existing Conditions
Study Intersection Level of Service Analysis Summary**

Study Intersection	Existing Conditions					
	AM Peak Hour		Mid-Day Peak Hour		PM Peak Hour	
	Delay	LOS	Delay	LOS	Delay	LOS
Highway 395 / Tioga Road (SR-120)	15.3	C	23.6	C	15.9	C
Project Access / Tioga Road (SR-120)	12.5	B	13.7	B	12.2	B

Notes:

delay shown in seconds based on 2010 Highway Capacity Manual methodology & Synchro 10 Analysis Software.

As shown in Table 6-1, all study area intersections are currently operating at an acceptable level of service (LOS D or better) during the peak hours for Existing Conditions.

Detailed LOS analysis sheets for Existing Conditions are contained in Appendix C.

6.2 Existing Plus Project Conditions Level of Service Analysis

Existing Plus Project Conditions Level of Service (LOS) calculations for the study intersections are shown in Table 6-2 and are based on the Existing Plus Project Conditions traffic volumes shown in Exhibit 4-4 and the existing geometry shown in Exhibit 3-1.

**Table 6-2
Existing Plus Project Conditions
Study Intersection Level of Service Analysis Summary**

Study Intersection	Existing Conditions						Existing Plus Project Conditions						Significant Impact?
	AM Peak Hour		Mid-Day Peak Hour		PM Peak Hour		AM Peak Hour		Mid-Day Peak Hour		PM Peak Hour		
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	
Highway 395 / Tioga Road (SR-120)	15.3	C	23.6	C	15.9	C	16.8	C	32.4	D	19.1	C	NO
Project Access / Tioga Road (SR-120)	12.5	B	13.7	B	12.2	B	13.3	B	17.2	C	14.6	B	NO

Notes:

Delay shown in seconds based on 2010 Highway Capacity Manual methodology & Synchro 10 Analysis Software.

As shown in Table 6-2, all study area intersections are forecast to continue to operate at an acceptable level of service (LOS D or better) during the peak hours for Existing Plus Project Conditions.

As also shown in Table 6-2, based on agency-established thresholds of significance, the proposed project is forecast to result in a less-than significant traffic impact at the study intersections for Existing Plus Project Conditions.

Detailed LOS analysis sheets for Existing Plus Project Conditions are contained in Appendix D.

6.3 Forecast Opening Year (2023) Without Project Conditions Level of Service Analysis

Forecast Opening Year (2023) Without Project Conditions Level of Service (LOS) calculations for the study intersections are shown in Table 6-3; the calculations are based on the Forecast Opening Year (2023) Without Project Conditions traffic volumes shown in Exhibit 4-6 and the existing geometry shown in Exhibit 3-1.

**Table 6-3
Forecast Opening Year (2023) Without Project Conditions
Study Intersection Level of Service Analysis Summary**

Study Intersection	Forecast Opening Year (2023) Without Project Conditions					
	AM Peak Hour		Mid-Day Peak Hour		PM Peak Hour	
	Delay	LOS	Delay	LOS	Delay	LOS
Highway 395 / Tioga Road (SR-120)	20.2	C	48.5	E	22.4	C
Project Access / Tioga Road (SR-120)	16.4	C	21.3	C	16.8	C

Notes:

delay shown in seconds based on 2010 Highway Capacity Manual methodology & Synchro 10 Analysis Software.

Deficient operation and significant impact shown in **bold**.

As shown in Table 6-3, all study area intersections are forecast to continue to operate at an acceptable level of service (LOS D or better) during the peak hours for Forecast Opening year (2023) Without Project Conditions with the exception of the following study intersection which is forecast to operate at a deficient level of service (LOS E or worse) during one or more of the analysis peak hours:

- Highway 395 / Tioga Road (SR-120) (Mid-day peak hour).

The deficiency is resulted from the addition of background trips and the traffic associated with the background/cumulative projects in the area, without the project traffic being added.

Detailed LOS analysis sheets for Forecast Opening Year (2023) Without Project Conditions are contained in Appendix E.

6.4 Forecast Opening Year (2023) With Project Conditions Level of Service Analysis

Forecast Opening Year (2023) With Project Conditions Level of Service (LOS) calculations for the study intersections are shown in Table 6-4 and are based on the Forecast Opening Year (2023) With Project Conditions traffic volumes shown in Exhibit 4-7 and the existing geometry shown in Exhibit 3-1.

Table 6-4
Forecast Opening Year (2023) With Project Conditions
Study Intersection Level of Service Analysis Summary

Study Intersection	Forecast Opening Year (2023) Without Project Conditions						Forecast Opening Year 92023) With Project Conditions						Significant Impact?
	AM Peak Hour		Mid-Day Peak Hour		PM Peak Hour		AM Peak Hour		Mid-Day Peak Hour		PM Peak Hour		
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	
Highway 395 / Tioga Road (SR-120)	20.2	C	48.5	E	22.4	C	23.2	C	88.5	F	29.6	D	YES
With Traffic Signal	---	---	---	---	---	---	10.8	B	11.4	B	11.0	B	NO
With One-Lane Roundabout	---	---	---	---	---	---	9.9	A	15.9	C	11.4	B	NO
Project Access / Tioga Road (SR-120)	16.4	C	21.3	C	16.8	C	18.1	C	32.0	D	22.4	C	NO

Notes:

For unsignalized and signalized locations, delay shown in seconds based on 2010 Highway Capacity Manual methodology & Synchro 10 Analysis Software.

For roundabouts, delay shown in seconds based on 2010 Highway Capacity Manual methodology & aaSIDRA 6.1 Analysis Software.

Deficient operation and significant impact shown in **bold**.

As shown in Table 6-4, all study area intersections are forecast to continue to operate at an acceptable level of service (LOS D or better) during the peak hours for Forecast Opening year (2023) With Project Conditions with the exception of the following study intersection which is forecast to continue to operate at a deficient level of service (LOS E or worse) during one or more of the analysis peak hours:

- Highway 395 / Tioga Road (SR-120) (Mid-day peak hour).

As also shown in Table 6-4, based on agency-established thresholds of significance, the proposed project is forecast to result in a significant traffic impact at the following study intersection for Forecast Opening Year (2023) With Project Conditions:

- Highway 395 / Tioga Road (SR-120) (Mid-day peak hour).

It should be noted in accordance with the HCM methodology, for one-way or two-way stop-controlled intersections, LOS is based on the worst stop-controlled approach.

Hence, the identified deficient operation and excess delay at the Highway 395 / Tioga Road (SR-120) intersection is experienced only by vehicles on the minor street (stop controlled Tioga Road approach) of the intersection which are performing a left-turn maneuver onto northbound Highway 395. Vehicles traveling along the major roadway (Highway 395) have free flow movement with minimal delay and the overall average delay of the intersection is 10.6 seconds (equivalent to LOS B).

Detailed LOS analysis sheets for Forecast Opening Year (2023) With Project Conditions are contained in Appendix F.

As previously shown in Section 5.0 of this report, the Highway 395 / Tioga Road (SR-120) unsignalized study intersection is forecast to satisfy the minimum traffic volumes criteria to satisfy the MUTCD traffic signal warrants for the following conditions:

- Forecast Opening Year (2023) Without Project Conditions (Mid-Day Peak Hour and PM Peak Hour); and
- Forecast Opening Year (2023) With Project Conditions (Mid-Day Peak Hour and PM Peak Hour).

The following two alternatives are identified to improve the operation of the intersection to an acceptable level (LOS D or better). The options are presented as alternatives for consideration by Caltrans for this intersection since both are forecast to achieve acceptable level of service:

- Highway 395 / Tioga Rd (SR-120) Improvement Alternative A: Signalize the intersection.

As shown in Table 6-4, installation of a traffic signal is forecast to achieve acceptable level of service (LOS D or better) at the study intersection for Forecast Opening Year (2023) With Project Conditions and the project's identified significant impact would be reduced to a level considered less than significant.

Detailed LOS analysis sheets for Forecast Opening Year (2023) With Project Conditions with traffic signal are contained in Appendix G.

- Highway 395 / Tioga Rd (SR-120) Improvement Alternative B: Convert to a Single-Lane Roundabout.

As shown in Table 6-4, conversion of the intersection to a single-lane roundabout is forecast to achieve acceptable level of service (LOS D or better) at the study intersection for Forecast Opening Year (2023) With Project Conditions and the project's identified significant impact would be reduced to a level considered less than significant.

Detailed LOS analysis sheets for Forecast Opening Year (2023) With Project Conditions with single-lane roundabout are contained in Appendix H.

If a two-lane roundabout is installed, it is expected to provide even further increased capacity compared to a single-lane roundabout.

When compared to the traffic signal alternative, the roundabout alternative would allow for continuous flow of traffic without vehicles having to stop at a red light. However, the roundabout alternative would require a well prepared design and potentially greater right-of-way to work effectively.

Since at this time Caltrans does not have any plans to signalize or modify the intersection, the two improvement alternatives which are required to achieve acceptable level of service could be considered infeasible. Hence, the project's traffic impact on the Highway 395 / Tioga Road (SR-120) study intersection is considered significant and unavoidable.

7.0 Peak Hour Vehicular Queue Analysis

Caltrans has previously reviewed the Notice of Preparation for the proposed project and has provided comments which were contained in a comment letter dated November 17, 2016.

As requested by Caltrans in the comment letter, a peak hour 95th percentile vehicular queue evaluation has been prepared to determine the required turn lane storage to accommodate the forecast traffic volumes at the study intersections. The queue analysis has been prepared for Forecast Opening Year (2023) With Project Conditions, which is the most trip-intensive scenario evaluated as part of this report.

The analysis utilizes the Highway Capacity Manual (HCM) 95th percentile methodology which estimates the vehicular queues with a probability of five percent or less of being exceeded. This methodology is commonly utilized for design of storage lanes and determination of turn lane pocket lengths.

It should be noted, Caltrans does not have established and adopted performance criteria and significant impact thresholds for vehicular queuing. Hence, the vehicular queuing analysis presented in this report is strictly for informational purposes.

Table 7-1 summarizes the results of the HCM 95th percentile vehicular queue evaluation.

Table 7-1
Forecast Opening Year With Project Conditions
HCM 95th Percentile Vehicular Queue Analysis Summary

Study Intersection & Movement	Existing Turn Lane Storage (Feet)	AM Peak Hour		Mid-Day Peak Hour		PM Peak Hour		Adequate Storage?
		Peak Hour Volume	Queue (Feet)	Peak Hour Volume	Queue (Feet)	Peak Hour Volume	Queue (Feet)	
Highway 395 / Tioga Road (SR-120)								
NB Highway 395 Left-Turn Lane	270	155	12.5	180	20.0	142	12.5	YES
SB Highway 395 Right-Turn Lane	380	97	Nom	94	Nom	90	Nom	YES
EB Tioga Rd (SR-120) Shared Through/Left-Turn Lane	800*	67	27.5	94	125.0	89	45.0	YES
Project Access / Tioga Road (SR-120)								
NB Project Access Left-Turn Lane	95	83	25.0	96	60.0	73	30.0	YES
SB Project Access Right-Turn Lane	95	161	17.5	176	25.0	166	22.5	YES
EB Tioga Rd (SR-120) Right-Turn Lane	275	71	Nom	114	Nom	127	Nom	YES
WB Tioga Rd (SR-120) Left-Turn Lane	70	155	10.0	227	22.5	192	17.5	YES

Notes:

Vehicular queue is based on 2010 Highway Capacity Manual 95th percentile methodology & Synchro 10 Analysis Software.

* Distance measured to the nearest/next intersection; Nom = Nominal

As shown in Table 7-1, the existing vehicular storage capacities are forecast to be adequate to accommodate the 95th percentile vehicular queues at the study intersections for Forecast Opening Year (2023) With Project Conditions.

As also shown in Table 7-1, for Forecast Opening Year (2023) With Project Conditions, approximately 227 vehicles are expected to turn left into the project site from Tioga Road (SR-120) during the mid-day peak hour. If needed in the future, this left-turn storage can be extended to provide additional storage capacity beyond the existing capacity by restriping within the existing right-of-way.

8.0 Evaluation of Other Elements

This section provides a discussion and recommendations on the following elements related to the study area and circulation system:

- Collision History and Patterns at the Highway 395 / Tioga Road (SR-120) study intersection;
- Pedestrian & Bicycle Circulation System;
- Caltrans Right-of-Way Acquisition and parking along the Tioga Road frontage; and
- Transportation Demand Management (TDM) recommendations.

8.1 Highway 395 / Tioga Road (SR-120) Collision History

To determine the frequency and patterns of collisions at the Highway 395 / Tioga Road (SR-120) intersection, MAT Engineering reviewed the collision history at the intersection through the California Highway Patrol Statewide Integrated Traffic Records System (SWITRS) database.

The database contains collision history for all jurisdictions reported through local police department and also the Highway Patrol. Data was reviewed for years 2010 through present (2018).

Table 8-1 summarizes the collision history for the intersection.

**Table 8-1
Highway 395 / Tioga Road (SR-120) Collision History**

Year	Collisions by Category						Total
	Improper Turn	Unsafe Speed	Right of Way	Travel on Wrong Side	Lane Change	Other *	
2010	1	2	1	1	1	1	7
2011	1	2	3	0	1	5	12
2012	3	5	0	0	0	3	11
2013	0	1	1	0	0	1	3
2014	1	1	1	0	0	3	6
2015	2	3	2	0	0	0	7
2016	1	4	0	0	0	0	5
2017	2	0	1	0	0	1	4
2018	0	2	1	0	0	2	5
Total	11	20	10	1	2	16	60

Notes:

Source: Statewide Integrated Traffic Records System (SWITRS) for Mono County region accessed in October 2018.

* Mostly consists of collisions of vehicles with wildlife.

As shown in Table 8-1, based on the SWITRS database, there are a total of 60 reported collisions at the Highway 395 / Tioga Road (SR-120) intersection from 2010 to present (2018).

Twenty of the 60 collisions are attributed to high travel speeds.

A substantial number of the collisions are suspected to be a result of high rates of travel speed on Highway 395 near the Tioga Road intersection in addition to limited visibility and sight distance for vehicles approaching the Highway 395 / Tioga Road (SR-120) intersection.

Based on the review of the SWITRS data, there are not a substantial number of collisions reported at the Project Site Access / Tioga Road (SR-120) intersection.

However, based on field observations, drivers traveling eastbound on Tioga Road and approaching the project site access from the Yosemite Park area, appear to sometimes mistakenly shift into the existing right-turn lane into the project site access as they are looking to turn right and southbound onto Highway 395.

Caltrans is considering plans to integrate 'Traffic Calming' improvements on US 395 through Lee Vining, and enhanced safety upgrades at the intersection of Highway 395/ Tioga Road (SR-120) as well as along the apron on both sides of the entry to Tioga Mart, and pedestrian access along 395. Other relevant improvements may also be considered.

Based on the foregoing analysis, it is recommended as part of the improvement project for the State Highway system in this area, that Caltrans consider the following:

- Reduce travel speeds on Highway 395 by implementation of effective traffic calming measures such as narrowing of travel lanes, etc.,
- Provide additional advanced warning signs and/or flashing beacons for vehicles approaching the Highway 395 / Tioga Road (SR-120) intersection;
- Provide additional advanced warning signs and lane assignment information for vehicles approaching the Project Site Access / Tioga Road (SR-120) intersection;
- Consider alternative lane striping options to better and more clearly delineate the right-turn lane entering the project site access from Tioga Road; and
- Increase law enforcement presence.

8.2 Pedestrian & Bicycle Circulation System

To improve the pedestrian and bicycle circulation between the project site and Lee Vining, it is recommended a pedestrian link between the project site and Lee Vining be provided by Caltrans to increase walkability, reduce parking demand in town, and enhance the visitor experience.

Caltrans might want to consider a pedestrian connection across Tioga Road (SR-120), and work with applicable agencies to identify additional alternatives and options for improving pedestrian and bicycle connectivity and circulation.

8.3 Caltrans Right-of-Way Acquisition

Another project element pertains to Caltrans' sale of a 70-foot wide portion of the Tioga Road (SR-120) right-of-way easement to the project applicant. The easement extends for a distance of 1,170-feet adjacent to the Tioga site. A portion of this easement (west of the entry) has long

been used informally by Tioga Mart customers as a picnic and play area. The ownership transfer will facilitate long-term use of the picnic area by customers, and provide greater flexibility in design of the land adjacent to and north of the hotel.

Caltrans will continue to own the remaining SR120 right of way, which includes an apron (east and west of the entry) that is used heavily by motorists as a Mono Lake vista point, and also used as an overflow parking area by Tioga Mart patrons.

The following is recommended for implementation by Caltrans and the project applicant:

- Improve and maintain the area to continue to provide parking for patrons and visitors;
- To reduce conflicts between vehicles traveling along Tioga Road (SR-120) and vehicles accessing the parking area, consider implementing a designated point of ingress and egress for this parking area.
- Provide a parking arrangement that maintains adequate sight distance at the project site access on Tioga Road (SR-120); and
- Relocate the existing YARTS bus stop in a manner to maintain adequate sight distance for the Project Site Access / Tioga Road (SR-120) intersection and also minimize conflicts between the busses and vehicles parking in this area or accessing the project site.

8.4 Transportation Demand Management (TDM) Recommendations

TDM is a program of information, encouragement and incentives provided by local or regional organizations to help people know about and use all their transportation options to optimize all modes in the system – and to counterbalance the incentives to drive that are so prevalent in subsidies of parking and roads. These are both traditional and innovative technology-based services to help people use transit, ridesharing, walking, biking, and telework.

8.5 Vehicle Miles Traveled (VMT) Analysis

The County of Mono and Caltrans do not currently have adopted and established threshold of significance for vehicles miles traveled (VMT) analysis and impact. An analysis of VMT has been included in this report for informational purposes.

Table 8-2 summarizes the project's weekday, Saturday, Sunday and overall VMT based on data from the air quality model analysis. The table shows the VMT for both the proposed project as well as the cumulative projects (currently approved hotel and restaurant).

**Table 8-2
Forecast Vehicle Miles Traveled (VMT)**

Land Use	VMT (miles)			
	Weekday	Saturday	Sunday	Annual VMT
<i>Proposed Project</i>				
Housing	208.00	208.00	208.00	595.348
Gas Station	516.00	516.00	516.00	276.785
Total Proposed Project	724.00	724.00	724.00	872.133
<i>Cumulative Projects</i>				
Restaurant	841.00	841.00	841.00	975.782
Hotel	752.40	752.40	752.40	1,429.508
Total Cumulative Projects	1,593.40	1,593.40	1,593.40	2,405.29
<i>Total Proposed Project & Cumulative Projects</i>	<i>2,317.40</i>	<i>2,317.40</i>	<i>2,317.40</i>	<i>3,277.423</i>

Notes:

Source: Proposed Project's Air Quality Analysis Model.

As shown in Table 8-2, the proposed project is forecast to result in an annual VMT of 872.133 miles.

As also shown in Table 8-2, the cumulative projects are forecast to result in an annual VMT of 2,405.29 miles.

Hence, the proposed project and the cumulative projects combined are forecast to result in an annual VMT of 3,277.423 miles.

9.0 Findings, Conclusions & Recommendations

Provided below is a summary of key findings, conclusions and recommendation of this traffic impact assessment:

9.1 Level of Service & Impact Analysis Summary

Existing Conditions

All study area intersections are currently operating at an acceptable level of service (LOS D or better) during the peak hours for Existing Conditions.

Existing Plus Project Conditions

All study area intersections are forecast to continue to operate at an acceptable level of service (LOS D or better) during the peak hours for Existing Plus Project Conditions.

Based on agency-established thresholds of significance, the proposed project is forecast to not result in a significant traffic impact at the study intersections for Existing Plus Project Conditions.

Forecast Opening Year (2023) Without Project Conditions

All study area intersections are forecast to continue to operate at an acceptable level of service (LOS D or better) during the peak hours for Forecast Opening year Without Project Conditions with the exception of the following study intersection which is forecast to operate at a deficient level of service (LOS E or worse) during one or more of the analysis peak hours:

- Highway 395 / Tioga Road (SR-120) (Mid-day peak hour).

Forecast Opening Year (2023) With Project Conditions

All study area intersections are forecast to continue to operate at an acceptable level of service (LOS D or better) during the peak hours for Forecast Opening year (2023) With Project Conditions with the exception of the following study intersection which is forecast to continue to operate at a deficient level of service (LOS E or worse) during one or more of the analysis peak hours:

- Highway 395 / Tioga Road (SR-120) (Mid-day peak hour).

Based on agency-established thresholds of significance, the proposed project is forecast to result in a significant traffic impact at the following study intersection for Forecast Opening Year (2023) With Project Conditions:

- Highway 395 / Tioga Road (SR-120) (Mid-day peak hour).

It should be noted in accordance with the HCM methodology, for one-way or two-way stop-controlled intersections, LOS is based on the worst stop-controlled approach.

Hence, the identified deficient operation and excess delay at the Highway 395 / Tioga Road (SR-120) intersection is experienced only by vehicles on the minor street (stop controlled Tioga Road approach) of the intersection which are performing a left-turn maneuver onto northbound Highway 395. Vehicles traveling along the major roadway (Highway 395) have free flow movement with minimal delay and the overall average delay of the intersection is 10.6 seconds (equivalent to LOS B).

As previously shown in Section 5.0 of this report, the Highway 395 / Tioga Road (SR-120) unsignalized study intersection is forecast to satisfy the minimum traffic volumes criteria to satisfy the MUTCD traffic signal warrants for the following conditions:

- Forecast Opening Year (2023) Without Project Conditions (Mid-Day Peak Hour and PM Peak Hour); and
- Forecast Opening Year (2023) With Project Conditions (Mid-Day Peak Hour and PM Peak Hour).

The following two alternatives are identified to improve the operation of the intersection to an acceptable level (LOS D or better). The options are presented as alternatives for consideration by Caltrans for this intersection since both are forecast to achieve acceptable level of service:

- Highway 395 / Tioga Rd (SR-120) Improvement Alternative A: Signalize the intersection.

As shown in Table 6-4, installation of a traffic signal is forecast to achieve acceptable level of service (LOS D or better) at the study intersection for Forecast Opening Year (2023) With Project Conditions and the project's identified significant impact would be reduced to a level considered less than significant.

- Highway 395 / Tioga Rd (SR-120) Improvement Alternative B: Convert to a Single-Lane Roundabout.

As shown in Table 6-4, conversion of the intersection to a single-lane roundabout is forecast to achieve acceptable level of service (LOS D or better) at the study intersection for Forecast Opening Year (2023) With Project Conditions and the project's identified significant impact would be reduced to a level considered less than significant.

If a two-lane roundabout is installed, it is expected to provide even further increased capacity compared to a single-lane roundabout.

When compared to the traffic signal alternative, the roundabout alternative would allow for continuous flow of traffic without vehicles having to stop at a red light. However, the roundabout alternative would require a well prepared design and potentially greater right-of-way to work effectively.

Since at this time Caltrans does not have any plans to signalize or modify the intersection, the two improvement alternatives which are required to achieve acceptable level of service could be considered infeasible. Hence, the project's traffic impact on the Highway 395 / Tioga Road (SR-120) study intersection is considered significant and unavoidable.

9.2 Peak Hour Vehicular Queue Analysis Summary

The existing vehicular storage capacities are forecast to be adequate to accommodate the 95th percentile vehicular queues at the study intersections for Forecast Opening Year (2023) With Project Conditions.

For Forecast Opening Year (2023) With Project Conditions, approximately 227 vehicles are expected to turn left into the project site from Tioga Road (SR-120) during the mid-day peak hour. If needed in the future, this left-turn storage can be extended to provide additional storage capacity beyond the existing capacity by restriping within the existing right-of-way.

9.3 Evaluation of Other Elements Summary

Highway 395 / Tioga Road (SR-120) Collision History

Based on the SWITRS database, there are a total of 60 reported collisions at the Highway 395 / Tioga Road (SR-120) intersection from 2010 to present (2018).

Twenty of the 60 collisions are attributed to high travel speeds.

A substantial number of the collisions are suspected to be a result of high rates of travel speed on Highway 395 near the Tioga Road intersection in addition to limited visibility and sight distance for vehicles approaching the Highway 395 / Tioga Road (SR-120) intersection.

Based on the review of the SWITRS data, there are not a substantial number of collisions reported at the Project Site Access / Tioga Road (SR-120) intersection.

However, based on field observations, drivers traveling eastbound on Tioga Road and approaching the project site access from the Yosemite Park area, appear to sometimes mistakenly shift into the existing right-turn lane into the project site access as they are looking to turn right and southbound onto Highway 395.

Caltrans is considering plans to integrate 'Traffic Calming' improvements on US 395 through Lee Vining, and enhanced safety upgrades at the intersection of Highway 395/ Tioga Road (SR-120) as well as along the apron on both sides of the entry to Tioga Mart, and pedestrian access along 395. Other relevant improvements may also be considered.

Based on the foregoing analysis, it is recommended as part of the improvement project for the State Highway system in this area, that Caltrans consider the following:

- Reduce travel speeds on Highway 395 by implementation of effective traffic calming measures such as narrowing of travel lanes, etc.,
- Provide additional advanced warning signs and/or flashing beacons for vehicles approaching the Highway 395 / Tioga Road (SR-120) intersection;
- Provide additional advanced warning signs and lane assignment information for vehicles approaching the Project Site Access / Tioga Road (SR-120) intersection;
- Consider alternative lane striping options to better and more clearly delineate the right-turn lane entering the project site access from Tioga Road; and
- Increase law enforcement presence.

Pedestrian & Bicycle Circulation System

To improve the pedestrian and bicycle circulation between the project site and Lee Vining, it is recommended a pedestrian link between the project site and Lee Vining be provided by Caltrans to increase walkability, reduce parking demand in town, and enhance the visitor experience.

Caltrans might want to consider a pedestrian connection across Tioga Road (SR-120), and work with applicable agencies to identify additional alternatives and options for improving pedestrian and bicycle connectivity and circulation.

Caltrans Right-of-Way Acquisition

Another project element pertains to Caltrans' sale of a 70-foot wide portion of the Tioga Road (SR-120) right-of-way easement to the project applicant. The easement extends for a distance of 1,170-feet adjacent to the Tioga site. A portion of this easement (west of the entry) has long been used informally by Tioga Mart customers as a picnic and play area. The ownership transfer will facilitate long-term use of the picnic area by customers, and provide greater flexibility in design of the land adjacent to and north of the hotel.

Caltrans will continue to own the remaining SR120 right of way, which includes an apron (east and west of the entry) that is used heavily by motorists as a Mono Lake vista point, and also used as an overflow parking area by Tioga Mart patrons.

The following is recommended for implementation by Caltrans and the project applicant:

- Improve and maintain the area to continue to provide parking for patrons and visitors;
- To reduce conflicts between vehicles traveling along Tioga Road (SR-120) and vehicles accessing the parking area, consider implementing a designated point of ingress and egress for this parking area.
- Provide a parking arrangement that maintains adequate sight distance at the project site access on Tioga Road (SR-120); and

Relocate the existing YARTS bus stop in a manner to maintain adequate sight distance for the Project Site Access / Tioga Road (SR-120) intersection and also minimize conflicts between the busses and vehicles parking in this area or accessing the project

Transportation Demand Management (TDM)

TDM is a program of information, encouragement and incentives provided by local or regional organizations to help people know about and use all their transportation options to optimize all modes in the system – and to counterbalance the incentives to drive that are so prevalent in subsidies of parking and roads. These are both traditional and innovative technology-based services to help people use transit, ridesharing, walking, biking, and telework.

Vehicles Miles Traveled (VMT)

The County of Mono and Caltrans do not currently have adopted and established threshold of significance for vehicles miles traveled (VMT) analysis and impact. An analysis of VMT has been included in this report for informational purposes.

The proposed project is forecast to result in an annual VMT of 872.133 miles.

The cumulative projects are forecast to result in an annual VMT of 2,405.29 miles.

Hence, the proposed project and the cumulative projects combined are forecast to result in an annual VMT of 3,277,423 miles.

APPENDIX A
Existing Traffic Count Worksheets

Location: State Highway 395 / State Route 120
Day: Thursday 8/9/2018
Time: 8:00 AM to 10:00 AM

15-Minute Counts													
Time	Northbound Highway 395			Southbound Highway 395			Eastbound SR 120			Westbound Pumice Road			Total
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
8:00 - 8:15	14	26	0	3	21	9	7	0	1	0	0	0	81
8:15-8:30	3	31	0	1	19	9	1	0	2	1	0	2	69
8:30-8:45	22	41	0	0	36	10	5	0	12	0	0	1	127
8:45-9:00	24	40	1	0	26	12	6	0	10	0	0	1	120
Hour Total	63	138	1	4	102	40	19	0	25	1	0	4	397
9:00-9:15	26	45	1	0	27	8	10	0	4	0	0	1	122
9:15-9:30	20	69	1	1	50	20	4	0	8	0	0	1	174
9:30-9:45	22	57	0	0	36	17	8	0	4	0	0	1	145
9:45-10:00	24	64	0	0	43	21	9	0	11	0	0	0	172
Hour Total	92	235	2	1	156	66	31	0	27	0	0	3	613
Total	155	373	3	5	258	106	50	0	52	1	0	7	1010

60-Minute Counts													
Time	Northbound Highway 395			Southbound Highway 395			Eastbound SR 120			Westbound Pumice Road			Total
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
8:00 - 9:00	63	138	1	4	102	40	19	0	25	1	0	4	397
8:15 - 9:15	75	157	2	1	108	39	22	0	28	1	0	5	438
8:30 - 9:30	92	195	3	1	139	50	25	0	34	0	0	4	543
8:45 - 9:45	92	211	3	1	139	57	28	0	26	0	0	4	561
9:00 - 10:00	92	235	2	1	156	66	31	0	27	0	0	3	613

Peak Hour													
Time	Northbound Highway 395			Southbound Highway 395			Eastbound SR 120			---			Total
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
9:00 - 10:00	92	235	2	1	156	66	31	0	27	0	0	3	613

Peak Hour Factor: 0.88

Location: State Highway 395 / State Route 120
Day: Thursday 8/9/2018
Time: 12:00 PM to 2:00 PM

15-Minute Counts													
Time	Northbound Highway 395			Southbound Highway 395			Eastbound SR 120			Westbound Pumice Road			Total
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
12:00 - 12:15	26	85	0	2	93	11	12	0	8	1	0	2	240
12:15 - 12:30	29	55	0	0	61	12	15	0	6	1	0	1	180
12:30 - 12:45	20	54	0	0	54	12	15	0	12	0	0	2	169
12:45 - 1:00	12	55	0	3	65	16	16	0	15	0	0	1	183
Hour Total	87	249	0	5	273	51	58	0	41	2	0	6	772
1:00 - 1:15	8	71	0	0	60	14	18	0	13	1	0	0	185
1:15 - 1:30	11	58	0	0	62	21	23	0	21	0	0	1	197
1:30 - 1:45	13	39	0	0	51	20	13	4	20	0	0	1	161
1:45 - 2:00	17	66	0	0	73	8	20	0	9	0	0	0	193
Hour Total	49	234	0	0	246	63	74	4	63	1	0	2	736
Total	136	483	0	5	519	114	132	4	104	3	0	8	1508

60-Minute Counts													
Time	Northbound Highway 395			Southbound Highway 395			Eastbound SR 120			Westbound Pumice Road			Total
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
12:00 - 1:00	87	249	0	5	273	51	58	0	41	2	0	6	772
12:15 - 1:15	69	235	0	3	240	54	64	0	46	2	0	4	717
12:30 - 1:30	51	238	0	3	241	63	72	0	61	1	0	4	734
12:45 - 1:45	44	223	0	3	238	71	70	4	69	1	0	3	726
1:00 - 2:00	49	234	0	0	246	63	74	4	63	1	0	2	736

Peak Hour													
Time	Northbound Highway 395			Southbound Highway 395			Eastbound SR 120			---			Total
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
12:00 - 1:00	87	249	0	5	273	51	58	0	41	2	0	6	772

Peak Hour Factor: 0.8

Location: State Highway 395 / State Route 120
Day: Thursday 8/9/2018
Time: 4:00 PM to 6:00 PM

15-Minute Counts													
Time	Northbound Highway 395			Southbound Highway 395			Eastbound SR 120			Westbound Pumice Road			Total
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
4:00 - 4:15	14	50	0	0	65	8	17	0	24	0	0	0	178
4:15 - 4:30	9	54	1	0	61	12	15	0	24	0	0	0	176
4:30 - 4:45	16	49	0	2	79	5	16	0	30	1	0	2	200
4:45 - 5:00	11	40	2	1	54	19	14	0	26	1	1	0	169
Hour Total	50	193	3	3	259	44	62	0	104	2	1	2	723
5:00 - 5:15	17	44	0	1	78	11	8	1	25	1	0	0	186
5:15 - 5:30	10	44	0	0	59	13	16	0	22	0	1	1	166
5:30 - 5:45	11	44	0	1	53	9	18	0	14	1	0	0	151
5:45 - 6:00	16	46	0	0	40	10	16	1	20	0	1	1	151
Hour Total	54	178	0	2	230	43	58	2	81	2	2	2	654
Total	104	371	3	5	489	87	120	2	185	4	3	4	1377

60-Minute Counts													
Time	Northbound Highway 395			Southbound Highway 395			Eastbound SR 120			Westbound Pumice Road			Total
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
4:00 - 5:00	50	193	3	3	259	44	62	0	104	2	1	2	723
4:15 - 5:15	53	187	3	4	272	47	53	1	105	3	1	2	731
4:30 - 5:30	54	177	2	4	270	48	54	1	103	3	2	3	721
4:45 - 5:45	49	172	2	3	244	52	56	1	87	3	2	1	672
5:00 - 6:00	54	178	0	2	230	43	58	2	81	2	2	2	654

Peak Hour													
Time	Northbound Highway 395			Southbound Highway 395			Eastbound SR 120			---			Total
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
4:15 - 5:15	53	187	3	4	272	47	53	1	105	3	1	2	731

Peak Hour Factor: 0.91

Location: Project Access / State Route 120
Day: Thursday 7/12/2018
Time: 8:00 AM to 10:00 AM

15-Minute Counts													
Time	Northbound Project Access			---			Eastbound SR 120			Westbound SR 120			Total
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
8:00 - 8:15	3	0	5	0	0	0	0	4	3	11	31	0	57
8:15-8:30	6	0	5	0	0	0	0	14	7	9	30	0	71
8:30-8:45	7	0	12	0	0	0	0	8	12	21	34	0	94
8:45-9:00	10	0	6	0	0	0	0	6	10	13	37	0	82
Hour Total	26	0	28	0	0	0	0	32	32	54	132	0	304
9:00-9:15	21	0	12	0	0	0	0	10	5	25	33	0	106
9:15-9:30	9	0	8	0	0	0	0	12	9	12	44	0	94
9:30-9:45	10	0	16	0	0	0	0	17	9	21	47	0	120
9:45-10:00	6	0	16	0	0	0	0	18	10	12	62	0	124
Hour Total	46	0	52	0	0	0	0	57	33	70	186	0	444
Total	72	0	80	0	0	0	0	89	65	124	318	0	748

60-Minute Counts													
Time	Northbound Project Access			---			Eastbound SR 120			Westbound SR 120			Total
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
8:00 - 9:00	26	0	28	0	0	0	0	32	32	54	132	0	304
8:15 - 9:15	44	0	35	0	0	0	0	38	34	68	134	0	353
8:30 - 9:30	47	0	38	0	0	0	0	36	36	71	148	0	376
8:45 - 9:45	50	0	42	0	0	0	0	45	33	71	161	0	402
9:00 - 10:00	46	0	52	0	0	0	0	57	33	70	186	0	444

Peak Hour													
Time	Northbound Highway 395			Southbound Highway 395			Eastbound SR 120			---			Total
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
9:00 - 10:00	46	0	52	0	0	0	0	57	33	70	186	0	444

Peak Hour Factor: 0.9

Location: Project Access / State Route 120
Day: Thursday 7/12/2018
Time: 12:00 PM to 2:00 PM

Time	Northbound Project Access			---			Eastbound SR 120			Westbound SR 120			Total
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
12:00 - 12:15	8	0	9	0	0	0	0	26	9	13	45	0	110
12:15 - 12:30	9	0	13	0	0	0	0	22	13	15	26	0	98
12:30 - 12:45	4	0	14	0	0	0	0	24	21	20	25	0	108
12:45 - 1:00	12	0	18	0	0	0	0	27	15	21	14	0	107
Hour Total	33	0	54	0	0	0	0	99	58	69	110	0	423
1:00 - 1:15	10	0	18	0	0	0	0	21	8	22	23	0	102
1:15 - 1:30	11	0	17	0	0	0	0	22	18	19	28	0	115
1:30 - 1:45	20	0	19	0	0	0	0	27	23	33	26	0	148
1:45 - 2:00	15	0	16	0	0	0	0	27	9	16	22	0	105
Hour Total	56	0	70	0	0	0	0	97	58	90	99	0	470
Total	89	0	124	0	0	0	0	196	116	159	209	0	893

Time	Northbound Project Access			---			Eastbound SR 120			Westbound SR 120			Total
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
12:00 - 1:00	33	0	54	0	0	0	0	99	58	69	110	0	423
12:15 - 1:15	35	0	63	0	0	0	0	94	57	78	88	0	415
12:30 - 1:30	37	0	67	0	0	0	0	94	62	82	90	0	432
12:45 - 1:45	53	0	72	0	0	0	0	97	64	95	91	0	472
1:00 - 2:00	56	0	70	0	0	0	0	97	58	90	99	0	470

Time	Northbound Highway 395			Southbound Highway 395			Eastbound SR 120			---			Total
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
12:45 - 1:45	53	0	72	0	0	0	0	97	64	95	91	0	472

Peak Hour Factor: 0.8

Location: Project Access / State Route 120
Day: Thursday 7/12/2018
Time: 4:00 PM to 6:00 PM

Time	Northbound Project Access			---			Eastbound SR 120			Westbound SR 120			Total
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
4:00 - 4:15	10	0	14	0	0	0	0	38	25	17	21	0	125
4:15 - 4:30	7	0	16	0	0	0	0	43	17	19	18	0	120
4:30 - 4:45	10	0	17	0	0	0	0	47	13	15	17	0	119
4:45 - 5:00	5	0	16	0	0	0	0	21	20	13	12	0	87
Hour Total	32	0	63	0	0	0	0	149	75	64	68	0	451
5:00 - 5:15	6	0	15	0	0	0	0	38	12	9	14	0	94
5:15 - 5:30	7	0	13	0	0	0	0	35	11	19	19	0	104
5:30 - 5:45	6	0	22	0	0	0	0	26	14	15	18	0	101
5:45 - 6:00	10	0	24	0	0	0	0	50	14	20	16	0	134
Hour Total	29	0	74	0	0	0	0	149	51	63	67	0	433
Total	61	0	137	0	0	0	0	298	126	127	135	0	884

Time	Northbound Project Access			---			Eastbound SR 120			Westbound SR 120			Total
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
4:00 - 5:00	32	0	63	0	0	0	0	149	75	64	68	0	451
4:15 - 5:15	28	0	64	0	0	0	0	149	62	56	61	0	420
4:30 - 5:30	28	0	61	0	0	0	0	141	56	56	62	0	404
4:45 - 5:45	24	0	66	0	0	0	0	120	57	56	63	0	386
5:00 - 6:00	29	0	74	0	0	0	0	149	51	63	67	0	433

Time	Northbound Highway 395			Southbound Highway 395			Eastbound SR 120			---			Total
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
4:00 - 5:00	32	0	63	0	0	0	0	149	75	64	68	0	451

Peak Hour Factor: 0.84

APPENDIX B
MUTCD Traffic Signal Analysis Worksheets

2014 Edition

WARRANT 3, PEAK HOUR (70% FACTOR) (Rural Areas)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing Conditions - AM Peak Hour**

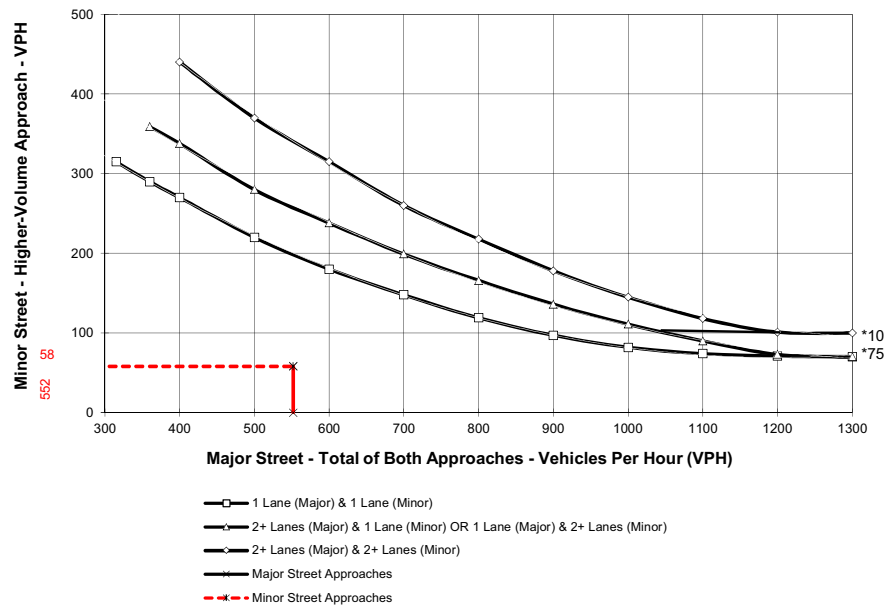
Major Street Name = **Highway 395**

Total of Both Approaches (VPH) = **552**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Tioga Rd (SR-120)**

High Volume Approach (VPH) = **58**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



November 2014

01_395 at 120_EX_AM.XLS

Sect. 4C.06

2014 Edition

WARRANT 3, PEAK HOUR (70% FACTOR) (Rural Areas)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing Conditions - Mid-Day Peak Hour**

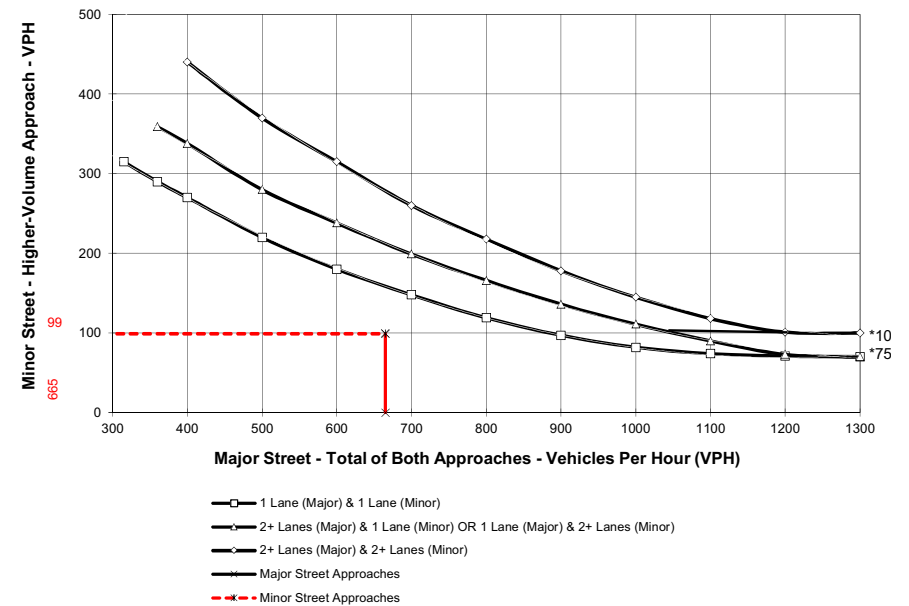
Major Street Name = **Highway 395**

Total of Both Approaches (VPH) = **665**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Tioga Rd (SR-120)**

High Volume Approach (VPH) = **99**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



November 2014

01_395 at 120_EX_MD.XLS

Sect. 4C.06

2014 Edition

WARRANT 3, PEAK HOUR (70% FACTOR) (Rural Areas)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing Conditions - PM Peak Hour**

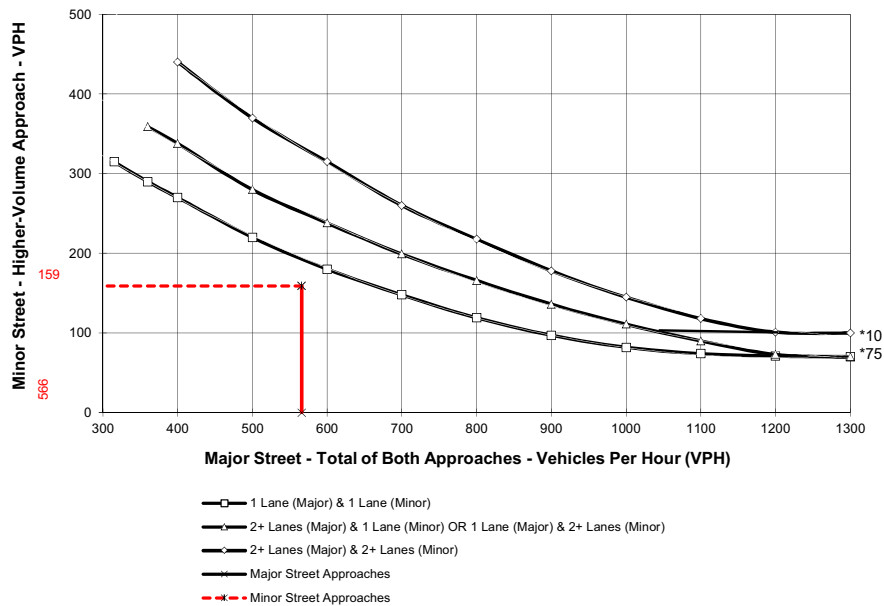
Major Street Name = **Highway 395**

Total of Both Approaches (VPH) = **566**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Tioga Rd (SR-120)**

High Volume Approach (VPH) = **159**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

November 2014

01_395 at 120_EX_PM.XLS

Sect. 4C.06

California MUTCD 2014 Edition

Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

Urban/Rural (1/2) = **2**

SCENARIO: **Existing Conditions**

MAJOR STREET: **Highway 395**

ADT = **4,682**

Lanes = **2**

MINOR STREET: **Tioga Rd (SR-120)**

ADT = **692**

Lanes = **1**

(Based on Estimated Average Daily Traffic-See Note)

URBAN		RURAL		XX		Minimum Requirements EADT			
1A - Minimum Vehicular Traffic						Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
						Satisfied		Not Satisfied XX	
Number of lanes for moving traffic on each approach.									
Major Street				Minor Street		Urban	Rural	Urban	Rural
1				1		8,000	5,600	2,400	1,680
2 or More		4,682		1		9,600	6,720	2,400	1,680
2 or More				2 or More		9,600	6,720	3,200	2,240
1				2 or More		8,000	5,600	3,200	2,240
1B - Interruption of Continuous Traffic						Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied				Not Satisfied XX					
Number of lanes for moving traffic on each approach.									
Major Street				Minor Street		Urban	Rural	Urban	Rural
1				1		12,000	8,400	1,200	850
2 or More		4,682		1		14,400	10,080	1,200	850
2 or More				2 or More		14,400	10,080	1,600	1,120
1				2 or More		12,000	8,400	1,600	1,120
1A&B - Combinations									
Satisfied				Not Satisfied XX					
No one warrant satisfied, but following warrants fulfilled 80% or more...						2 Warrants		2 Warrants	
41%				46%					
1A				1B					

Note: Use only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

10/4/2018

2014 Edition

WARRANT 3, PEAK HOUR (70% FACTOR) (Rural Areas)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing + Project Conditions - AM Peak Hour**

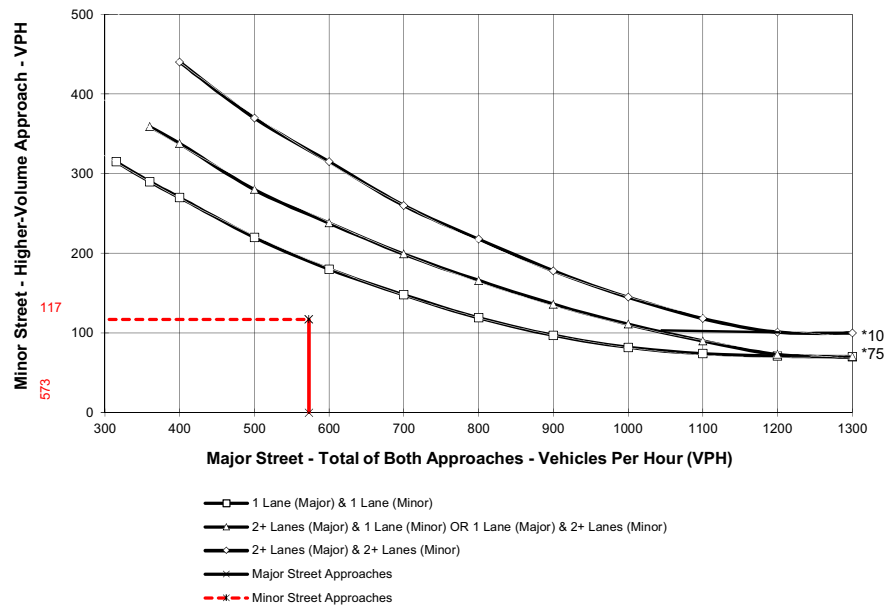
Major Street Name = **Highway 395**

Total of Both Approaches (VPH) = **573**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Tioga Rd (SR-120)**

High Volume Approach (VPH) = **117**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

November 2014

01_395 at 120_EX+P_AM.XLS

Sect. 4C.06

2014 Edition

WARRANT 3, PEAK HOUR (70% FACTOR) (Rural Areas)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing + Project Conditions - Mid-Day Peak Hour**

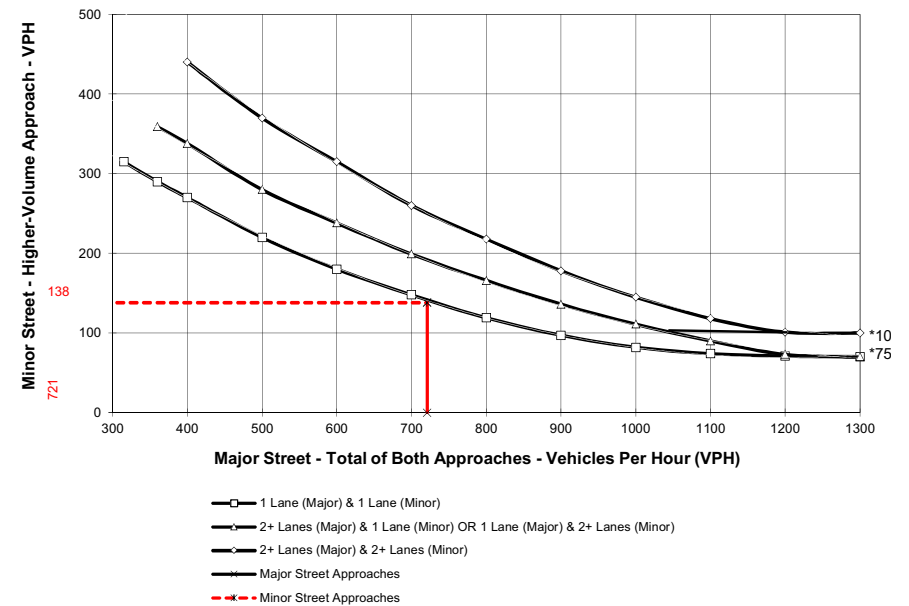
Major Street Name = **Highway 395**

Total of Both Approaches (VPH) = **721**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Tioga Rd (SR-120)**

High Volume Approach (VPH) = **138**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

November 2014

01_395 at 120_EX+P_MD.XLS

Sect. 4C.06

2014 Edition

WARRANT 3, PEAK HOUR (70% FACTOR) (Rural Areas)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing + Project Conditions - PM Peak Hour**

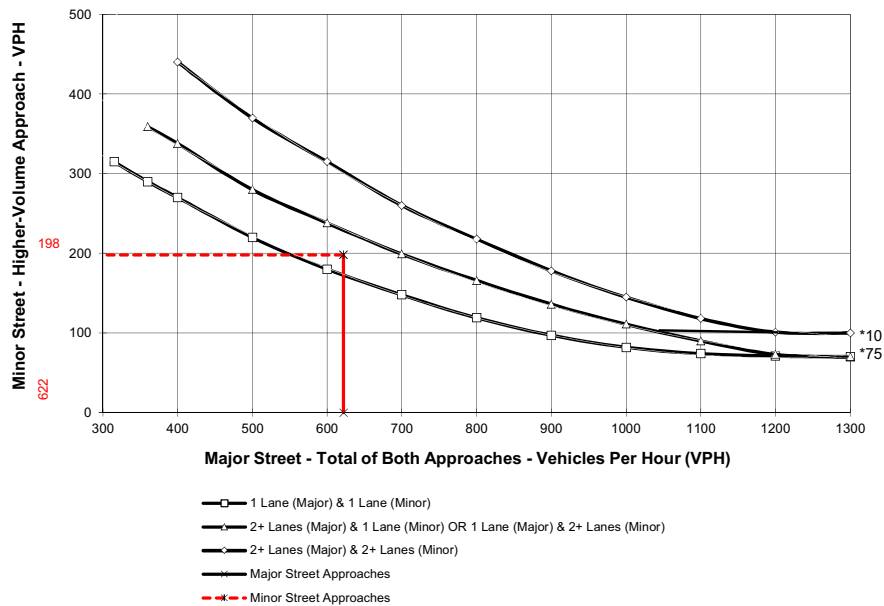
Major Street Name = **Highway 395**

Total of Both Approaches (VPH) = **622**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Tioga Rd (SR-120)**

High Volume Approach (VPH) = **198**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

November 2014

01_395 at 120_EX+P_PM.XLS

Sect. 4C.06

California MUTCD 2014 Edition

Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

Urban/Rural (1/2) = **2**

SCENARIO: **Existing + Project Conditions**

MAJOR STREET: **Highway 395** ADT = **4,989** Lanes = **2**

MINOR STREET: **Tioga Rd (SR-120)** ADT = **999** Lanes = **1**

(Based on Estimated Average Daily Traffic-See Note)

URBAN		RURAL		XX		Minimum Requirements			
1A - Minimum Vehicular Traffic						EADT			
						Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied		Not Satisfied		XX					
Number of lanes for moving traffic on each approach.									
Major Street		Minor Street				Urban	Rural	Urban	Rural
1		1				8,000	5,600	2,400	1,680
2 or More	4,989	1		999		9,600	6,720	2,400	1,680
2 or More		2 or More				9,600	6,720	3,200	2,240
1		2 or More				8,000	5,600	3,200	2,240
1B - Interruption of Continuous Traffic						Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied		Not Satisfied		XX					
Number of lanes for moving traffic on each approach.									
Major Street		Minor Street				Urban	Rural	Urban	Rural
1		1				12,000	8,400	1,200	850
2 or More	4,989	1		999		14,400	10,080	1,200	850 *
2 or More		2 or More				14,400	10,080	1,600	1,120
1		2 or More				12,000	8,400	1,600	1,120
1A&B - Combinations									
Satisfied		Not Satisfied		XX					
No one warrant satisfied, but following warrants fulfilled 80% or more...						2 Warrants		2 Warrants	
59%		49%							
1A		1B							

Note: Use only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

10/4/2018

2014 Edition

WARRANT 3, PEAK HOUR (70% FACTOR) (Rural Areas)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Opening Year Without Project Conditions - AM Peak**

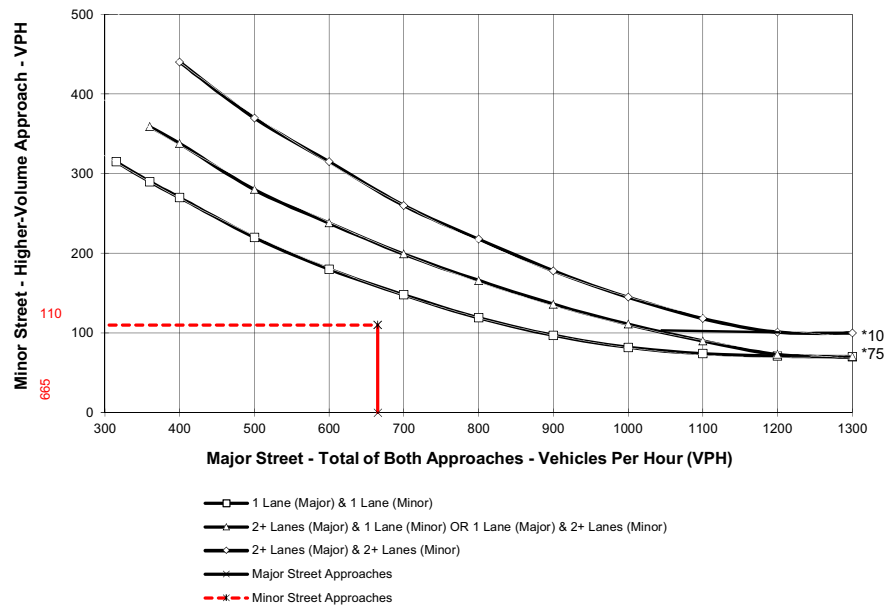
Major Street Name = **Highway 395**

Total of Both Approaches (VPH) = **665**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Tioga Rd (SR-120)**

High Volume Approach (VPH) = **110**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

November 2014

01_395 at 120_OY_AM.XLS

Sect. 4C.06

2014 Edition

WARRANT 3, PEAK HOUR (70% FACTOR) (Rural Areas)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Opening Year Without Project Conditions - Mid-Day Peak**

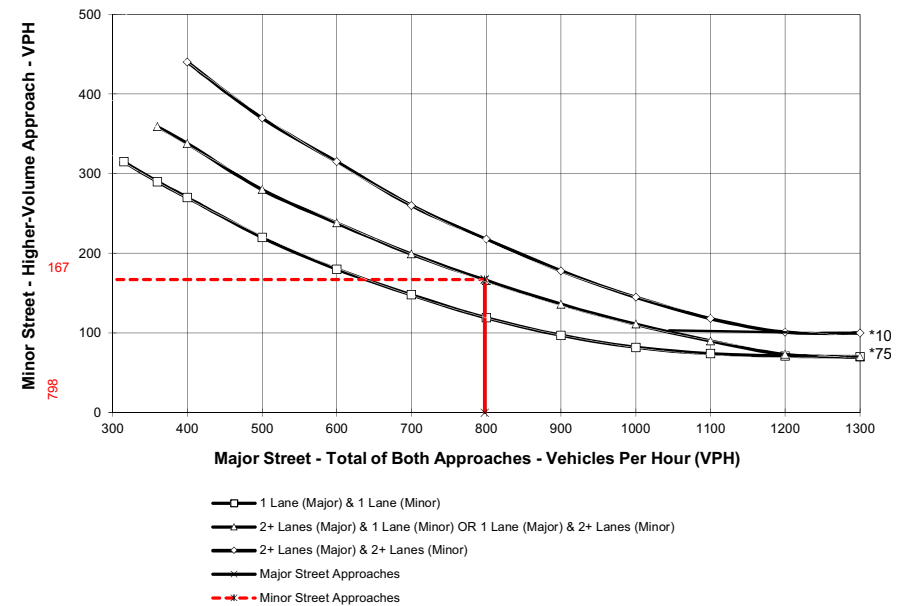
Major Street Name = **Highway 395**

Total of Both Approaches (VPH) = **798**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Tioga Rd (SR-120)**

High Volume Approach (VPH) = **167**
Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

November 2014

01_395 at 120_OY_MD.XLS

Sect. 4C.06

2014 Edition

WARRANT 3, PEAK HOUR (70% FACTOR) (Rural Areas)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Opening Year Without Project Conditions - PM Peak**

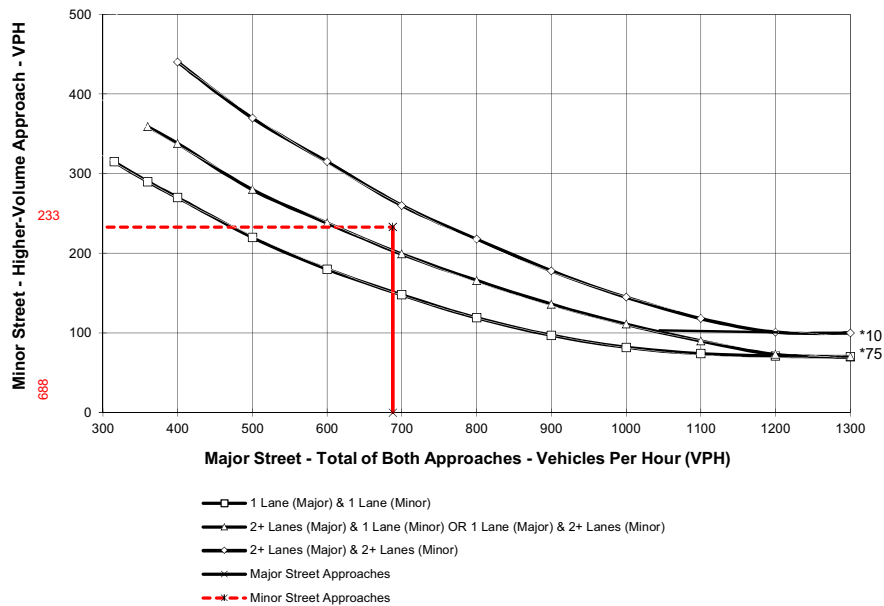
Major Street Name = **Highway 395**

Total of Both Approaches (VPH) = **688**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Tioga Rd (SR-120)**

High Volume Approach (VPH) = **233**
Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

November 2014

01_395 at 120_OY_PM.XLS

Sect. 4C.06

California MUTCD 2014 Edition

Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

Urban/Rural (1/2) = **2**

SCENARIO: **Opening Year Without Project Conditions**

MAJOR STREET: **Highway 395** ADT = **5,671** Lanes = **2**

MINOR STREET: **Tioga Rd (SR-120)** ADT = **1,281** Lanes = **1**

(Based on Estimated Average Daily Traffic-See Note)

URBAN		RURAL		XX		Minimum Requirements EADT			
1A - Minimum Vehicular Traffic						Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
						Satisfied		Not Satisfied XX	
Number of lanes for moving traffic on each approach.									
Major Street				Minor Street		Urban	Rural	Urban	Rural
1				1		8,000	5,600	2,400	1,680
2 or More		5,671		1		9,600	6,720	2,400	1,680
2 or More				2 or More		9,600	6,720	3,200	2,240
1				2 or More		8,000	5,600	3,200	2,240
1B - Interruption of Continuous Traffic						Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied						Not Satisfied XX			
Number of lanes for moving traffic on each approach.									
Major Street				Minor Street		Urban	Rural	Urban	Rural
1				1		12,000	8,400	1,200	850
2 or More		5,671		1		14,400	10,080	1,200	850 *
2 or More				2 or More		14,400	10,080	1,600	1,120
1				2 or More		12,000	8,400	1,600	1,120
1A&B - Combinations									
Satisfied						Not Satisfied XX			
<u>No one warrant satisfied</u> , but following warrants fulfilled 80% or more...						2 Warrants		2 Warrants	
76%				56%					
1A				1B					

Note: Use only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

10/4/2018

2014 Edition

WARRANT 3, PEAK HOUR (70% FACTOR) (Rural Areas)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Opening Year With Project Conditions - AM Peak Hour**

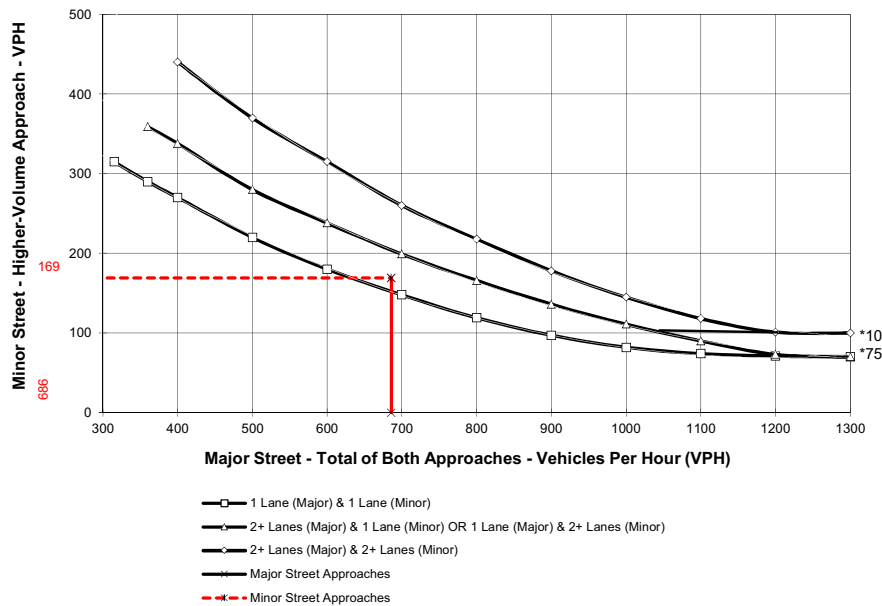
Major Street Name = **Highway 395**

Total of Both Approaches (VPH) = **686**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Tioga Rd (SR-120)**

High Volume Approach (VPH) = **169**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

November 2014

01_395 at 120_OY+P_AM.XLS

Sect. 4C.06

2014 Edition

WARRANT 3, PEAK HOUR (70% FACTOR) (Rural Areas)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Opening Year With Project Conditions - Mid-Day Peak**

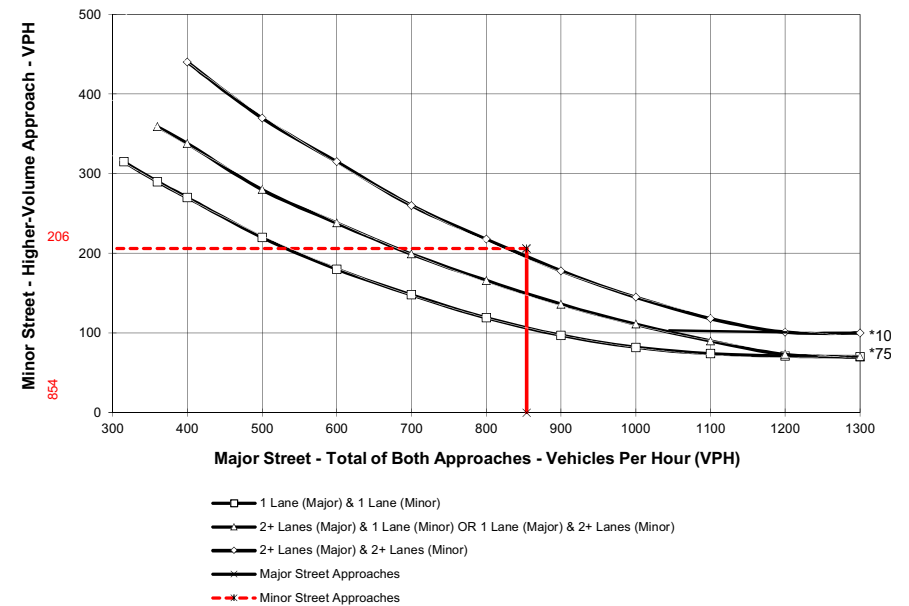
Major Street Name = **Highway 395**

Total of Both Approaches (VPH) = **854**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Tioga Rd (SR-120)**

High Volume Approach (VPH) = **206**
Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

November 2014

01_395 at 120_OY+P_MD.XLS

Sect. 4C.06

WARRANT 3, PEAK HOUR (70% FACTOR) (Rural Areas)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h OR ABOVE 40 mph ON MAJOR STREET)

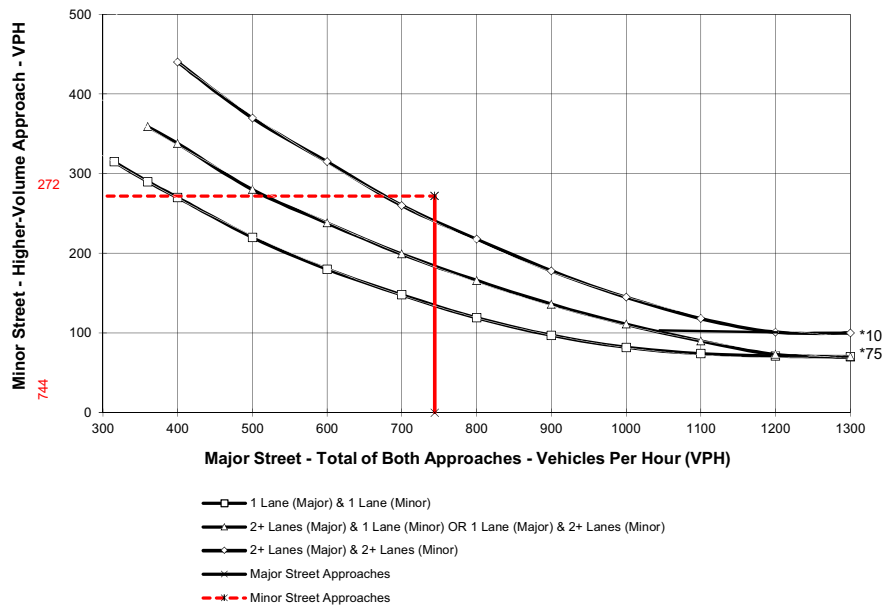
Traffic Conditions = **Opening Year With Project Conditions - PM Peak Hour**Major Street Name = **Highway 395**

Total of Both Approaches (VPH) = **744**
 Number of Approach Lanes Major Street = **2**

Minor Street Name = **Tioga Rd (SR-120)**

High Volume Approach (VPH) = **272**
 Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

Urban/Rural (1/2) = **2**SCENARIO: **Opening Year With Project Conditions**MAJOR STREET: **Highway 395** ADT = **5,978** Lanes = **2**MINOR STREET: **Tioga Rd (SR-120)** ADT = **1,588** Lanes = **1**

(Based on Estimated Average Daily Traffic-See Note)

URBAN	RURAL	XX	Minimum Requirements EADT			
			Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
1A - Minimum Vehicular Traffic						
Satisfied	Not Satisfied	XX				
Number of lanes for moving traffic on each approach.						
Major Street	Minor Street		Urban	Rural	Urban	Rural
1	1		8,000	5,600	2,400	1,680
2 or More	5,978 1	1,588	9,600	6,720	2,400	1,680
2 or More	2 or More		9,600	6,720	3,200	2,240
1	2 or More		8,000	5,600	3,200	2,240
1B - Interruption of Continuous Traffic						
Satisfied	Not Satisfied	XX				
Number of lanes for moving traffic on each approach.						
Major Street	Minor Street		Urban	Rural	Urban	Rural
1	1		12,000	8,400	1,200	850
2 or More	5,978 1	1,588	14,400	10,080	1,200	850 *
2 or More	2 or More		14,400	10,080	1,600	1,120
1	2 or More		12,000	8,400	1,600	1,120
1A&B - Combinations						
Satisfied	Not Satisfied	XX				
No one warrant satisfied, but following warrants fulfilled 80% or more...						
89%	59%					
1A	1B					
			2 Warrants		2 Warrants	

Note: Use only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

APPENDIX C
Existing Conditions LOS Analysis Worksheets

Lanes and Geometrics

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

09/27/2018

	↖	→	↘	↙	←	↖	↙	↘	↙	↘	↙	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↖↖	↘	↘	↖↖			↘	↘		↖↖	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	400		400	270		0	0		50	0		0
Storage Lanes	1		1	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.999				0.850		0.865	
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1583	3034	1417	1583	3032	0	0	1583	1417	0	1442	0
Flt Permitted	0.950			0.950			0.950					
Satd. Flow (perm)	1583	3034	1417	1583	3032	0	0	1583	1417	0	1442	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1553			1621			921			296	
Travel Time (s)		35.3			36.8			20.9			6.7	

Intersection Summary

Area Type: Other

EXISTING CONDITIONS (2018)
AM PEAK HOUR

Synchro 10 Report

Volume

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

09/27/2018

	↖	→	↘	↙	←	↖	↙	↘	↙	↘	↙	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	1	156	66	92	235	2	31	0	27	0	0	3
Future Volume (vph)	1	156	66	92	235	2	31	0	27	0	0	3
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	19%	14%	14%	19%	14%	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	1	177	75	105	267	2	35	0	31	0	0	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	177	75	105	269	0	0	35	31	0	3	0

Intersection Summary

EXISTING CONDITIONS (2018)
AM PEAK HOUR

Synchro 10 Report

HCM 2010 TWSC
1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA
09/27/2018

Intersection													
Int Delay, s/veh	2.1												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↗	↘	↔	↗	↘		↗	↘		↗	↘	
Traffic Vol, veh/h	1	156	66	92	235	2	31	0	27	0	0	3	
Future Vol, veh/h	1	156	66	92	235	2	31	0	27	0	0	3	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	
RT Channelized	-	-	Yield	-	-	None	-	-	Free	-	-	None	
Storage Length	400	-	400	270	-	-	-	50	-	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88	
Heavy Vehicles, %	14	19	14	14	19	14	14	14	14	14	14	14	
Mvmt Flow	1	177	75	105	267	2	35	0	31	0	0	3	

Major/Minor	Major1	Major2	Minor1	Minor2									
Conflicting Flow All	269	0	0	177	0	0	523	658	-	569	657	135	
Stage 1	-	-	-	-	-	-	179	179	-	478	478	-	
Stage 2	-	-	-	-	-	-	344	479	-	91	179	-	
Critical Hdwy	4.38	-	-	4.38	-	-	7.78	6.78	-	7.78	6.78	7.18	
Critical Hdwy Stg 1	-	-	-	-	-	-	6.78	5.78	-	6.78	5.78	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	6.78	5.78	-	6.78	5.78	-	
Follow-up Hdwy	2.34	-	-	2.34	-	-	3.64	4.14	-	3.64	4.14	3.44	
Pot Cap-1 Maneuver	1209	-	-	1313	-	-	411	359	0	380	360	852	
Stage 1	-	-	-	-	-	-	772	722	0	507	525	-	
Stage 2	-	-	-	-	-	-	613	524	0	872	722	-	
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	
Mov Cap-1 Maneuver	1209	-	-	1313	-	-	384	330	-	356	331	852	
Mov Cap-2 Maneuver	-	-	-	-	-	-	384	330	-	356	331	-	
Stage 1	-	-	-	-	-	-	771	721	-	506	483	-	
Stage 2	-	-	-	-	-	-	562	482	-	871	721	-	

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2.2	15.3	9.2
HCM LOS			C	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	384	-	1209	-	-	1313	-	-	852
HCM Lane V/C Ratio	0.092	-	0.001	-	-	0.08	-	-	0.004
HCM Control Delay (s)	15.3	0	8	-	-	8	-	-	9.2
HCM Lane LOS	C	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.3	-	0	-	-	0.3	-	-	0

EXISTING CONDITIONS (2018)
AM PEAK HOUR

Synchro 10 Report

Lanes and Geometrics
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
09/27/2018

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↗	↗	↗	↗	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		275	75	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1583	1417	1667	1417	1583	1667
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1583	1417	1667	1417	1583	1667
Link Speed (mph)	30		30		30	
Link Distance (ft)	624		1463		921	
Travel Time (s)	14.2		33.3		20.9	

Intersection Summary						
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


Area Type: Other

EXISTING CONDITIONS (2018)
AM PEAK HOUR

Synchro 10 Report

Volume
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
09/27/2018







						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (vph)	46	52	57	33	70	186
Future Volume (vph)	46	52	57	33	70	186
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	51	58	63	37	78	207
Shared Lane Traffic (%)						
Lane Group Flow (vph)	51	58	63	37	78	207
Intersection Summary						

EXISTING CONDITIONS (2018)
AM PEAK HOUR

Synchro 10 Report

HCM 2010 TWSC
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
09/27/2018

Intersection						
Int Delay, s/veh	3.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	46	52	57	33	70	186
Future Vol, veh/h	46	52	57	33	70	186
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	275	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	14	14	14	14	14	14
Mvmt Flow	51	58	63	37	78	207

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	426	63	0
Stage 1	63	-	-
Stage 2	363	-	-
Critical Hdwy	6.54	6.34	-
Critical Hdwy Stg 1	5.54	-	-
Critical Hdwy Stg 2	5.54	-	-
Follow-up Hdwy	3.626	3.426	-
Pot Cap-1 Maneuver	563	969	-
Stage 1	930	-	-
Stage 2	678	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	532	969	-
Mov Cap-2 Maneuver	532	-	-
Stage 1	879	-	-
Stage 2	678	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.6	0	2.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	532	969	1421	-
HCM Lane V/C Ratio	-	-	0.096	0.06	0.055	-
HCM Control Delay (s)	-	-	12.5	9	7.7	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.2	0.2	-

EXISTING CONDITIONS (2018)
AM PEAK HOUR

Synchro 10 Report

Lanes and Geometrics

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

09/27/2018

	↖	→	↘	↙	←	↖	↙	↘	↙	↘	↙	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↖↖	↘	↘	↖↖			↘	↘		↖↖	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	400		400	270		0	0		50	0		0
Storage Lanes	1		1	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850						0.850		0.902	
Flt Protected	0.950			0.950			0.950				0.987	
Satd. Flow (prot)	1583	3034	1417	1583	3034	0	0	1583	1417	0	1484	0
Flt Permitted	0.950			0.950			0.950				0.987	
Satd. Flow (perm)	1583	3034	1417	1583	3034	0	0	1583	1417	0	1484	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1553			1621			921			296	
Travel Time (s)		35.3			36.8			20.9			6.7	

Intersection Summary

Area Type: Other

EXISTING CONDITIONS (2018)
MID-DAY PEAK HOUR

Synchro 10 Report

Volume

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

09/27/2018

	↖	→	↘	↙	←	↖	↙	↘	↙	↘	↙	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	5	273	51	87	249	0	58	0	41	2	0	6
Future Volume (vph)	5	273	51	87	249	0	58	0	41	2	0	6
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	19%	14%	14%	19%	14%	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	6	341	64	109	311	0	73	0	51	3	0	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	6	341	64	109	311	0	0	73	51	0	11	0

Intersection Summary

EXISTING CONDITIONS (2018)
MID-DAY PEAK HOUR

Synchro 10 Report

HCM 2010 TWSC
1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA
09/27/2018

Intersection													
Int Delay, s/veh	3.1												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↗	↘	↔	↗	↘		↗	↘	↔	↗	↘	
Traffic Vol, veh/h	5	273	51	87	249	0	58	0	41	2	0	6	
Future Vol, veh/h	5	273	51	87	249	0	58	0	41	2	0	6	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	
RT Channelized	-	-	Yield	-	-	None	-	-	Free	-	-	None	
Storage Length	400	-	400	270	-	-	-	-	50	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80	
Heavy Vehicles, %	14	19	14	14	19	14	14	14	14	14	14	14	
Mvmt Flow	6	341	64	109	311	0	73	0	51	3	0	8	

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	311	0	0	341	0	0	727	882	-	712	882	156
Stage 1	-	-	-	-	-	-	353	353	-	529	529	-
Stage 2	-	-	-	-	-	-	374	529	-	183	353	-
Critical Hdwy	4.38	-	-	4.38	-	-	7.78	6.78	-	7.78	6.78	7.18
Critical Hdwy Stg 1	-	-	-	-	-	-	6.78	5.78	-	6.78	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.78	5.78	-	6.78	5.78	-
Follow-up Hdwy	2.34	-	-	2.34	-	-	3.64	4.14	-	3.64	4.14	3.44
Pot Cap-1 Maneuver	1164	-	-	1133	-	-	290	263	0	298	263	825
Stage 1	-	-	-	-	-	-	605	600	0	472	496	-
Stage 2	-	-	-	-	-	-	587	496	0	768	600	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1164	-	-	1133	-	-	265	236	-	275	236	825
Mov Cap-2 Maneuver	-	-	-	-	-	-	265	236	-	275	236	-
Stage 1	-	-	-	-	-	-	602	597	-	470	448	-
Stage 2	-	-	-	-	-	-	526	448	-	764	597	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0.1		2.2		23.6		11.7	
HCM LOS					C		B	

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	265	-	1164	-	-	1133	-	-	550
HCM Lane V/C Ratio	0.274	-	0.005	-	-	0.096	-	-	0.018
HCM Control Delay (s)	23.6	0	8.1	-	-	8.5	-	-	11.7
HCM Lane LOS	C	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.1	-	0	-	-	0.3	-	-	0.1

EXISTING CONDITIONS (2018)
MID-DAY PEAK HOUR

Synchro 10 Report

Lanes and Geometrics
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
09/27/2018

	↖		↗		↖		↗		↖		↗	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗	↖	↗	↖	↗	↖	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%		0%								0%	
Storage Length (ft)	0	0		275	75							
Storage Lanes	1	1		1	1							
Taper Length (ft)	25				25							
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.850		0.850									
Flt Protected	0.950				0.950							
Satd. Flow (prot)	1583	1417	1667	1417	1583	1667						
Flt Permitted	0.950				0.950							
Satd. Flow (perm)	1583	1417	1667	1417	1583	1667						
Link Speed (mph)	30		30		30							
Link Distance (ft)	624		1463		921							
Travel Time (s)	14.2		33.3		20.9							

Intersection Summary												
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Area Type: Other

EXISTING CONDITIONS (2018)
MID-DAY PEAK HOUR

Synchro 10 Report

Volume
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
09/27/2018







						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (vph)	53	72	97	64	95	91
Future Volume (vph)	53	72	97	64	95	91
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	66	90	121	80	119	114
Shared Lane Traffic (%)						
Lane Group Flow (vph)	66	90	121	80	119	114
Intersection Summary						

EXISTING CONDITIONS (2018)
MID-DAY PEAK HOUR

Synchro 10 Report

HCM 2010 TWSC
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
09/27/2018

Intersection						
Int Delay, s/veh	4.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	53	72	97	64	95	91
Future Vol, veh/h	53	72	97	64	95	91
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	275	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	14	14	14	14	14	14
Mvmt Flow	66	90	121	80	119	114

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	473	121	0
Stage 1	121	-	-
Stage 2	352	-	-
Critical Hdwy	6.54	6.34	-
Critical Hdwy Stg 1	5.54	-	-
Critical Hdwy Stg 2	5.54	-	-
Follow-up Hdwy	3.626	3.426	-
Pot Cap-1 Maneuver	529	899	-
Stage 1	875	-	-
Stage 2	686	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	481	899	-
Mov Cap-2 Maneuver	481	-	-
Stage 1	795	-	-
Stage 2	686	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.2	0	4.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	481	899	1302	-
HCM Lane V/C Ratio	-	-	0.138	0.1	0.091	-
HCM Control Delay (s)	-	-	13.7	9.4	8	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0.3	0.3	-

EXISTING CONDITIONS (2018)
MID-DAY PEAK HOUR

Synchro 10 Report

Lanes and Geometrics

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

09/27/2018

	↖	→	↘	↙	←	↖	↙	↘	↙	↘	↙	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↖↖	↘	↘	↖↖			↘	↘		↖↖	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	400		400	270		0	0		50	0		0
Storage Lanes	1		1	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.998				0.850		0.955	
Flt Protected	0.950			0.950			0.953				0.976	
Satd. Flow (prot)	1583	3034	1417	1583	3029	0	0	1588	1417	0	1553	0
Flt Permitted	0.950			0.950				0.953			0.976	
Satd. Flow (perm)	1583	3034	1417	1583	3029	0	0	1588	1417	0	1553	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1553			1621			921			296	
Travel Time (s)		35.3			36.8			20.9			6.7	

Intersection Summary

Area Type: Other

EXISTING CONDITIONS (2018)
PM PEAK HOUR

Synchro 10 Report

Volume

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

09/27/2018

	↖	→	↘	↙	←	↖	↙	↘	↙	↘	↙	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	4	272	47	53	187	3	53	1	105	3	1	2
Future Volume (vph)	4	272	47	53	187	3	53	1	105	3	1	2
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	19%	14%	14%	19%	14%	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	4	299	52	58	205	3	58	1	115	3	1	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	299	52	58	208	0	0	59	115	0	6	0

Intersection Summary

EXISTING CONDITIONS (2018)
PM PEAK HOUR

Synchro 10 Report

HCM 2010 TWSC
1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA
09/27/2018

Intersection													
Int Delay, s/veh	2.2												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↗	↘	↔	↗	↘		↔	↗	↘	↔	↗	
Traffic Vol, veh/h	4	272	47	53	187	3	53	1	105	3	1	2	
Future Vol, veh/h	4	272	47	53	187	3	53	1	105	3	1	2	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	
RT Channelized	-	-	Yield	-	-	None	-	-	Free	-	-	None	
Storage Length	400	-	400	270	-	-	-	-	50	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91	
Heavy Vehicles, %	14	19	14	14	19	14	14	14	14	14	14	14	
Mvmt Flow	4	299	52	58	205	3	58	1	115	3	1	2	

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	208	0	0	299	0	0	526	631	-	481	630	104
Stage 1	-	-	-	-	-	-	307	307	-	323	323	-
Stage 2	-	-	-	-	-	-	219	324	-	158	307	-
Critical Hdwy	4.38	-	-	4.38	-	-	7.78	6.78	-	7.78	6.78	7.18
Critical Hdwy Stg 1	-	-	-	-	-	-	6.78	5.78	-	6.78	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.78	5.78	-	6.78	5.78	-
Follow-up Hdwy	2.34	-	-	2.34	-	-	3.64	4.14	-	3.64	4.14	3.44
Pot Cap-1 Maneuver	1277	-	-	1177	-	-	409	373	0	442	373	893
Stage 1	-	-	-	-	-	-	645	630	0	631	620	-
Stage 2	-	-	-	-	-	-	730	619	0	795	630	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1277	-	-	1177	-	-	391	354	-	423	354	893
Mov Cap-2 Maneuver	-	-	-	-	-	-	391	354	-	423	354	-
Stage 1	-	-	-	-	-	-	643	628	-	629	590	-
Stage 2	-	-	-	-	-	-	691	589	-	791	628	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0.1		1.8		15.9		12.4	
HCM LOS					C		B	

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	390	-	1277	-	-	1177	-	-	494
HCM Lane V/C Ratio	0.152	-	0.003	-	-	0.049	-	-	0.013
HCM Control Delay (s)	15.9	0	7.8	-	-	8.2	-	-	12.4
HCM Lane LOS	C	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.5	-	0	-	-	0.2	-	-	0

EXISTING CONDITIONS (2018)
PM PEAK HOUR

Synchro 10 Report

Lanes and Geometrics
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
09/27/2018

	↖		↗		↖		↗		↖		↗	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗	↖	↗	↖	↗	↖	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%		0%								0%	
Storage Length (ft)	0	0		275	75							
Storage Lanes	1	1		1	1							
Taper Length (ft)	25				25							
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.850		0.850									
Flt Protected	0.950				0.950							
Satd. Flow (prot)	1583	1417	1667	1417	1583	1667						
Flt Permitted	0.950				0.950							
Satd. Flow (perm)	1583	1417	1667	1417	1583	1667						
Link Speed (mph)	30		30		30							
Link Distance (ft)	624		1463		921							
Travel Time (s)	14.2		33.3		20.9							

Intersection Summary







Area Type: Other

EXISTING CONDITIONS (2018)
PM PEAK HOUR

Synchro 10 Report

Volume
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
09/27/2018







						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (vph)	32	63	149	75	64	68
Future Volume (vph)	32	63	149	75	64	68
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	38	75	177	89	76	81
Shared Lane Traffic (%)						
Lane Group Flow (vph)	38	75	177	89	76	81
Intersection Summary						

EXISTING CONDITIONS (2018)
PM PEAK HOUR

Synchro 10 Report

HCM 2010 TWSC
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
09/27/2018

Intersection						
Int Delay, s/veh	3.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	32	63	149	75	64	68
Future Vol, veh/h	32	63	149	75	64	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	275	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	14	14	14	14	14	14
Mvmt Flow	38	75	177	89	76	81

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	410	177	0
Stage 1	177	-	-
Stage 2	233	-	-
Critical Hdwy	6.54	6.34	-
Critical Hdwy Stg 1	5.54	-	-
Critical Hdwy Stg 2	5.54	-	-
Follow-up Hdwy	3.626	3.426	-
Pot Cap-1 Maneuver	575	836	-
Stage 1	826	-	-
Stage 2	778	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	539	836	-
Mov Cap-2 Maneuver	539	-	-
Stage 1	775	-	-
Stage 2	778	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	3.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	539	836	1231	-
HCM Lane V/C Ratio	-	-	0.071	0.09	0.062	-
HCM Control Delay (s)	-	-	12.2	9.7	8.1	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.3	0.2	-

EXISTING CONDITIONS (2018)
PM PEAK HOUR

Synchro 10 Report

APPENDIX D
Existing Plus Project Conditions LOS Analysis Worksheets

Lanes and Geometrics

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

10/04/2018

	↖	→	↘	↙	←	↖	↙	↘	↙	↘	↙	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↖↖	↘	↘	↖↖			↘	↘		↖↖	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	400		400	270		0	0		50	0		0
Storage Lanes	1		1	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.999				0.850		0.865	
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1583	3034	1417	1583	3032	0	0	1583	1417	0	1442	0
Flt Permitted	0.950			0.950			0.950					
Satd. Flow (perm)	1583	3034	1417	1583	3032	0	0	1583	1417	0	1442	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1553			1621			921			296	
Travel Time (s)		35.3			36.8			20.9			6.7	

Intersection Summary

Area Type: Other

EXISTING PLUS PROJECT CONDITIONS
AM PEAK HOUR

Synchro 10 Report

Volume

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

10/04/2018

	↖	→	↘	↙	←	↖	↙	↘	↙	↘	↙	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	1	156	73	106	235	2	50	0	67	0	0	3
Future Volume (vph)	1	156	73	106	235	2	50	0	67	0	0	3
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	19%	14%	14%	19%	14%	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	1	177	83	120	267	2	57	0	76	0	0	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	177	83	120	269	0	0	57	76	0	3	0

Intersection Summary

EXISTING PLUS PROJECT CONDITIONS
AM PEAK HOUR

Synchro 10 Report

HCM 2010 TWSC
1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA
10/04/2018

Intersection													
Int Delay, s/veh	2.8												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↗	↘	↔	↗	↘		↔	↗	↘	↔	↗	↘
Traffic Vol, veh/h	1	156	73	106	235	2	50	0	67	0	0	3	
Future Vol, veh/h	1	156	73	106	235	2	50	0	67	0	0	3	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	
RT Channelized	-	-	Yield	-	-	None	-	-	Free	-	-	None	
Storage Length	400	-	400	270	-	-	-	-	50	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88	
Heavy Vehicles, %	14	19	14	14	19	14	14	14	14	14	14	14	
Mvmt Flow	1	177	83	120	267	2	57	0	76	0	0	3	

Major/Minor	Major1	Major2	Minor1	Minor2									
Conflicting Flow All	269	0	0	177	0	0	553	688	-	599	687	135	
Stage 1	-	-	-	-	-	-	179	179	-	508	508	-	
Stage 2	-	-	-	-	-	-	374	509	-	91	179	-	
Critical Hdwy	4.38	-	-	4.38	-	-	7.78	6.78	-	7.78	6.78	7.18	
Critical Hdwy Stg 1	-	-	-	-	-	-	6.78	5.78	-	6.78	5.78	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	6.78	5.78	-	6.78	5.78	-	
Follow-up Hdwy	2.34	-	-	2.34	-	-	3.64	4.14	-	3.64	4.14	3.44	
Pot Cap-1 Maneuver	1209	-	-	1313	-	-	391	344	0	361	345	852	
Stage 1	-	-	-	-	-	-	772	722	0	486	508	-	
Stage 2	-	-	-	-	-	-	587	507	0	872	722	-	
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	
Mov Cap-1 Maneuver	1209	-	-	1313	-	-	362	312	-	335	313	852	
Mov Cap-2 Maneuver	-	-	-	-	-	-	362	312	-	335	313	-	
Stage 1	-	-	-	-	-	-	771	721	-	486	462	-	
Stage 2	-	-	-	-	-	-	531	461	-	871	721	-	

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2.5	16.8	9.2
HCM LOS			C	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	362	-	1209	-	-	1313	-	-	852
HCM Lane V/C Ratio	0.157	-	0.001	-	-	0.092	-	-	0.004
HCM Control Delay (s)	16.8	0	8	-	-	8	-	-	9.2
HCM Lane LOS	C	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.6	-	0	-	-	0.3	-	-	0

EXISTING PLUS PROJECT CONDITIONS
AM PEAK HOUR

Synchro 10 Report

Lanes and Geometrics
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
10/04/2018

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↗	↗	↗	↗	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		275	75	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.850		0.850			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1583	1417	1667	1417	1583	1667
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1583	1417	1667	1417	1583	1667
Link Speed (mph)	30		30		30	
Link Distance (ft)	624		1463		921	
Travel Time (s)	14.2		33.3		20.9	

Intersection Summary







Area Type: Other

EXISTING PLUS PROJECT CONDITIONS
AM PEAK HOUR

Synchro 10 Report

Volume
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
10/04/2018







						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (vph)	55	111	57	40	90	186
Future Volume (vph)	55	111	57	40	90	186
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	61	123	63	44	100	207
Shared Lane Traffic (%)						
Lane Group Flow (vph)	61	123	63	44	100	207
Intersection Summary						

EXISTING PLUS PROJECT CONDITIONS
AM PEAK HOUR

Synchro 10 Report

HCM 2010 TWSC
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
10/04/2018

Intersection						
Int Delay, s/veh	4.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	55	111	57	40	90	186
Future Vol, veh/h	55	111	57	40	90	186
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	275	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	14	14	14	14	14	14
Mvmt Flow	61	123	63	44	100	207

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	470	63	0	0	107
Stage 1	63	-	-	-	-
Stage 2	407	-	-	-	-
Critical Hdwy	6.54	6.34	-	-	4.24
Critical Hdwy Stg 1	5.54	-	-	-	-
Critical Hdwy Stg 2	5.54	-	-	-	-
Follow-up Hdwy	3.626	3.426	-	-	2.326
Pot Cap-1 Maneuver	531	969	-	-	1412
Stage 1	930	-	-	-	-
Stage 2	647	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	493	969	-	-	1412
Mov Cap-2 Maneuver	493	-	-	-	-
Stage 1	864	-	-	-	-
Stage 2	647	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.6	0	2.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	493	969	1412	-
HCM Lane V/C Ratio	-	-	0.124	0.127	0.071	-
HCM Control Delay (s)	-	-	13.3	9.3	7.7	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.4	0.2	-

EXISTING PLUS PROJECT CONDITIONS
AM PEAK HOUR

Synchro 10 Report

Lanes and Geometrics

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

10/04/2018

	↗	→	↘	↙	←	↖	↗	↘	↙	↖	↗	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗	↘	↘	↗↗			↘	↘		↗↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	400		400	270		0	0		50	0		0
Storage Lanes	1		1	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850						0.850		0.902	
Flt Protected	0.950			0.950			0.950				0.987	
Satd. Flow (prot)	1583	3034	1417	1583	3034	0	0	1583	1417	0	1484	0
Flt Permitted	0.950			0.950				0.950			0.987	
Satd. Flow (perm)	1583	3034	1417	1583	3034	0	0	1583	1417	0	1484	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1553			1621			921			296	
Travel Time (s)		35.3			36.8			20.9			6.7	

Intersection Summary

Area Type: Other

EXISTING PLUS PROJECT CONDITIONS
MID-DAY PEAK HOUR

Synchro 10 Report

Volume

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

10/04/2018

	↗	→	↘	↙	←	↖	↗	↘	↙	↖	↗	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	5	273	69	125	249	0	71	0	67	2	0	6
Future Volume (vph)	5	273	69	125	249	0	71	0	67	2	0	6
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	19%	14%	14%	19%	14%	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	6	341	86	156	311	0	89	0	84	3	0	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	6	341	86	156	311	0	0	89	84	0	11	0

Intersection Summary

EXISTING PLUS PROJECT CONDITIONS
MID-DAY PEAK HOUR

Synchro 10 Report

HCM 2010 TWSC
1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA
10/04/2018

Intersection													
Int Delay, s/veh	4.4												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↰	↱	↱	↰	↱	↱		↰	↱	↰	↱	↱	
Traffic Vol, veh/h	5	273	69	125	249	0	71	0	67	2	0	6	
Future Vol, veh/h	5	273	69	125	249	0	71	0	67	2	0	6	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	
RT Channelized	-	-	Yield	-	-	None	-	-	Free	-	-	None	
Storage Length	400	-	400	270	-	-	-	50	-	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80	
Heavy Vehicles, %	14	19	14	14	19	14	14	14	14	14	14	14	
Mvmt Flow	6	341	86	156	311	0	89	0	84	3	0	8	

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	311	0	0	341	0	0	821	976	-	806	976	156
Stage 1	-	-	-	-	-	-	353	353	-	623	623	-
Stage 2	-	-	-	-	-	-	468	623	-	183	353	-
Critical Hdwy	4.38	-	-	4.38	-	-	7.78	6.78	-	7.78	6.78	7.18
Critical Hdwy Stg 1	-	-	-	-	-	-	6.78	5.78	-	6.78	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.78	5.78	-	6.78	5.78	-
Follow-up Hdwy	2.34	-	-	2.34	-	-	3.64	4.14	-	3.64	4.14	3.44
Pot Cap-1 Maneuver	1164	-	-	1133	-	-	247	230	0	253	230	825
Stage 1	-	-	-	-	-	-	605	600	0	412	448	-
Stage 2	-	-	-	-	-	-	514	448	0	768	600	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1164	-	-	1133	-	-	218	197	-	225	197	825
Mov Cap-2 Maneuver	-	-	-	-	-	-	218	197	-	225	197	-
Stage 1	-	-	-	-	-	-	602	597	-	410	386	-
Stage 2	-	-	-	-	-	-	439	386	-	764	597	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0.1		2.9		32.4		12.4	
HCM LOS					D		B	

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	218	-	1164	-	-	1133	-	-	495
HCM Lane V/C Ratio	0.407	-	0.005	-	-	0.138	-	-	0.02
HCM Control Delay (s)	32.4	0	8.1	-	-	8.7	-	-	12.4
HCM Lane LOS	D	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.8	-	0	-	-	0.5	-	-	0.1

EXISTING PLUS PROJECT CONDITIONS
MID-DAY PEAK HOUR

Synchro 10 Report

Lanes and Geometrics
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
10/04/2018

	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰	↱	↰	↱	↰	↱
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		275	75	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.850		0.850			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1583	1417	1667	1417	1583	1667
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1583	1417	1667	1417	1583	1667
Link Speed (mph)	30		30		30	
Link Distance (ft)	624		1463		921	
Travel Time (s)	14.2		33.3		20.9	

Intersection Summary						
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Area Type: Other

EXISTING PLUS PROJECT CONDITIONS
MID-DAY PEAK HOUR

Synchro 10 Report

Volume
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
10/04/2018







						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (vph)	63	111	97	75	151	91
Future Volume (vph)	63	111	97	75	151	91
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	79	139	121	94	189	114
Shared Lane Traffic (%)						
Lane Group Flow (vph)	79	139	121	94	189	114
Intersection Summary						

EXISTING PLUS PROJECT CONDITIONS
MID-DAY PEAK HOUR

Synchro 10 Report

HCM 2010 TWSC
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
10/04/2018

Intersection						
Int Delay, s/veh	5.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	63	111	97	75	151	91
Future Vol, veh/h	63	111	97	75	151	91
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	275	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	14	14	14	14	14	14
Mvmt Flow	79	139	121	94	189	114

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	613	121	0
Stage 1	121	-	-
Stage 2	492	-	-
Critical Hdwy	6.54	6.34	-
Critical Hdwy Stg 1	5.54	-	-
Critical Hdwy Stg 2	5.54	-	-
Follow-up Hdwy	3.626	3.426	-
Pot Cap-1 Maneuver	437	899	-
Stage 1	875	-	-
Stage 2	591	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	373	899	-
Mov Cap-2 Maneuver	373	-	-
Stage 1	746	-	-
Stage 2	591	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.4	0	5.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	373	899	1287	-
HCM Lane V/C Ratio	-	-	0.211	0.154	0.147	-
HCM Control Delay (s)	-	-	17.2	9.7	8.3	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	0.8	0.5	0.5	-

EXISTING PLUS PROJECT CONDITIONS
MID-DAY PEAK HOUR

Synchro 10 Report

Lanes and Geometrics

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

10/04/2018

	↗	→	↘	↙	←	↖	↗	↘	↙	↖	↗	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗	↘	↘	↗↗			↘	↘		↗↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	400		400	270		0	0		50	0		0
Storage Lanes	1		1	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.998				0.850		0.955	
Flt Protected	0.950			0.950			0.953				0.976	
Satd. Flow (prot)	1583	3034	1417	1583	3029	0	0	1588	1417	0	1553	0
Flt Permitted	0.950			0.950				0.953			0.976	
Satd. Flow (perm)	1583	3034	1417	1583	3029	0	0	1588	1417	0	1553	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1553			1621			921			296	
Travel Time (s)		35.3			36.8			20.9			6.7	

Intersection Summary

Area Type: Other

EXISTING PLUS PROJECT CONDITIONS
PM PEAK HOUR

Synchro 10 Report

Volume

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

10/04/2018

	↗	→	↘	↙	←	↖	↗	↘	↙	↖	↗	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	4	272	65	91	187	3	66	1	131	3	1	2
Future Volume (vph)	4	272	65	91	187	3	66	1	131	3	1	2
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	19%	14%	14%	19%	14%	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	4	299	71	100	205	3	73	1	144	3	1	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	299	71	100	208	0	0	74	144	0	6	0

Intersection Summary

EXISTING PLUS PROJECT CONDITIONS
PM PEAK HOUR

Synchro 10 Report

HCM 2010 TWSC
1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA
10/04/2018

Intersection													
Int Delay, s/veh	3.1												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↰	↱	↱	↰	↱	↱		↰	↱	↰	↱	↱	
Traffic Vol, veh/h	4	272	65	91	187	3	66	1	131	3	1	2	
Future Vol, veh/h	4	272	65	91	187	3	66	1	131	3	1	2	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	
RT Channelized	-	-	Yield	-	-	None	-	-	Free	-	-	None	
Storage Length	400	-	400	270	-	-	-	-	50	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91	
Heavy Vehicles, %	14	19	14	14	19	14	14	14	14	14	14	14	
Mvmt Flow	4	299	71	100	205	3	73	1	144	3	1	2	

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	208	0	0	299	0	0	610	715	-	565	714	104
Stage 1	-	-	-	-	-	-	307	307	-	407	407	-
Stage 2	-	-	-	-	-	-	303	408	-	158	307	-
Critical Hdwy	4.38	-	-	4.38	-	-	7.78	6.78	-	7.78	6.78	7.18
Critical Hdwy Stg 1	-	-	-	-	-	-	6.78	5.78	-	6.78	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.78	5.78	-	6.78	5.78	-
Follow-up Hdwy	2.34	-	-	2.34	-	-	3.64	4.14	-	3.64	4.14	3.44
Pot Cap-1 Maneuver	1277	-	-	1177	-	-	355	332	0	383	332	893
Stage 1	-	-	-	-	-	-	645	630	0	561	566	-
Stage 2	-	-	-	-	-	-	649	566	0	795	630	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1277	-	-	1177	-	-	329	303	-	356	303	893
Mov Cap-2 Maneuver	-	-	-	-	-	-	329	303	-	356	303	-
Stage 1	-	-	-	-	-	-	643	628	-	559	518	-
Stage 2	-	-	-	-	-	-	591	518	-	791	628	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0.1		2.7		19.1		13.5	
HCM LOS					C		B	

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	329	-	1277	-	-	1177	-	-	430
HCM Lane V/C Ratio	0.224	-	0.003	-	-	0.085	-	-	0.015
HCM Control Delay (s)	19.1	0	7.8	-	-	8.3	-	-	13.5
HCM Lane LOS	C	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.8	-	0	-	-	0.3	-	-	0

EXISTING PLUS PROJECT CONDITIONS
PM PEAK HOUR

Synchro 10 Report

Lanes and Geometrics
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
10/04/2018

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰	↱	↱	↰	↰	↱
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		275	75	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.850		0.850			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1583	1417	1667	1417	1583	1667
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1583	1417	1667	1417	1583	1667
Link Speed (mph)	30		30		30	
Link Distance (ft)	624		1463		921	
Travel Time (s)	14.2		33.3		20.9	

Intersection Summary						
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Area Type: Other

EXISTING PLUS PROJECT CONDITIONS
PM PEAK HOUR

Synchro 10 Report

Volume
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
10/04/2018







						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (vph)	42	102	149	86	120	68
Future Volume (vph)	42	102	149	86	120	68
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	50	121	177	102	143	81
Shared Lane Traffic (%)						
Lane Group Flow (vph)	50	121	177	102	143	81
Intersection Summary						

EXISTING PLUS PROJECT CONDITIONS
PM PEAK HOUR

Synchro 10 Report

HCM 2010 TWSC
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
10/04/2018

Intersection						
Int Delay, s/veh	4.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	42	102	149	86	120	68
Future Vol, veh/h	42	102	149	86	120	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	275	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	14	14	14	14	14	14
Mvmt Flow	50	121	177	102	143	81

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	544	177	0
Stage 1	177	-	-
Stage 2	367	-	-
Critical Hdwy	6.54	6.34	-
Critical Hdwy Stg 1	5.54	-	-
Critical Hdwy Stg 2	5.54	-	-
Follow-up Hdwy	3.626	3.426	-
Pot Cap-1 Maneuver	480	836	-
Stage 1	826	-	-
Stage 2	675	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	424	836	-
Mov Cap-2 Maneuver	424	-	-
Stage 1	729	-	-
Stage 2	675	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	5.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	424	836	1218	-
HCM Lane V/C Ratio	-	-	0.118	0.145	0.117	-
HCM Control Delay (s)	-	-	14.6	10	8.3	-
HCM Lane LOS	-	-	B	B	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.5	0.4	-

EXISTING PLUS PROJECT CONDITIONS
PM PEAK HOUR

Synchro 10 Report

APPENDIX E
Forecast Opening Year (2023) Without Project Conditions
LOS Analysis Worksheets

Lanes and Geometrics

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

10/04/2018

	↖	→	↘	↙	←	↖	↙	↘	↙	↘	↙	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↖↖	↘	↘	↖↖			↘	↘		↖↖	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	400		400	270		0	0		50	0		0
Storage Lanes	1		1	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.999				0.850		0.865	
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1583	3034	1417	1583	3031	0	0	1583	1417	0	1442	0
Flt Permitted	0.950			0.950			0.950					
Satd. Flow (perm)	1583	3034	1417	1583	3031	0	0	1583	1417	0	1442	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1553			1621			921			296	
Travel Time (s)		35.3			36.8			20.9			6.7	

Intersection Summary

Area Type: Other

OPENING YEAR WITHOUT PROJECT CONDITIONS
AM PEAK HOUR

Synchro 10 Report

Volume

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

10/04/2018

	↖	→	↘	↙	←	↖	↙	↘	↙	↘	↙	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	1	172	90	141	259	2	48	0	62	0	0	3
Future Volume (vph)	1	172	90	141	259	2	48	0	62	0	0	3
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	19%	14%	14%	19%	14%	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	1	195	102	160	294	2	55	0	70	0	0	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	195	102	160	296	0	0	55	70	0	3	0

Intersection Summary

OPENING YEAR WITHOUT PROJECT CONDITIONS
AM PEAK HOUR

Synchro 10 Report

HCM 2010 TWSC
1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA
10/04/2018

Intersection													
Int Delay, s/veh	3												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↗	↘	↔	↗	↘		↗	↘		↗	↘	
Traffic Vol, veh/h	1	172	90	141	259	2	48	0	62	0	0	3	
Future Vol, veh/h	1	172	90	141	259	2	48	0	62	0	0	3	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	
RT Channelized	-	-	Yield	-	-	None	-	-	Free	-	-	None	
Storage Length	400	-	400	270	-	-	-	-	50	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88	
Heavy Vehicles, %	14	19	14	14	19	14	14	14	14	14	14	14	
Mvmt Flow	1	195	102	160	294	2	55	0	70	0	0	3	

Major/Minor	Major1	Major2	Minor1	Minor2									
Conflicting Flow All	296	0	0	195	0	0	664	813	-	715	812	148	
Stage 1	-	-	-	-	-	-	197	197	-	615	615	-	
Stage 2	-	-	-	-	-	-	467	616	-	100	197	-	
Critical Hdwy	4.38	-	-	4.38	-	-	7.78	6.78	-	7.78	6.78	7.18	
Critical Hdwy Stg 1	-	-	-	-	-	-	6.78	5.78	-	6.78	5.78	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	6.78	5.78	-	6.78	5.78	-	
Follow-up Hdwy	2.34	-	-	2.34	-	-	3.64	4.14	-	3.64	4.14	3.44	
Pot Cap-1 Maneuver	1180	-	-	1292	-	-	323	290	0	296	290	835	
Stage 1	-	-	-	-	-	-	753	708	0	417	452	-	
Stage 2	-	-	-	-	-	-	515	451	0	861	708	-	
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	
Mov Cap-1 Maneuver	1180	-	-	1292	-	-	291	254	-	268	254	835	
Mov Cap-2 Maneuver	-	-	-	-	-	-	291	254	-	268	254	-	
Stage 1	-	-	-	-	-	-	752	707	-	417	396	-	
Stage 2	-	-	-	-	-	-	449	395	-	860	707	-	

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2.9	20.2	9.3
HCM LOS			C	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	291	-	1180	-	-	1292	-	-	835
HCM Lane V/C Ratio	0.187	-	0.001	-	-	0.124	-	-	0.004
HCM Control Delay (s)	20.2	0	8.1	-	-	8.2	-	-	9.3
HCM Lane LOS	C	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.7	-	0	-	-	0.4	-	-	0

OPENING YEAR WITHOUT PROJECT CONDITIONS
AM PEAK HOUR

Synchro 10 Report

Lanes and Geometrics
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
10/04/2018

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↗	↗	↗	↗	↗	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		275	75	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.850		0.850			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1583	1417	1667	1417	1583	1667
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1583	1417	1667	1417	1583	1667
Link Speed (mph)	30		30		30	
Link Distance (ft)	624		1463		921	
Travel Time (s)	14.2		33.3		20.9	

Intersection Summary						
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Area Type: Other

OPENING YEAR WITHOUT PROJECT CONDITIONS
AM PEAK HOUR

Synchro 10 Report

Volume
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
10/04/2018







						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (vph)	74	102	63	64	135	205
Future Volume (vph)	74	102	63	64	135	205
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	82	113	70	71	150	228
Shared Lane Traffic (%)						
Lane Group Flow (vph)	82	113	70	71	150	228
Intersection Summary						

OPENING YEAR WITHOUT PROJECT CONDITIONS
AM PEAK HOUR

Synchro 10 Report

HCM 2010 TWSC
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
10/04/2018

Intersection						
Int Delay, s/veh	5.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	74	102	63	64	135	205
Future Vol, veh/h	74	102	63	64	135	205
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	275	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	14	14	14	14	14	14
Mvmt Flow	82	113	70	71	150	228

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	598	70	0
Stage 1	70	-	-
Stage 2	528	-	-
Critical Hdwy	6.54	6.34	-
Critical Hdwy Stg 1	5.54	-	-
Critical Hdwy Stg 2	5.54	-	-
Follow-up Hdwy	3.626	3.426	-
Pot Cap-1 Maneuver	446	960	-
Stage 1	923	-	-
Stage 2	568	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	397	960	-
Mov Cap-2 Maneuver	397	-	-
Stage 1	822	-	-
Stage 2	568	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.3	0	3.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	397	960	1372	-
HCM Lane V/C Ratio	-	-	0.207	0.118	0.109	-
HCM Control Delay (s)	-	-	16.4	9.3	7.9	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	0.8	0.4	0.4	-

OPENING YEAR WITHOUT PROJECT CONDITIONS
AM PEAK HOUR

Synchro 10 Report

Lanes and Geometrics

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

10/04/2018

	↖	→	↘	↙	←	↖	↙	↘	↙	↘	↙	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↖	↖	↖	↖↖			↖	↖		↖↖	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	400		400	270		0	0		50	0		0
Storage Lanes	1		1	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850						0.850		0.899	
Flt Protected	0.950			0.950			0.950				0.988	
Satd. Flow (prot)	1583	3034	1417	1583	3034	0	0	1583	1417	0	1480	0
Flt Permitted	0.950			0.950				0.950			0.988	
Satd. Flow (perm)	1583	3034	1417	1583	3034	0	0	1583	1417	0	1480	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1553			1621			921			296	
Travel Time (s)		35.3			36.8			20.9			6.7	

Intersection Summary

Area Type: Other

OPENING YEAR WITHOUT PROJECT CONDITIONS
MID-DAY PEAK HOUR

Synchro 10 Report

Volume

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

10/04/2018

	↖	→	↘	↙	←	↖	↙	↘	↙	↘	↙	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	6	300	76	142	274	0	81	0	86	2	0	7
Future Volume (vph)	6	300	76	142	274	0	81	0	86	2	0	7
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	19%	14%	14%	19%	14%	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	8	375	95	178	343	0	101	0	108	3	0	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	375	95	178	343	0	0	101	108	0	12	0

Intersection Summary

OPENING YEAR WITHOUT PROJECT CONDITIONS
MID-DAY PEAK HOUR

Synchro 10 Report

HCM 2010 TWSC
1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA
10/04/2018

Intersection													
Int Delay, s/veh	6												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↰	↱	↱	↰	↱	↱		↰	↱	↰	↱	↱	
Traffic Vol, veh/h	6	300	76	142	274	0	81	0	86	2	0	7	
Future Vol, veh/h	6	300	76	142	274	0	81	0	86	2	0	7	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	
RT Channelized	-	-	Yield	-	-	None	-	-	Free	-	-	None	
Storage Length	400	-	400	270	-	-	-	-	50	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80	
Heavy Vehicles, %	14	19	14	14	19	14	14	14	14	14	14	14	
Mvmt Flow	8	375	95	178	343	0	101	0	108	3	0	9	

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	343	0	0	375	0	0	919	1090	-	903	1090	172
Stage 1	-	-	-	-	-	-	391	391	-	699	699	-
Stage 2	-	-	-	-	-	-	528	699	-	204	391	-
Critical Hdwy	4.38	-	-	4.38	-	-	7.78	6.78	-	7.78	6.78	7.18
Critical Hdwy Stg 1	-	-	-	-	-	-	6.78	5.78	-	6.78	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.78	5.78	-	6.78	5.78	-
Follow-up Hdwy	2.34	-	-	2.34	-	-	3.64	4.14	-	3.64	4.14	3.44
Pot Cap-1 Maneuver	1131	-	-	1098	-	-	208	196	0	214	196	805
Stage 1	-	-	-	-	-	-	573	576	0	370	412	-
Stage 2	-	-	-	-	-	-	472	412	0	745	576	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1131	-	-	1098	-	-	179	163	-	186	163	805
Mov Cap-2 Maneuver	-	-	-	-	-	-	179	163	-	186	163	-
Stage 1	-	-	-	-	-	-	569	572	-	367	345	-
Stage 2	-	-	-	-	-	-	391	345	-	740	572	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0.1		3		48.5		13	
HCM LOS					E		B	

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	179	-	1131	-	-	1098	-	-	463
HCM Lane V/C Ratio	0.566	-	0.007	-	-	0.162	-	-	0.024
HCM Control Delay (s)	48.5	0	8.2	-	-	8.9	-	-	13
HCM Lane LOS	E	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	3	-	0	-	-	0.6	-	-	0.1

OPENING YEAR WITHOUT PROJECT CONDITIONS
MID-DAY PEAK HOUR

Synchro 10 Report

Lanes and Geometrics
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
10/04/2018

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰	↱	↰	↱	↰	↱
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		275	75	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.850		0.850			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1583	1417	1667	1417	1583	1667
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1583	1417	1667	1417	1583	1667
Link Speed (mph)	30		30		30	
Link Distance (ft)	624		1463		921	
Travel Time (s)	14.2		33.3		20.9	

Intersection Summary







Area Type: Other

OPENING YEAR WITHOUT PROJECT CONDITIONS
MID-DAY PEAK HOUR

Synchro 10 Report

Volume
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
10/04/2018







						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (vph)	86	137	107	103	171	100
Future Volume (vph)	86	137	107	103	171	100
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	108	171	134	129	214	125
Shared Lane Traffic (%)						
Lane Group Flow (vph)	108	171	134	129	214	125
Intersection Summary						

OPENING YEAR WITHOUT PROJECT CONDITIONS
MID-DAY PEAK HOUR

Synchro 10 Report

HCM 2010 TWSC
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
10/04/2018

Intersection						
Int Delay, s/veh	6.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	86	137	107	103	171	100
Future Vol, veh/h	86	137	107	103	171	100
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	275	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	14	14	14	14	14	14
Mvmt Flow	108	171	134	129	214	125

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	687	134	0
Stage 1	134	-	-
Stage 2	553	-	-
Critical Hdwy	6.54	6.34	-
Critical Hdwy Stg 1	5.54	-	-
Critical Hdwy Stg 2	5.54	-	-
Follow-up Hdwy	3.626	3.426	-
Pot Cap-1 Maneuver	395	884	-
Stage 1	864	-	-
Stage 2	553	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	327	884	-
Mov Cap-2 Maneuver	327	-	-
Stage 1	715	-	-
Stage 2	553	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.4	0	5.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	327	884	1235	-
HCM Lane V/C Ratio	-	-	0.329	0.194	0.173	-
HCM Control Delay (s)	-	-	21.3	10	8.5	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	1.4	0.7	0.6	-

OPENING YEAR WITHOUT PROJECT CONDITIONS
MID-DAY PEAK HOUR













Synchro 10 Report

Lanes and Geometrics

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

10/04/2018

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%		0%		0%		0%		0%		0%	
Storage Length (ft)	400		400	270		0	0		50	0		0
Storage Lanes	1		1	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.850			0.998			0.850			0.955		
Flt Protected	0.950			0.950			0.953			0.976		
Satd. Flow (prot)	1583	3034	1417	1583	3029	0	0	1588	1417	0	1553	0
Flt Permitted	0.950			0.950			0.953			0.976		
Satd. Flow (perm)	1583	3034	1417	1583	3029	0	0	1588	1417	0	1553	0
Link Speed (mph)	30			30			30			30		
Link Distance (ft)	1553			1621			921			296		
Travel Time (s)	35.3			36.8			20.9			6.7		

Intersection Summary

Area Type: Other

OPENING YEAR WITHOUT PROJECT CONDITIONS
PM PEAK HOUR

Synchro 10 Report

Volume

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

10/04/2018

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	4	299	72	104	206	3	75	1	157	3	1	2
Future Volume (vph)	4	299	72	104	206	3	75	1	157	3	1	2
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	19%	14%	14%	19%	14%	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)	0%			0%			0%			0%		
Adj. Flow (vph)	4	329	79	114	226	3	82	1	173	3	1	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	329	79	114	229	0	0	83	173	0	6	0

Intersection Summary

OPENING YEAR WITHOUT PROJECT CONDITIONS
PM PEAK HOUR

Synchro 10 Report

HCM 2010 TWSC
1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA
10/04/2018

Intersection													
Int Delay, s/veh	3.5												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↗	↘	↔	↗	↘		↔	↗	↘	↔	↗	↘
Traffic Vol, veh/h	4	299	72	104	206	3	75	1	157	3	1	2	
Future Vol, veh/h	4	299	72	104	206	3	75	1	157	3	1	2	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	
RT Channelized	-	-	Yield	-	-	None	-	-	Free	-	-	None	
Storage Length	400	-	400	270	-	-	-	-	50	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91	
Heavy Vehicles, %	14	19	14	14	19	14	14	14	14	14	14	14	
Mvmt Flow	4	329	79	114	226	3	82	1	173	3	1	2	

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	229	0	0	329	0	0	679	794	-	629	793	115
Stage 1	-	-	-	-	-	-	337	337	-	456	456	-
Stage 2	-	-	-	-	-	-	342	457	-	173	337	-
Critical Hdwy	4.38	-	-	4.38	-	-	7.78	6.78	-	7.78	6.78	7.18
Critical Hdwy Stg 1	-	-	-	-	-	-	6.78	5.78	-	6.78	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.78	5.78	-	6.78	5.78	-
Follow-up Hdwy	2.34	-	-	2.34	-	-	3.64	4.14	-	3.64	4.14	3.44
Pot Cap-1 Maneuver	1253	-	-	1145	-	-	315	297	0	343	298	879
Stage 1	-	-	-	-	-	-	619	611	0	523	537	-
Stage 2	-	-	-	-	-	-	614	537	0	778	611	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1253	-	-	1145	-	-	289	266	-	315	267	879
Mov Cap-2 Maneuver	-	-	-	-	-	-	289	266	-	315	267	-
Stage 1	-	-	-	-	-	-	617	609	-	521	483	-
Stage 2	-	-	-	-	-	-	550	483	-	774	609	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0.1		2.8		22.4		14.5	
HCM LOS					C		B	

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	289	-	1253	-	-	1145	-	-	386
HCM Lane V/C Ratio	0.289	-	0.004	-	-	0.1	-	-	0.017
HCM Control Delay (s)	22.4	0	7.9	-	-	8.5	-	-	14.5
HCM Lane LOS	C	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.2	-	0	-	-	0.3	-	-	0.1

OPENING YEAR WITHOUT PROJECT CONDITIONS
PM PEAK HOUR

Synchro 10 Report

Lanes and Geometrics
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
10/04/2018

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↗	↗	↗	↗	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		275	75	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.850		0.850			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1583	1417	1667	1417	1583	1667
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1583	1417	1667	1417	1583	1667
Link Speed (mph)	30		30		30	
Link Distance (ft)	624		1463		921	
Travel Time (s)	14.2		33.3		20.9	

Intersection Summary						
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Area Type: Other

OPENING YEAR WITHOUT PROJECT CONDITIONS
PM PEAK HOUR

Synchro 10 Report

Volume
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
10/04/2018







						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (vph)	63	127	164	116	136	75
Future Volume (vph)	63	127	164	116	136	75
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	75	151	195	138	162	89
Shared Lane Traffic (%)						
Lane Group Flow (vph)	75	151	195	138	162	89
Intersection Summary						

OPENING YEAR WITHOUT PROJECT CONDITIONS
PM PEAK HOUR

Synchro 10 Report

HCM 2010 TWSC
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
10/04/2018

Intersection						
Int Delay, s/veh	5.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	63	127	164	116	136	75
Future Vol, veh/h	63	127	164	116	136	75
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	275	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	14	14	14	14	14	14
Mvmt Flow	75	151	195	138	162	89

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	608	195	0
Stage 1	195	-	-
Stage 2	413	-	-
Critical Hdwy	6.54	6.34	-
Critical Hdwy Stg 1	5.54	-	-
Critical Hdwy Stg 2	5.54	-	-
Follow-up Hdwy	3.626	3.426	-
Pot Cap-1 Maneuver	440	817	-
Stage 1	810	-	-
Stage 2	643	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	379	817	-
Mov Cap-2 Maneuver	379	-	-
Stage 1	697	-	-
Stage 2	643	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.5	0	5.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	379	817	1162	-
HCM Lane V/C Ratio	-	-	0.198	0.185	0.139	-
HCM Control Delay (s)	-	-	16.8	10.4	8.6	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.7	0.7	0.5	-

OPENING YEAR WITHOUT PROJECT CONDITIONS
PM PEAK HOUR

Synchro 10 Report

APPENDIX F
Forecast Opening Year (2023) With Project Conditions LOS
Analysis Worksheets

Lanes and Geometrics

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

10/04/2018

	↖	→	↘	↙	←	↖	↙	↘	↙	↘	↙	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↖↖	↘	↘	↖↖			↘	↘		↖↖	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	400		400	270		0	0		50	0		0
Storage Lanes	1		1	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.999				0.850		0.865	
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1583	3034	1417	1583	3031	0	0	1583	1417	0	1442	0
Flt Permitted	0.950			0.950			0.950					
Satd. Flow (perm)	1583	3034	1417	1583	3031	0	0	1583	1417	0	1442	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1553			1621			921			296	
Travel Time (s)		35.3			36.8			20.9			6.7	

Intersection Summary

Area Type: Other

OPENING YEAR WITH PROJECT CONDITIONS
AM PEAK HOUR

Synchro 10 Report

Volume

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

10/04/2018

	↖	→	↘	↙	←	↖	↙	↘	↙	↘	↙	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	1	172	97	155	259	2	67	0	102	0	0	3
Future Volume (vph)	1	172	97	155	259	2	67	0	102	0	0	3
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	19%	14%	14%	19%	14%	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	1	195	110	176	294	2	76	0	116	0	0	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	195	110	176	296	0	0	76	116	0	3	0

Intersection Summary

OPENING YEAR WITH PROJECT CONDITIONS
AM PEAK HOUR

Synchro 10 Report

HCM 2010 TWSC
1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA
10/04/2018

Intersection													
Int Delay, s/veh	3.8												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↔	↔	↔	↔	↔		↔	↔		↔	↔	
Traffic Vol, veh/h	1	172	97	155	259	2	67	0	102	0	0	3	
Future Vol, veh/h	1	172	97	155	259	2	67	0	102	0	0	3	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	
RT Channelized	-	-	Yield	-	-	None	-	-	Free	-	-	None	
Storage Length	400	-	400	270	-	-	-	-	50	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88	
Heavy Vehicles, %	14	19	14	14	19	14	14	14	14	14	14	14	
Mvmt Flow	1	195	110	176	294	2	76	0	116	0	0	3	

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	296	0	0	195	0	0	696	845	-	747	844	148
Stage 1	-	-	-	-	-	-	197	197	-	647	647	-
Stage 2	-	-	-	-	-	-	499	648	-	100	197	-
Critical Hdwy	4.38	-	-	4.38	-	-	7.78	6.78	-	7.78	6.78	7.18
Critical Hdwy Stg 1	-	-	-	-	-	-	6.78	5.78	-	6.78	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.78	5.78	-	6.78	5.78	-
Follow-up Hdwy	2.34	-	-	2.34	-	-	3.64	4.14	-	3.64	4.14	3.44
Pot Cap-1 Maneuver	1180	-	-	1292	-	-	306	277	0	280	277	835
Stage 1	-	-	-	-	-	-	753	708	0	398	436	-
Stage 2	-	-	-	-	-	-	492	436	0	861	708	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1180	-	-	1292	-	-	273	239	-	251	239	835
Mov Cap-2 Maneuver	-	-	-	-	-	-	273	239	-	251	239	-
Stage 1	-	-	-	-	-	-	752	707	-	398	377	-
Stage 2	-	-	-	-	-	-	423	377	-	860	707	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0		3.1		23.2		9.3	
HCM LOS					C		A	

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	273	-	1180	-	-	1292	-	-	835
HCM Lane V/C Ratio	0.279	-	0.001	-	-	0.136	-	-	0.004
HCM Control Delay (s)	23.2	0	8.1	-	-	8.2	-	-	9.3
HCM Lane LOS	C	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	1.1	-	0	-	-	0.5	-	-	0

OPENING YEAR WITH PROJECT CONDITIONS
AM PEAK HOUR

Synchro 10 Report

Lanes and Geometrics
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
10/04/2018

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		275	75	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.850		0.850			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1583	1417	1667	1417	1583	1667
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1583	1417	1667	1417	1583	1667
Link Speed (mph)	30		30		30	
Link Distance (ft)	624		1463		921	
Travel Time (s)	14.2		33.3		20.9	

Intersection Summary						
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Area Type: Other

OPENING YEAR WITH PROJECT CONDITIONS
AM PEAK HOUR

Synchro 10 Report

Volume
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
10/04/2018







						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (vph)	83	161	63	71	155	205
Future Volume (vph)	83	161	63	71	155	205
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	92	179	70	79	172	228
Shared Lane Traffic (%)						
Lane Group Flow (vph)	92	179	70	79	172	228
Intersection Summary						

OPENING YEAR WITH PROJECT CONDITIONS
AM PEAK HOUR

Synchro 10 Report

HCM 2010 TWSC
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
10/04/2018

Intersection						
Int Delay, s/veh	5.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	83	161	63	71	155	205
Future Vol, veh/h	83	161	63	71	155	205
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	275	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	14	14	14	14	14	14
Mvmt Flow	92	179	70	79	172	228

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	642	70	0
Stage 1	70	-	-
Stage 2	572	-	-
Critical Hdwy	6.54	6.34	-
Critical Hdwy Stg 1	5.54	-	-
Critical Hdwy Stg 2	5.54	-	-
Follow-up Hdwy	3.626	3.426	-
Pot Cap-1 Maneuver	420	960	-
Stage 1	923	-	-
Stage 2	542	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	367	960	-
Mov Cap-2 Maneuver	367	-	-
Stage 1	807	-	-
Stage 2	542	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.5	0	3.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	367	960	1362	-
HCM Lane V/C Ratio	-	-	0.251	0.186	0.126	-
HCM Control Delay (s)	-	-	18.1	9.6	8	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	1	0.7	0.4	-

OPENING YEAR WITH PROJECT CONDITIONS
AM PEAK HOUR

Synchro 10 Report

Lanes and Geometrics

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

09/27/2018

	↗	→	↘	↙	←	↖	↗	↘	↙	↖	↗	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗	↘	↘	↗↗			↘	↘		↗↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	400		400	270		0	0		50	0		0
Storage Lanes	1		1	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850						0.850		0.899	
Flt Protected	0.950			0.950			0.950				0.988	
Satd. Flow (prot)	1583	3034	1417	1583	3034	0	0	1583	1417	0	1480	0
Flt Permitted	0.950			0.950			0.950				0.988	
Satd. Flow (perm)	1583	3034	1417	1583	3034	0	0	1583	1417	0	1480	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1553			1621			921			296	
Travel Time (s)		35.3			36.8			20.9			6.7	

Intersection Summary

Area Type: Other

OPENING YEAR WITH PROJECT CONDITIONS
MID-DAY PEAK HOUR

Synchro 10 Report

Volume

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

09/27/2018

	↗	→	↘	↙	←	↖	↗	↘	↙	↖	↗	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	6	300	94	180	274	0	94	0	112	2	0	7
Future Volume (vph)	6	300	94	180	274	0	94	0	112	2	0	7
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	19%	14%	14%	19%	14%	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	8	375	118	225	343	0	118	0	140	3	0	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	375	118	225	343	0	0	118	140	0	12	0

Intersection Summary

OPENING YEAR WITH PROJECT CONDITIONS
MID-DAY PEAK HOUR

Synchro 10 Report

HCM 2010 TWSC
1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA
09/27/2018

Intersection													
Int Delay, s/veh	10.6												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↔	↔	↔	↔	↔		↔	↔		↔	↔	
Traffic Vol, veh/h	6	300	94	180	274	0	94	0	112	2	0	7	
Future Vol, veh/h	6	300	94	180	274	0	94	0	112	2	0	7	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	
RT Channelized	-	-	Yield	-	-	None	-	-	Free	-	-	None	
Storage Length	400	-	400	270	-	-	-	-	50	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80	
Heavy Vehicles, %	14	19	14	14	19	14	14	14	14	14	14	14	
Mvmt Flow	8	375	118	225	343	0	118	0	140	3	0	9	

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	343	0	0	375	0	0	1013	1184	-	997	1184	172
Stage 1	-	-	-	-	-	-	391	391	-	793	793	-
Stage 2	-	-	-	-	-	-	622	793	-	204	391	-
Critical Hdwy	4.38	-	-	4.38	-	-	7.78	6.78	-	7.78	6.78	7.18
Critical Hdwy Stg 1	-	-	-	-	-	-	6.78	5.78	-	6.78	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.78	5.78	-	6.78	5.78	-
Follow-up Hdwy	2.34	-	-	2.34	-	-	3.64	4.14	-	3.64	4.14	3.44
Pot Cap-1 Maneuver	1131	-	-	1098	-	-	177	171	0	182	171	805
Stage 1	-	-	-	-	-	-	573	576	0	323	371	-
Stage 2	-	-	-	-	-	-	413	371	0	745	576	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1131	-	-	1098	-	-	147	135	-	153	135	805
Mov Cap-2 Maneuver	-	-	-	-	-	-	147	135	-	153	135	-
Stage 1	-	-	-	-	-	-	569	572	-	321	295	-
Stage 2	-	-	-	-	-	-	325	295	-	740	572	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	3.6	88.5	14
HCM LOS			F	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	147	-	1131	-	-	1098	-	-	413
HCM Lane V/C Ratio	0.799	-	0.007	-	-	0.205	-	-	0.027
HCM Control Delay (s)	88.5	0	8.2	-	-	9.1	-	-	14
HCM Lane LOS	F	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	5	-	0	-	-	0.8	-	-	0.1

OPENING YEAR WITH PROJECT CONDITIONS
MID-DAY PEAK HOUR

Synchro 10 Report

Lanes and Geometrics
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
09/27/2018

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		275	75	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.850		0.850			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1583	1417	1667	1417	1583	1667
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1583	1417	1667	1417	1583	1667
Link Speed (mph)	30		30		30	
Link Distance (ft)	624		1463		921	
Travel Time (s)	14.2		33.3		20.9	

Intersection Summary







Area Type: Other

OPENING YEAR WITH PROJECT CONDITIONS
MID-DAY PEAK HOUR

Synchro 10 Report

Volume
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
09/27/2018







						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (vph)	96	176	107	114	227	100
Future Volume (vph)	96	176	107	114	227	100
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	120	220	134	143	284	125
Shared Lane Traffic (%)						
Lane Group Flow (vph)	120	220	134	143	284	125
Intersection Summary						

OPENING YEAR WITH PROJECT CONDITIONS
MID-DAY PEAK HOUR

Synchro 10 Report

HCM 2010 TWSC
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
09/27/2018

Intersection						
Int Delay, s/veh	8.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	96	176	107	114	227	100
Future Vol, veh/h	96	176	107	114	227	100
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	275	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	14	14	14	14	14	14
Mvmt Flow	120	220	134	143	284	125

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	827	134	0	0	277
Stage 1	134	-	-	-	-
Stage 2	693	-	-	-	-
Critical Hdwy	6.54	6.34	-	-	4.24
Critical Hdwy Stg 1	5.54	-	-	-	-
Critical Hdwy Stg 2	5.54	-	-	-	-
Follow-up Hdwy	3.626	3.426	-	-	2.326
Pot Cap-1 Maneuver	326	884	-	-	1220
Stage 1	864	-	-	-	-
Stage 2	475	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	250	884	-	-	1220
Mov Cap-2 Maneuver	250	-	-	-	-
Stage 1	663	-	-	-	-
Stage 2	475	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18	0	6.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	250	884	1220	-
HCM Lane V/C Ratio	-	-	0.48	0.249	0.233	-
HCM Control Delay (s)	-	-	32	10.4	8.8	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	2.4	1	0.9	-

OPENING YEAR WITH PROJECT CONDITIONS
MID-DAY PEAK HOUR

Synchro 10 Report

Lanes and Geometrics

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

09/27/2018

	↖	→	↘	↙	←	↖	↙	↘	↙	↘	↙	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↖↖	↘	↘	↖↖			↘	↘		↖↖	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	400		400	270		0	0		50	0		0
Storage Lanes	1		1	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.998				0.850		0.955	
Flt Protected	0.950			0.950			0.953				0.976	
Satd. Flow (prot)	1583	3034	1417	1583	3029	0	0	1588	1417	0	1553	0
Flt Permitted	0.950			0.950				0.953			0.976	
Satd. Flow (perm)	1583	3034	1417	1583	3029	0	0	1588	1417	0	1553	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1553			1621			921			296	
Travel Time (s)		35.3			36.8			20.9			6.7	

Intersection Summary

Area Type: Other

OPENING YEAR WITH PROJECT CONDITIONS
PM PEAK HOUR

Synchro 10 Report

Volume

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

09/27/2018

	↖	→	↘	↙	←	↖	↙	↘	↙	↘	↙	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	4	299	90	142	206	3	88	1	183	3	1	2
Future Volume (vph)	4	299	90	142	206	3	88	1	183	3	1	2
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	19%	14%	14%	19%	14%	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	4	329	99	156	226	3	97	1	201	3	1	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	329	99	156	229	0	0	98	201	0	6	0

Intersection Summary

OPENING YEAR WITH PROJECT CONDITIONS
PM PEAK HOUR

Synchro 10 Report

HCM 2010 TWSC
1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA
09/27/2018

Intersection													
Int Delay, s/veh	4.8												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↗	↘	↔	↗	↘		↔	↗	↘	↔	↗	
Traffic Vol, veh/h	4	299	90	142	206	3	88	1	183	3	1	2	
Future Vol, veh/h	4	299	90	142	206	3	88	1	183	3	1	2	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	
RT Channelized	-	-	Yield	-	-	None	-	-	Free	-	-	None	
Storage Length	400	-	400	270	-	-	-	-	50	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91	
Heavy Vehicles, %	14	19	14	14	19	14	14	14	14	14	14	14	
Mvmt Flow	4	329	99	156	226	3	97	1	201	3	1	2	

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	229	0	0	329	0	0	763	878	-	713	877	115
Stage 1	-	-	-	-	-	-	337	337	-	540	540	-
Stage 2	-	-	-	-	-	-	426	541	-	173	337	-
Critical Hdwy	4.38	-	-	4.38	-	-	7.78	6.78	-	7.78	6.78	7.18
Critical Hdwy Stg 1	-	-	-	-	-	-	6.78	5.78	-	6.78	5.78	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.78	5.78	-	6.78	5.78	-
Follow-up Hdwy	2.34	-	-	2.34	-	-	3.64	4.14	-	3.64	4.14	3.44
Pot Cap-1 Maneuver	1253	-	-	1145	-	-	273	264	0	297	265	879
Stage 1	-	-	-	-	-	-	619	611	0	464	491	-
Stage 2	-	-	-	-	-	-	546	490	0	778	611	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1253	-	-	1145	-	-	242	227	-	264	228	879
Mov Cap-2 Maneuver	-	-	-	-	-	-	242	227	-	264	228	-
Stage 1	-	-	-	-	-	-	617	609	-	463	424	-
Stage 2	-	-	-	-	-	-	469	423	-	774	609	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0.1		3.5		29.6		16	
HCM LOS					D		C	

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	242	-	1253	-	-	1145	-	-	333
HCM Lane V/C Ratio	0.404	-	0.004	-	-	0.136	-	-	0.02
HCM Control Delay (s)	29.6	0	7.9	-	-	8.6	-	-	16
HCM Lane LOS	D	A	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	1.8	-	0	-	-	0.5	-	-	0.1

OPENING YEAR WITH PROJECT CONDITIONS
PM PEAK HOUR

Synchro 10 Report

Lanes and Geometrics
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
09/27/2018

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		275	75	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.850		0.850			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1583	1417	1667	1417	1583	1667
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1583	1417	1667	1417	1583	1667
Link Speed (mph)	30		30		30	
Link Distance (ft)	624		1463		921	
Travel Time (s)	14.2		33.3		20.9	

Intersection Summary						
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Area Type: Other

OPENING YEAR WITH PROJECT CONDITIONS
PM PEAK HOUR

Synchro 10 Report

Volume
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
09/27/2018







						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (vph)	73	166	164	127	192	75
Future Volume (vph)	73	166	164	127	192	75
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	87	198	195	151	229	89
Shared Lane Traffic (%)						
Lane Group Flow (vph)	87	198	195	151	229	89
Intersection Summary						

OPENING YEAR WITH PROJECT CONDITIONS
PM PEAK HOUR

Synchro 10 Report

HCM 2010 TWSC
2: TIOGA RD (SR-120) & PROJECT SITE ACCESS

TIOGA INN TIA
09/27/2018

Intersection						
Int Delay, s/veh	6.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	73	166	164	127	192	75
Future Vol, veh/h	73	166	164	127	192	75
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	275	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	14	14	14	14	14	14
Mvmt Flow	87	198	195	151	229	89

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	742	195	0	0	346
Stage 1	195	-	-	-	-
Stage 2	547	-	-	-	-
Critical Hdwy	6.54	6.34	-	-	4.24
Critical Hdwy Stg 1	5.54	-	-	-	-
Critical Hdwy Stg 2	5.54	-	-	-	-
Follow-up Hdwy	3.626	3.426	-	-	2.326
Pot Cap-1 Maneuver	366	817	-	-	1149
Stage 1	810	-	-	-	-
Stage 2	556	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	293	817	-	-	1149
Mov Cap-2 Maneuver	293	-	-	-	-
Stage 1	649	-	-	-	-
Stage 2	556	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.3	0	6.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	293	817	1149	-
HCM Lane V/C Ratio	-	-	0.297	0.242	0.199	-
HCM Control Delay (s)	-	-	22.4	10.8	8.9	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	1.2	0.9	0.7	-

OPENING YEAR WITH PROJECT CONDITIONS
PM PEAK HOUR

Synchro 10 Report

APPENDIX G
Forecast Opening Year (2023) With Project Conditions With
Traffic Signal LOS Analysis Worksheets

Lanes and Geometrics

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

10/04/2018

	↖	→	↘	↙	←	↖	↙	↗	↘	↖	↙	↗
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗	↘	↘	↗↗			↘	↘		↗↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	400		400	270		0	0		50	0		0
Storage Lanes	1		1	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.999				0.850		0.865	
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1583	3034	1417	1583	3031	0	0	1583	1417	0	1442	0
Flt Permitted	0.950			0.950				0.756				
Satd. Flow (perm)	1583	3034	1417	1583	3031	0	0	1260	1417	0	1442	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			191		1				191		555	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1553			1621			921			296	
Travel Time (s)		35.3			36.8			20.9			6.7	

Intersection Summary

Area Type: Other

OPENING YEAR WITH PROJECT CONDITIONS - WITH TRAFFIC SIGNAL
AM PEAK HOUR

Synchro 10 Report

Volume

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

10/04/2018

	↖	→	↘	↙	←	↖	↙	↗	↘	↖	↙	↗
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	1	172	97	155	259	2	67	0	102	0	0	3
Future Volume (vph)	1	172	97	155	259	2	67	0	102	0	0	3
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	19%	14%	14%	19%	14%	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	1	195	110	176	294	2	76	0	116	0	0	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	195	110	176	296	0	0	76	116	0	3	0

Intersection Summary

OPENING YEAR WITH PROJECT CONDITIONS - WITH TRAFFIC SIGNAL
AM PEAK HOUR

Synchro 10 Report

Timings

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

10/04/2018

	↖	→	↘	↙	←	↖	↗	↘	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT
Lane Configurations	↖	↖↗	↖	↖	↖↗	↖	↖	↖	↖↗
Traffic Volume (vph)	1	172	97	155	259	67	0	102	0
Future Volume (vph)	1	172	97	155	259	67	0	102	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4		3	8		2		6
Permitted Phases			4			2		2	
Detector Phase	7	4	4	3	8	2	2	2	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	9.5	22.5	22.5	15.0	28.0	22.5	22.5	22.5	22.5
Total Split (%)	15.8%	37.5%	37.5%	25.0%	46.7%	37.5%	37.5%	37.5%	37.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	6.1	9.0	9.0	10.1	17.7	13.0	13.0	13.0	13.0
Actuated g/C Ratio	0.17	0.26	0.26	0.29	0.50	0.37	0.37	0.37	0.37
v/c Ratio	0.00	0.25	0.22	0.39	0.19	0.16	0.18	0.00	0.00
Control Delay	18.0	14.5	1.9	16.7	6.7	15.2	1.7	0.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.0	14.5	1.9	16.7	6.7	15.2	1.7	0.0	0.0
LOS	B	B	A	B	A	B	A	A	A
Approach Delay		10.0			10.4		7.1		
Approach LOS		A			B		A		

Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 35.2

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.39

Intersection Signal Delay: 9.6

Intersection LOS: A

Intersection Capacity Utilization 35.0%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

↖ Ø2	↖ Ø3	→ Ø4
22.5 s	15 s	22.5 s
↘ Ø6	↖ Ø7	← Ø8
22.5 s	9.5 s	28 s

OPENING YEAR WITH PROJECT CONDITIONS - WITH TRAFFIC SIGNAL
AM PEAK HOUR

Synchro 10 Report

Queues

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

10/04/2018

	↖	→	↘	↙	←	↖	↗	↘	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT	
Lane Group Flow (vph)	1	195	110	176	296	76	116	3	
v/c Ratio	0.00	0.25	0.22	0.39	0.19	0.16	0.18	0.00	
Control Delay	18.0	14.5	1.9	16.7	6.7	15.2	1.7	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	18.0	14.5	1.9	16.7	6.7	15.2	1.7	0.0	
Queue Length 50th (ft)	0	18	0	32	12	14	0	0	
Queue Length 95th (ft)	3	42	8	85	49	42	10	0	
Internal Link Dist (ft)		1473			1541	841		216	
Turn Bay Length (ft)	400		400	270			50		
Base Capacity (vph)	272	1693	875	571	2027	703	875	1050	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.00	0.12	0.13	0.31	0.15	0.11	0.13	0.00	
Intersection Summary									

OPENING YEAR WITH PROJECT CONDITIONS - WITH TRAFFIC SIGNAL
AM PEAK HOUR

Synchro 10 Report

HCM 2010 Signalized Intersection Summary
1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA
10/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔↔	↔	↔	↔↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	1	172	97	155	259	2	67	0	102	0	0	3
Future Volume (veh/h)	1	172	97	155	259	2	67	0	102	0	0	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1597	1667	1667	1597	1900	1900	1667	1667	1900	1667	1900
Adj Flow Rate, veh/h	1	195	0	176	294	2	76	0	0	0	0	3
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	14	19	14	14	19	19	14	14	14	14	14	14
Cap, veh/h	6	545	255	221	980	7	495	0	261	0	0	261
Arrive On Green	0.00	0.18	0.00	0.14	0.32	0.32	0.18	0.00	0.00	0.00	0.00	0.18
Sat Flow, veh/h	1587	3034	1417	1587	3090	21	1248	0	1417	0	0	1417
Grp Volume(v), veh/h	1	195	0	176	144	152	76	0	0	0	0	3
Grp Sat Flow(s), veh/h/ln	1587	1517	1417	1587	1517	1593	1248	0	1417	0	0	1417
Q Serve(g_s), s	0.0	1.5	0.0	2.9	1.9	2.0	1.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	1.5	0.0	2.9	1.9	2.0	1.5	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	6	545	255	221	481	505	495	0	261	0	0	261
V/C Ratio(X)	0.17	0.36	0.00	0.80	0.30	0.30	0.15	0.00	0.00	0.00	0.00	0.01
Avail Cap(c_a), veh/h	292	2011	939	614	1313	1379	1098	0	939	0	0	939
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	13.5	9.8	0.0	11.3	7.0	7.0	9.7	0.0	0.0	0.0	0.0	9.1
Incr Delay (d2), s/veh	13.3	0.4	0.0	6.5	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.7	0.0	1.7	0.8	0.9	0.5	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	26.8	10.2	0.0	17.8	7.3	7.3	9.8	0.0	0.0	0.0	0.0	9.1
LnGrp LOS	C	B		B	A	A	A					A
Approach Vol, veh/h	196		472				76				3	
Approach Delay, s/veh	10.2		11.2				9.8				9.1	
Approach LOS	B		B				A				A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		9.5	8.3	9.4		9.5	4.5	13.1				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.0	10.5	18.0		18.0	5.0	23.5				
Max Q Clear Time (g_c+I1), s		3.5	4.9	3.5		2.0	2.0	4.0				
Green Ext Time (p_c), s		0.2	0.2	1.0		0.0	0.0	1.6				
Intersection Summary												
HCM 2010 Ctrl Delay			10.8									
HCM 2010 LOS			B									

OPENING YEAR WITH PROJECT CONDITIONS - WITH TRAFFIC SIGNAL
AM PEAK HOUR

Synchro 10 Report

Lanes and Geometrics
1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA
09/27/2018

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔↔	↔	↔	↔↔	↔	↔	↔	↔	↔	↔	↔
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%		0%				0%				0%	
Storage Length (ft)	400		400	270		0	0		50	0		0
Storage Lanes	1		1	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.850				0.850				0.899	
Flt Protected	0.950			0.950			0.950					0.988
Satd. Flow (prot)	1583	3034	1417	1583	3034	0	0	1583	1417	0	1480	0
Flt Permitted	0.950			0.950				0.750				0.930
Satd. Flow (perm)	1583	3034	1417	1583	3034	0	0	1250	1417	0	1393	0
Right Turn on Red			Yes				Yes				Yes	
Satd. Flow (RTOR)			191				191				191	
Link Speed (mph)	30		30				30				30	
Link Distance (ft)	1553		1621				921				296	
Travel Time (s)	35.3		36.8				20.9				6.7	

Intersection Summary

Area Type: Other

OPENING YEAR WITH PROJECT CONDITIONS - WITH TRAFFIC SIGNAL
MID-DAY PEAK HOUR

Synchro 10 Report

Volume TIOGA INN TIA
1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395 09/27/2018

	↖	→	↗	↙	←	↖	↗	↙	↘	↗	↘	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	6	300	94	180	274	0	94	0	112	2	0	7
Future Volume (vph)	6	300	94	180	274	0	94	0	112	2	0	7
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	19%	14%	14%	19%	14%	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	8	375	118	225	343	0	118	0	140	3	0	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	375	118	225	343	0	0	118	140	0	12	0

Intersection Summary

OPENING YEAR WITH PROJECT CONDITIONS - WITH TRAFFIC SIGNAL
MID-DAY PEAK HOUR

Synchro 10 Report

Timings TIOGA INN TIA
1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395 09/27/2018

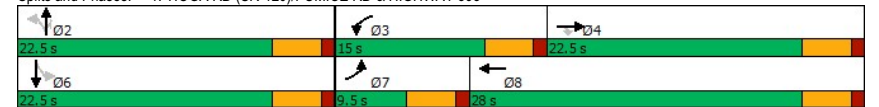
	↖	→	↗	↙	←	↖	↗	↙	↘	↗	↘	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT		
Lane Configurations	↖	↖↗	↗	↖	↖↗		↖	↗	↖	↖↗		↖↗
Traffic Volume (vph)	6	300	94	180	274	94	0	112	2	0		
Future Volume (vph)	6	300	94	180	274	94	0	112	2	0		
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA		
Protected Phases	7	4		3	8		2			6		
Permitted Phases			4			2		2	6			
Detector Phase	7	4	4	3	8	2	2	2	6	6		
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	22.5		
Total Split (s)	9.5	22.5	22.5	15.0	28.0	22.5	22.5	22.5	22.5	22.5		
Total Split (%)	15.8%	37.5%	37.5%	25.0%	46.7%	37.5%	37.5%	37.5%	37.5%	37.5%		
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5		
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Recall Mode	None	None	None	None	None	Min	Min	Min	Min	Min		
Act Effct Green (s)	5.1	11.6	11.6	10.3	25.0		9.8	9.8		9.8		
Actuated g/C Ratio	0.11	0.25	0.25	0.23	0.55		0.21	0.21		0.21		
v/c Ratio	0.04	0.49	0.23	0.63	0.21		0.44	0.31		0.03		
Control Delay	22.8	17.2	2.0	29.9	7.2		21.9	3.4		0.1		
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0		
Total Delay	22.8	17.2	2.0	29.9	7.2		21.9	3.4		0.1		
LOS	C	B	A	C	A		C	A		A		
Approach Delay		13.7			16.2		11.9			0.1		
Approach LOS		B			B		B			A		

Intersection Summary

Cycle Length: 60
Actuated Cycle Length: 45.6
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.63
Intersection Signal Delay: 14.3
Intersection Capacity Utilization 41.4%
Analysis Period (min) 15

Intersection LOS: B
ICU Level of Service A

Splits and Phases: 1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395



OPENING YEAR WITH PROJECT CONDITIONS - WITH TRAFFIC SIGNAL
MID-DAY PEAK HOUR

Synchro 10 Report

Queues

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

09/27/2018

	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	8	375	118	225	343	118	140	12
v/c Ratio	0.04	0.49	0.23	0.63	0.21	0.44	0.31	0.03
Control Delay	22.8	17.2	2.0	29.9	7.2	21.9	3.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.8	17.2	2.0	29.9	7.2	21.9	3.4	0.1
Queue Length 50th (ft)	2	43	0	52	17	27	0	0
Queue Length 95th (ft)	12	75	4	#145	57	62	11	0
Internal Link Dist (ft)	1473			1541			216	
Turn Bay Length (ft)	400			270			50	
Base Capacity (vph)	178	1231	688	374	1718	507	688	678
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.30	0.17	0.60	0.20	0.23	0.20	0.02

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

OPENING YEAR WITH PROJECT CONDITIONS - WITH TRAFFIC SIGNAL
MID-DAY PEAK HOUR

Synchro 10 Report

HCM 2010 Signalized Intersection Summary

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

09/27/2018

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱	↱	↰	↱	↱		↰	↱	↰	↱	↱
Traffic Volume (veh/h)	6	300	94	180	274	0	94	0	112	2	0	7
Future Volume (veh/h)	6	300	94	180	274	0	94	0	112	2	0	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1597	1667	1667	1597	1900	1900	1667	1667	1900	1667	1900
Adj Flow Rate, veh/h	8	375	0	225	342	0	118	0	0	2	0	9
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	14	19	14	14	19	19	14	14	14	14	14	14
Cap, veh/h	17	707	330	283	1215	0	433	0	230	153	23	189
Arrive On Green	0.01	0.23	0.00	0.18	0.40	0.00	0.16	0.00	0.00	0.16	0.00	0.16
Sat Flow, veh/h	1587	3034	1417	1587	3113	0	1266	0	1417	115	144	1165
Grp Volume(v), veh/h	8	375	0	225	342	0	118	0	0	11	0	0
Grp Sat Flow(s),veh/h/ln	1587	1517	1417	1587	1517	0	1266	0	1417	1424	0	0
Q Serve(g_s), s	0.2	3.4	0.0	4.3	2.4	0.0	2.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	3.4	0.0	4.3	2.4	0.0	2.7	0.0	0.0	0.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.18		0.82
Lane Grp Cap(c), veh/h	17	707	330	283	1215	0	433	0	230	365	0	0
V/C Ratio(X)	0.47	0.53	0.00	0.80	0.28	0.00	0.27	0.00	0.00	0.03	0.00	0.00
Avail Cap(c_a), veh/h	251	1726	806	527	2254	0	943	0	806	929	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.6	10.6	0.0	12.4	6.4	0.0	12.2	0.0	0.0	11.2	0.0	0.0
Incr Delay (d2), s/veh	18.8	0.6	0.0	5.1	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.5	0.0	2.3	1.0	0.0	1.0	0.0	0.0	0.1	0.0	0.0
LnGrp Delay(d),s/veh	34.3	11.2	0.0	17.5	6.5	0.0	12.5	0.0	0.0	11.2	0.0	0.0
LnGrp LOS	C	B		B	A		B			B		
Approach Vol, veh/h	383			567			118			11		
Approach Delay, s/veh	11.7			10.9			12.5			11.2		
Approach LOS	B			B			B			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		9.6	10.1	11.9		9.6	4.8	17.2				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.0	10.5	18.0		18.0	5.0	23.5				
Max Q Clear Time (g_c+I1), s		4.7	6.3	5.4		2.2	2.2	4.4				
Green Ext Time (p_c), s		0.4	0.3	2.0		0.0	0.0	2.1				
Intersection Summary												
HCM 2010 Ctrl Delay	11.4											
HCM 2010 LOS	B											

OPENING YEAR WITH PROJECT CONDITIONS - WITH TRAFFIC SIGNAL
MID-DAY PEAK HOUR

Synchro 10 Report

Lanes and Geometrics

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

09/27/2018

	↖	→	↘	↙	←	↖	↙	↗	↘	↖	↙	↗
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗	↘	↘	↗↗			↘	↘		↗↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	400		400	270		0	0		50	0		0
Storage Lanes	1		1	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.998				0.850		0.955	
Flt Protected	0.950			0.950			0.953				0.976	
Satd. Flow (prot)	1583	3034	1417	1583	3029	0	0	1588	1417	0	1553	0
Flt Permitted	0.950			0.950			0.725				0.878	
Satd. Flow (perm)	1583	3034	1417	1583	3029	0	0	1208	1417	0	1397	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			191		3				201		2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1553			1621			921			296	
Travel Time (s)		35.3			36.8			20.9			6.7	

Intersection Summary

Area Type: Other

OPENING YEAR WITH PROJECT CONDITIONS - WITH TRAFFIC SIGNAL
PM PEAK HOUR

Synchro 10 Report

Volume

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

09/27/2018

	↖	→	↘	↙	←	↖	↙	↗	↘	↖	↙	↗
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	4	299	90	142	206	3	88	1	183	3	1	2
Future Volume (vph)	4	299	90	142	206	3	88	1	183	3	1	2
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	19%	14%	14%	19%	14%	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	4	329	99	156	226	3	97	1	201	3	1	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	329	99	156	229	0	0	98	201	0	6	0

Intersection Summary

OPENING YEAR WITH PROJECT CONDITIONS - WITH TRAFFIC SIGNAL
PM PEAK HOUR

Synchro 10 Report

Timings

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

09/27/2018

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↰	↰	↰	↰	↰	↰	↰	↰	↰	↰
Traffic Volume (vph)	4	299	90	142	206	88	1	183	3	1
Future Volume (vph)	4	299	90	142	206	88	1	183	3	1
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	7	4		3	8		2		6	
Permitted Phases			4			2		2	6	
Detector Phase	7	4	4	3	8	2	2	2	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	9.5	22.5	22.5	15.0	28.0	22.5	22.5	22.5	22.5	22.5
Total Split (%)	15.8%	37.5%	37.5%	25.0%	46.7%	37.5%	37.5%	37.5%	37.5%	37.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	None	Min	Min	Min	Min	Min
Act Effect Green (s)	5.6	10.6	10.6	9.1	19.3		9.3	9.3		9.3
Actuated g/C Ratio	0.14	0.26	0.26	0.23	0.48		0.23	0.23		0.23
v/c Ratio	0.02	0.41	0.19	0.43	0.16		0.35	0.42		0.02
Control Delay	21.0	15.5	1.2	20.9	6.9		19.3	6.1		13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	21.0	15.5	1.2	20.9	6.9		19.3	6.1		13.0
LOS	C	B	A	C	A		B	A		B
Approach Delay		12.3			12.6		10.4			13.0
Approach LOS		B			B		B			B

Intersection Summary

Cycle Length: 60
Actuated Cycle Length: 40
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.43
Intersection Signal Delay: 11.9
Intersection Capacity Utilization 36.0%
Analysis Period (min) 15
Intersection LOS: B
ICU Level of Service A

Splits and Phases: 1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

↰ Ø2	↰ Ø3	→ Ø4
22.5 s	15 s	22.5 s
↰ Ø6	↰ Ø7	↰ Ø8
22.5 s	9.5 s	28 s

OPENING YEAR WITH PROJECT CONDITIONS - WITH TRAFFIC SIGNAL

PM PEAK HOUR

Synchro 10 Report

Queues

1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA

09/27/2018

	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	4	329	99	156	229	98	201	6
v/c Ratio	0.02	0.41	0.19	0.43	0.16	0.35	0.42	0.02
Control Delay	21.0	15.5	1.2	20.9	6.9	19.3	6.1	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.0	15.5	1.2	20.9	6.9	19.3	6.1	13.0
Queue Length 50th (ft)	1	34	0	31	10	20	0	1
Queue Length 95th (ft)	9	73	4	94	43	59	40	8
Internal Link Dist (ft)		1473			1541	841		216
Turn Bay Length (ft)	400		400	270			50	
Base Capacity (vph)	220	1519	805	462	1954	605	810	700
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.22	0.12	0.34	0.12	0.16	0.25	0.01
Intersection Summary								

OPENING YEAR WITH PROJECT CONDITIONS - WITH TRAFFIC SIGNAL

PM PEAK HOUR

Synchro 10 Report

HCM 6th Signalized Intersection Summary
1: TIOGA RD (SR-120)/PUMICE RD & HIGHWAY 395

TIOGA INN TIA
09/27/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	299	90	142	206	3	88	1	183	3	1	2
Future Volume (veh/h)	4	299	90	142	206	3	88	1	183	3	1	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1693	1618	1693	1693	1618	1618	1693	1693	1693	1693	1693	1693
Adj Flow Rate, veh/h	4	329	0	156	226	3	97	1	0	3	1	2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	14	19	14	14	19	19	14	14	14	14	14	14
Cap, veh/h	9	683		201	1061	14	477	4		274	90	86
Arrive On Green	0.01	0.22	0.00	0.12	0.34	0.34	0.18	0.18	0.00	0.18	0.18	0.18
Sat Flow, veh/h	1612	3075	1434	1612	3107	41	1269	20	1434	472	508	490
Grp Volume(v), veh/h	4	329	0	156	112	117	98	0	0	6	0	0
Grp Sat Flow(s),veh/h/ln	1612	1537	1434	1612	1537	1611	1289	0	1434	1470	0	0
Q Serve(g_s), s	0.1	2.6	0.0	2.7	1.5	1.5	1.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	2.6	0.0	2.7	1.5	1.5	1.9	0.0	0.0	0.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.03	0.99		1.00	0.50		0.33
Lane Grp Cap(c), veh/h	9	683		201	525	550	480	0		450	0	0
V/C Ratio(X)	0.45	0.48		0.78	0.21	0.21	0.20	0.00		0.01	0.00	0.00
Avail Cap(c_a), veh/h	284	1954		597	1275	1336	1069	0		1086	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.0	9.6	0.0	12.0	6.6	6.6	10.4	0.0	0.0	9.6	0.0	0.0
Incr Delay (d2), s/veh	32.4	0.5	0.0	6.3	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.6	0.0	1.0	0.3	0.3	0.4	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.4	10.1	0.0	18.3	6.8	6.8	10.6	0.0	0.0	9.7	0.0	0.0
LnGrp LOS	D	B		B	A	A	B	A		A	A	A
Approach Vol, veh/h	333	A		385			98	A		6		
Approach Delay, s/veh	10.6			11.5			10.6			9.7		
Approach LOS	B			B			B			A		
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	9.5	8.0	10.8		9.5	4.7	14.2					
Change Period (Y+Rc), s	4.5	4.5	4.5		4.5	4.5	4.5					
Max Green Setting (Gmax), s	18.0	10.5	18.0		18.0	5.0	23.5					
Max Q Clear Time (g_c+I1), s	3.9	4.7	4.6		2.1	2.1	3.5					
Green Ext Time (p_c), s	0.3	0.2	1.7		0.0	0.0	1.2					

Intersection Summary

HCM 6th Ctrl Delay 11.0
HCM 6th LOS B

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

APPENDIX H
Forecast Opening Year (2023) With Project Conditions With
Single-Lane Roundabout LOS Analysis Worksheets

INTERSECTION SUMMARY

Site: OY+P (AM)

HIGHWAY 395 (NS) at TIOGA ROAD (SR-120) (EW)
Roundabout

Intersection Performance - Hourly Values		
Performance Measure	Vehicles	Persons
Travel Speed (Average)	30.7 mph	30.7 mph
Travel Distance (Total)	612.0 veh-mi/h	734.4 pers-mi/h
Travel Time (Total)	19.9 veh-h/h	23.9 pers-h/h
Demand Flows (Total)	978 veh/h	1174 pers/h
Percent Heavy Vehicles (Demand)	16.5 %	
Degree of Saturation	0.536	
Practical Spare Capacity	58.7 %	
Effective Intersection Capacity	1826 veh/h	
Control Delay (Total)	2.70 veh-h/h	3.24 pers-h/h
Control Delay (Average)	9.9 sec	9.9 sec
Control Delay (Worst Lane)	11.4 sec	
Control Delay (Worst Movement)	11.4 sec	11.4 sec
Geometric Delay (Average)	0.0 sec	
Stop-Line Delay (Average)	9.9 sec	
Idling Time (Average)	8.2 sec	
Intersection Level of Service (LOS)	LOS A	
95% Back of Queue - Vehicles (Worst Lane)	2.6 veh	
95% Back of Queue - Distance (Worst Lane)	74.9 ft	
Queue Storage Ratio (Worst Lane)	0.06	
Total Effective Stops	241 veh/h	290 pers/h
Effective Stop Rate	0.25 per veh	0.25 per pers
Proportion Queued	0.36	0.36
Performance Index	31.5	31.5
Cost (Total)	411.60 \$/h	411.60 \$/h
Fuel Consumption (Total)	41.2 gal/h	
Carbon Dioxide (Total)	377.7 kg/h	
Hydrocarbons (Total)	0.029 kg/h	
Carbon Monoxide (Total)	0.372 kg/h	
NOx (Total)	1.670 kg/h	

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Intersection LOS value for Vehicles is based on average delay for all vehicle movements.
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Intersection Performance - Annual Values		
Performance Measure	Vehicles	Persons
Demand Flows (Total)	469,636 veh/y	563,564 pers/y
Delay	1,296 veh-h/y	1,555 pers-h/y
Effective Stops	115,916 veh/y	139,099 pers/y
Travel Distance	293,769 veh-mi/y	352,523 pers-mi/y
Travel Time	9,557 veh-h/y	11,468 pers-h/y
Cost	197,568 \$/y	197,568 \$/y
Fuel Consumption	19,757 gal/y	
Carbon Dioxide	181,293 kg/y	
Hydrocarbons	14 kg/y	
Carbon Monoxide	179 kg/y	
NOx	801 kg/y	

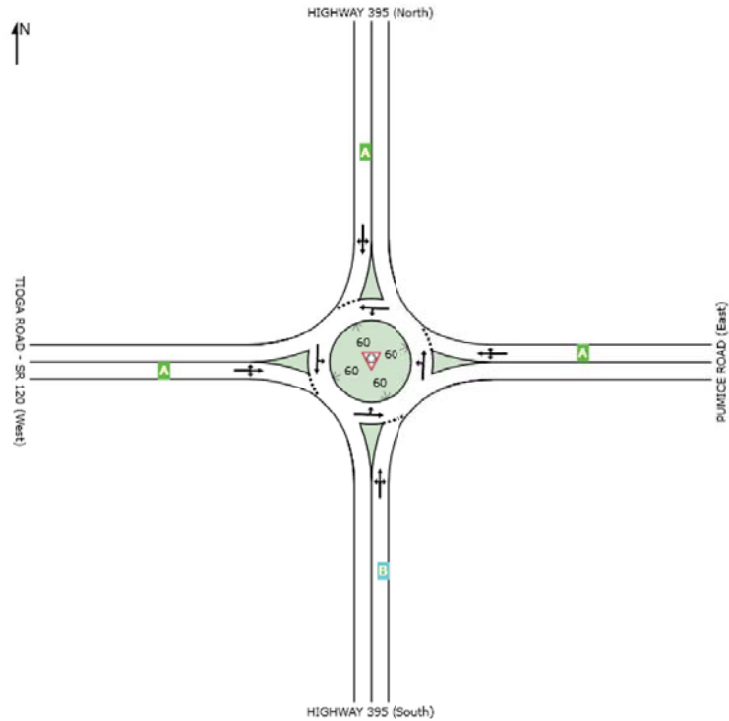
LEVEL OF SERVICE

Site: OY+P (AM)

HIGHWAY 395 (NS) at TIOGA ROAD (SR-120) (EW)
Roundabout

All Movement Classes

	South	East	North	West	Intersection
LOS	B	A	A	A	A



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

INTERSECTION SUMMARY

Site: OY+P (MD)

HIGHWAY 395 (NS) at TIOGA ROAD (SR-120) (EW)
Roundabout

Intersection Performance - Hourly Values		
Performance Measure	Vehicles	Persons
Travel Speed (Average)	28.4 mph	28.4 mph
Travel Distance (Total)	838.8 veh-mi/h	1006.6 pers-mi/h
Travel Time (Total)	29.5 veh-h/h	35.4 pers-h/h
Demand Flows (Total)	1340 veh/h	1608 pers/h
Percent Heavy Vehicles (Demand)	16.7 %	
Degree of Saturation	0.680	
Practical Spare Capacity	25.0 %	
Effective Intersection Capacity	1970 veh/h	
Control Delay (Total)	5.93 veh-h/h	7.11 pers-h/h
Control Delay (Average)	15.9 sec	15.9 sec
Control Delay (Worst Lane)	17.8 sec	
Control Delay (Worst Movement)	17.8 sec	17.8 sec
Geometric Delay (Average)	0.0 sec	
Stop-Line Delay (Average)	15.9 sec	
Idling Time (Average)	12.9 sec	
Intersection Level of Service (LOS)	LOS C	
95% Back of Queue - Vehicles (Worst Lane)	4.3 veh	
95% Back of Queue - Distance (Worst Lane)	121.8 ft	
Queue Storage Ratio (Worst Lane)	0.10	
Total Effective Stops	654 veh/h	785 pers/h
Effective Stop Rate	0.49 per veh	0.49 per pers
Proportion Queued	0.55	
Performance Index	54.9	54.9
Cost (Total)	608.37 \$/h	608.37 \$/h
Fuel Consumption (Total)	58.4 gal/h	
Carbon Dioxide (Total)	536.1 kg/h	
Hydrocarbons (Total)	0.043 kg/h	
Carbon Monoxide (Total)	0.531 kg/h	
NOx (Total)	2.380 kg/h	

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Intersection LOS value for Vehicles is based on average delay for all vehicle movements.
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Intersection Performance - Annual Values		
Performance Measure	Vehicles	Persons
Demand Flows (Total)	643,200 veh/y	771,840 pers/y
Delay	2,846 veh-h/y	3,415 pers-h/y
Effective Stops	314,125 veh/y	376,950 pers/y
Travel Distance	402,629 veh-mi/y	483,155 pers-mi/y
Travel Time	14,162 veh-h/y	16,995 pers-h/y
Cost	292,019 \$/y	292,019 \$/y
Fuel Consumption	28,048 gal/y	
Carbon Dioxide	257,348 kg/y	
Hydrocarbons	21 kg/y	
Carbon Monoxide	255 kg/y	
NOx	1,142 kg/y	

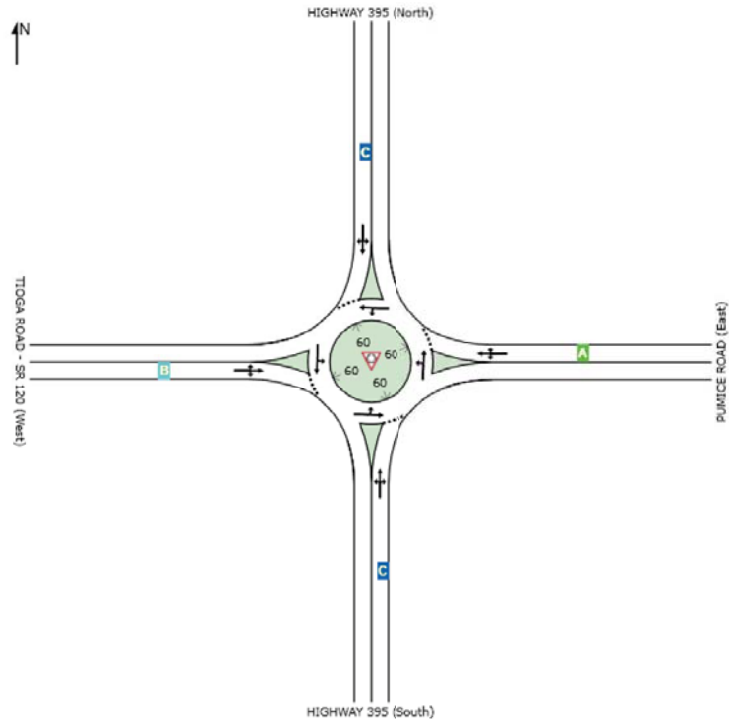
LEVEL OF SERVICE

Site: OY+P (MD)

HIGHWAY 395 (NS) at TIOGA ROAD (SR-120) (EW)
Roundabout

All Movement Classes

	South	East	North	West	Intersection
LOS	C	A	C	B	C



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

INTERSECTION SUMMARY

Site: OY+P (PM)

HIGHWAY 395 (NS) at TIOGA ROAD (SR-120) (EW)
Roundabout

Intersection Performance - Hourly Values		
Performance Measure	Vehicles	Persons
Travel Speed (Average)	30.2 mph	30.2 mph
Travel Distance (Total)	701.7 veh-mi/h	842.1 pers-mi/h
Travel Time (Total)	23.2 veh-h/h	27.9 pers-h/h
Demand Flows (Total)	1123 veh/h	1348 pers/h
Percent Heavy Vehicles (Demand)	16.5 %	
Degree of Saturation	0.541	
Practical Spare Capacity	57.2 %	
Effective Intersection Capacity	2078 veh/h	
Control Delay (Total)	3.54 veh-h/h	4.25 pers-h/h
Control Delay (Average)	11.4 sec	11.4 sec
Control Delay (Worst Lane)	12.4 sec	
Control Delay (Worst Movement)	12.4 sec	12.4 sec
Geometric Delay (Average)	0.0 sec	
Stop-Line Delay (Average)	11.4 sec	
Idling Time (Average)	9.2 sec	
Intersection Level of Service (LOS)	LOS B	
95% Back of Queue - Vehicles (Worst Lane)	2.5 veh	
95% Back of Queue - Distance (Worst Lane)	70.6 ft	
Queue Storage Ratio (Worst Lane)	0.06	
Total Effective Stops	402 veh/h	482 pers/h
Effective Stop Rate	0.36 per veh	0.36 per pers
Proportion Queued	0.44	
Performance Index	38.6	38.6
Cost (Total)	480.15 \$/h	480.15 \$/h
Fuel Consumption (Total)	47.6 gal/h	
Carbon Dioxide (Total)	436.3 kg/h	
Hydrocarbons (Total)	0.034 kg/h	
Carbon Monoxide (Total)	0.431 kg/h	
NOx (Total)	1.929 kg/h	

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Intersection LOS value for Vehicles is based on average delay for all vehicle movements.
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Intersection Performance - Annual Values		
Performance Measure	Vehicles	Persons
Demand Flows (Total)	539,077 veh/y	646,892 pers/y
Delay	1,701 veh-h/y	2,041 pers-h/y
Effective Stops	192,747 veh/y	231,296 pers/y
Travel Distance	336,826 veh-mi/y	404,191 pers-mi/y
Travel Time	11,159 veh-h/y	13,390 pers-h/y
Cost	230,473 \$/y	230,473 \$/y
Fuel Consumption	22,828 gal/y	
Carbon Dioxide	209,444 kg/y	
Hydrocarbons	16 kg/y	
Carbon Monoxide	207 kg/y	
NOx	926 kg/y	

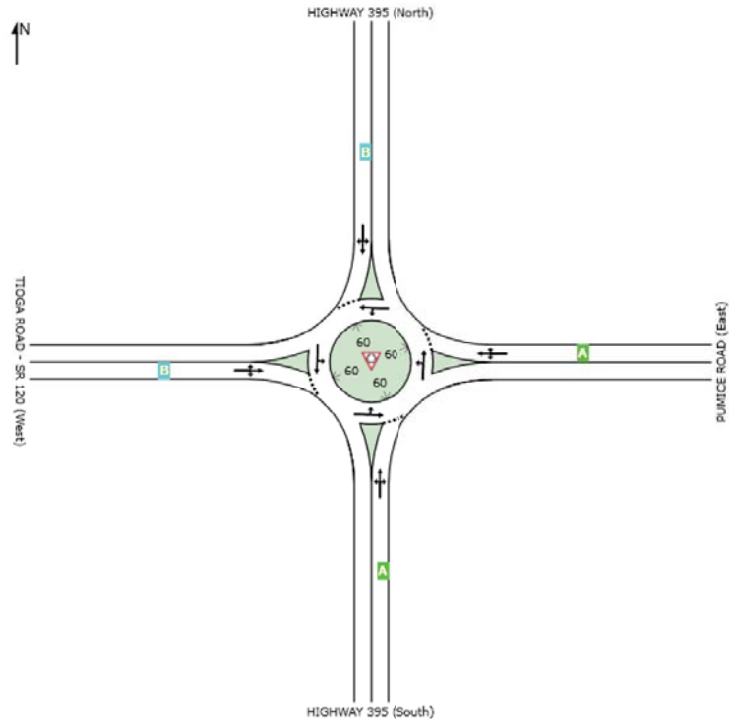
LEVEL OF SERVICE

Site: OY+P (PM)

HIGHWAY 395 (NS) at TIOGA ROAD (SR-120) (EW)
Roundabout

All Movement Classes

	South	East	North	West	Intersection
LOS	A	A	B	B	B



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

APPENDIX M

Air Quality and Greenhouse Gases Impact Analysis By Giroux & Associates

AIR QUALITY and GHG IMPACT ANALYSES

TIOGA INN WORKFORCE HOUSING PROJECT

MONO COUNTY, CALIFORNIA

Prepared for:

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Attn: Sandra Bauer
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Date:

November 29, 2018

Project No.: P18-023 AQ

AIR QUALITY IMPACT

STANDARDS OF SIGNIFICANCE

Air quality impacts are considered “significant” if they cause clean air standards to be violated where they are currently met, or if they “substantially” contribute to an existing violation of standards. Any substantial emissions of air contaminants for which there is no safe exposure, or nuisance emissions such as dust or odors, would also be considered a significant impact.

Appendix G of the California CEQA Guidelines offers the following five tests of air quality impact significance. A project would have a potentially significant impact if it:

- a. Conflicts with or obstructs implementation of the applicable air quality plan.
- b. Violates any air quality standard or contributes substantially to an existing or projected air quality violation.
- c. Results in a cumulatively considerable net increase of any criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- d. Exposes sensitive receptors to substantial pollutant concentrations.
- e. Creates objectionable odors affecting a substantial number of people.

Primary Pollutants

Air quality impacts generally occur on two scales of motion. Near an individual source of emissions or a collection of sources such as a crowded intersection or parking lot, levels of those pollutants that are emitted in their already unhealthful form will be highest. Carbon monoxide (CO) is an example of such a pollutant. Primary pollutant impacts can generally be evaluated directly in comparison to appropriate clean air standards. Violations of these standards where they are currently met, or a measurable worsening of an existing or future violation, would be considered a significant impact. Many particulates, especially fugitive dust emissions, are also primary pollutants.

Secondary Pollutants

Many pollutants, however, require time to transform from a more benign form to a more unhealthful contaminant. Their impact occurs regionally far from the source. Their incremental regional impact is minute on an individual basis and cannot be quantified except through complex photochemical computer models. Analysis of significance of such emissions is based upon a specified amount of emissions (pounds, tons, etc.) even though there is no way to translate those emissions directly into a corresponding ambient air quality impact.

The project is located within the Great Basin Unified Air Pollution Control District (GBUAPCD). However, the GBUAPCD has not developed numerical thresholds that define a “substantial” increase in air pollution emissions. However, CEQA procedure will allow reliance on standards or thresholds promulgated by other agencies. For purpose of this project, the CEQA significance thresholds used by the South Coast Air Quality Management District (SCAQMD) have been adopted as representative significance thresholds for this project. Projects with daily emissions that exceed any of the following emission thresholds are considered significant:

Table 1
Adopted Emissions Significance Thresholds (lbs/day)

Pollutant	Construction	Operations
ROG	75	55
NO _x	100	55
CO	550	550
PM-10	150	150
PM-2.5	55	55
SO _x	150	150
Lead	3	3

CONSTRUCTION ACTIVITY IMPACTS

The proposed project consists of the following elements:

- Workforce housing with 100 units, which includes approximately 150 bedrooms with a total capacity of 300 residents;
- An additional island to the existing gas station, adding a total of 4 vehicle fueling positions (2 two-sided fuel pumps);
- Modifications to the existing parking area layout and the existing access driveway and Caltrans right-of-way on Tioga Road (SR-120)
- Addition of a 30,000-gallon propane gas tank;
- Replacement of existing water storage tank with a newer and slightly larger water tank;
- Expansion of sewage leach field and new graywater treatment area.

CaleEMod was developed by the SCAQMD to provide a computer model by which to calculate both construction emissions and operational emissions from a variety of land use projects. It calculates both the daily maximum and annual average emissions for criteria pollutants as well as total or annual greenhouse gas (GHG) emissions. It has been adopted for use by most air pollution control districts in California.

Although exhaust emissions will result from on and off-site construction equipment, the exact types and numbers of equipment will vary among contractors such that such emissions cannot be quantified with certainty. However, estimated construction emissions were modeled using CalEEMod2016.3.2 to identify maximum daily emissions for each pollutant during project construction using typical equipment fleets for project activities. The proposed construction related activities are shown in Table 2. Each activity was modeled in CalEEMod with the indicated time frame and equipment fleet:

Table 2
CalEEMod Construction Activity Equipment Fleet
100 Workforce Housing Units and 4 Vehicle Fueling Positions

Grading 20 days	1 Excavator
	1 Grader
	1 Dozer
	3 Loader/Backhoes
Construction 230 days	1 Crane
	3 Forklifts
	1 Welder
	1 Gen Set
	3 Loader/Backhoes
	1 Welder

CalEEMod Construction Activity Equipment Fleet
Roadway and Parking Lot

Demolition 10 days	1 Concrete Saw
	1 Dozer
	1 Loader/Backhoe
Grade 20 days	1 Grader
	1 Dozer
	1 Loader/Backhoe
Pave 40 days	1 Mixer
	1 Paver
	1 Roller
	1 Pump

**CalEEMod Construction Activity Equipment Fleet
New Water Tank**

Excavate 1 week	1 Bobcat
	1 Loader/Backhoe
Pour Concrete Pad 1 week	1 Mixer
	1 Pump
	1 Roller
Install Tank 1 week	1 Crane
	1 Forklift
	1 Welder

**CalEEMod Construction Activity Equipment Fleet
New Propane Tank**

Excavate 1 week	1 Bobcat
	1 Loader/Backhoe
Pour Concrete Pad 1 week	1 Mixer
	1 Pump
	1 Roller
Install Tank 1 week	1 Crane
	1 Forklift
	1 Welder

**CalEEMod Construction Activity Equipment Fleet
Install Septic System**

Excavate 2 weeks	1 Bobcat
	1 Loader/Backhoe
Install 1 week	1 Crane
	1 Loader/Backhoe
	1 Welder
	1 Forklift

Utilizing the equipment fleet and durations shown in Table 2, the following worst-case daily construction emissions are calculated by CalEEMod as shown in Table 3. Emissions were calculated for year 2022 to accommodate an opening year of 2023.

Table 3
Construction Activity Emissions
Maximum Daily Emissions (pounds/day) 2022

Maximal Construction Emissions	ROG	NO_x	CO	SO₂	PM-10	PM-2.5
Housing and Gas Pumps	16.0	20.9	21.0	0.0	7.6	4.3
Roadways and Parking	1.4	15.5	10.3	0.0	6.9	4.0
New Water Tank	0.5	4.0	4.9	0.0	0.9	0.5
New Propane Tank	0.5	4.0	4.9	0.0	0.9	0.5
Septic System	0.6	5.6	5.3	0.0	0.9	0.5
Total 2022	19.0	50.0	46.4	<0.1	17.2	9.8
Significance Thresholds	75	100	550	150	150	55

Peak daily construction activity emissions are estimated to be well below SCAQMD CEQA thresholds without the need for added mitigation even if all activities occurred simultaneously. No additional adjustments were used.

Construction equipment exhaust contains carcinogenic compounds within the diesel exhaust particulates. The toxicity of diesel exhaust is evaluated relative to a 24-hour per day, 365 days per year, 70-year lifetime exposure. Air pollution agencies do not generally require the analysis of construction-related diesel emissions relative to health risk due to the short period for which the majority of diesel exhaust would occur. Health risk analyses are typically assessed over a 9-, 30-, or 70-year timeframe and not over a relatively brief construction period due to the lack of health risk associated with such a brief exposure.

OPERATIONAL IMPACTS

Operational emissions are primarily attributed to mobile sources. Trip generation estimates used in modeling were obtained from the project traffic report. The traffic report anticipates that project housing will generate 208 daily trips and the additional fueling positions will generate 516 daily trips.

In addition to mobile sources from vehicles, general development causes smaller amounts of “area source” air pollution to be generated from on-site energy consumption (primarily landscaping) and from off-site electrical generation (lighting). These sources represent a minimal percentage of the total project NO_x and CO burdens, and a few percent other pollutants. The inclusion of such emissions adds negligibly to the total significant project-related emissions burden as shown in Table 4.

Table 4
Daily Operational Impacts

	Operational Emissions (lbs/day)					
Source	ROG	NOx	CO	SO₂	PM-10	PM-2.5
Area*	3.4	1.6	8.9	0.0	0.2	0.2
Energy	0.0	0.3	0.1	0.0	0.0	0.0
Mobile	0.4	8.2	11.4	0.0	2.6	0.7
Total	4.8	10.1	20.4	0.0	2.8	0.9
Significance Threshold	55	55	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

*no wood burning hearths

Source: CalEEMod2016.3.2 Output in Appendix

The operational emissions assume wood burning fireplaces will not be installed in new construction. With this assumption, the project would not cause operational emissions to exceed their respective adopted CEQA significance thresholds and impacts are judged to be less than significant. No impact mitigation for operational activity emissions is considered necessary to support this finding.

CONSTRUCTION EMISSIONS MINIMIZATION

Construction activities are not anticipated to cause dust emissions to exceed the adopted CEQA significance thresholds. Nevertheless, emissions minimization through enhanced dust control measures is recommended. Recommended measures include:

Fugitive Dust Control

- Apply soil stabilizers or moisten inactive areas.
- Prepare a high wind dust control plan.
- Address previously disturbed areas if subsequent construction is delayed.
- Water exposed surfaces as needed to avoid visible dust leaving the construction site (typically 2-3 times/day).
- Cover all stock piles with tarps at the end of each day or as needed.
- Provide water spray during loading and unloading of earthen materials.
- Minimize in-out traffic from construction zone
- Cover all trucks hauling dirt, sand, or loose material and require all trucks to maintain at least two feet of freeboard
- Sweep streets daily if visible soil material is carried out from the construction site

Similarly, ozone precursor emissions (ROG and NO_x) are calculated to be below adopted CEQA thresholds. However, because of the regional non-attainment for photochemical smog, the use of reasonably available control measures for diesel exhaust is recommended. Combustion emissions control options include:

Exhaust Emissions Control

- Utilize well-tuned off-road construction equipment.
- Establish a preference for contractors using Tier 3 or better heavy equipment.
- Enforce 5-minute idling limits for both on-road trucks and off-road equipment.

GREENHOUSE GAS EMISSIONS

THRESHOLDS OF SIGNIFICANCE

The GBUAPCD has no thresholds for GHG emissions. However, if the lead agency does not have sufficient expertise in evaluating GHG impacts, it may rely on thresholds adopted by an agency with greater expertise.

On December 5, 2008 the SCAQMD Governing Board adopted an Interim quantitative GHG Significance Threshold for industrial projects where the SCAQMD is the lead agency (e.g., stationary source permit projects, rules, plans, etc.) of 10,000 Metric Tons (MT) CO₂ equivalent/year. In September 2010, the SCAQMD CEQA Significance Thresholds GHG Working Group released revisions which recommended a threshold of 3,000 MT CO₂e for all land use projects. This 3,000 MT/year recommendation has been used as a guideline for this analysis. In the absence of an adopted numerical threshold of significance, project related GHG emissions in excess of the guideline level are presumed to trigger a requirement for enhanced GHG reduction at the project level.

Construction Activity GHG Emissions

As a worst case, all construction was assumed to occur within the same calendar year. During project construction, the CalEEMod2016.3.2 computer model predicts that the construction activities will generate the annual CO₂e emissions identified in Table 5.

Table 5
2022 Construction Emissions (Metric Tons CO₂e)

	CO₂e
Housing and Gas Pumps	426.6
Roadways and Parking	53.4
New Water Tank	4.0
New Propane Tank	4.0
Septic System	4.0
Total 2022	492.0

CalEEMod Output provided in appendix

Air quality agencies typically recommend that construction activity GHG emissions be amortized over the useful life of a project. Assuming a 30-year life for the proposed improvements, the annual average GHG emissions would be less than 16.4 MT/year.

Project Operational GHG Emissions

The input assumptions for operational GHG emissions calculations, and the GHG conversion from consumption to annual regional CO₂e emissions are summarized in the CalEEMod2013.2.2 output files found in the appendix of this report.

The total operational and annualized construction emissions for the proposed project are identified in Table 6.

Table 6
Proposed Uses Operational Emissions

Consumption Source	
Area Sources*	72.6
Energy Utilization	212.8
Mobile Source	651.2
Solid Waste Generation	23.1
Water Consumption	24.9
Construction	16.4
Total	1,001.0
Guideline Threshold	3,000
Exceeds Threshold?	No

*no wood burning fireplaces

Total project GHG emissions would be substantially below the proposed significance threshold of 3,000 MT adopted for use for this project. Such emissions would have a less-than-significant local, national or global GHG emissions impact.

CALEEMOD2016.3.2 COMPUTER MODEL OUTPUT **

- DAILY EMISIONS
- ANNUAL EMISSIONS

**** THE MODEL OUTPUT DATA ARE AVAILABLE ON REQUEST FROM MONO COUNTY COMMUNITY DEVELOPMENT DEPARTMENT, AND ON THE COUNTY WEBSITE:**

<https://www.monocounty.ca.gov/planning/page/tioga-inn-specific-plan-seir>

APPENDIX N

**Noise Assessment
By Giroux & Associates**

NOISE IMPACT ANALYSIS

TIOGA INN WORKFORCE HOUSING PROJECT

MONO COUNTY, CALIFORNIA

Prepared for:

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Prepared by:

Hans D. Giroux

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Date:

December 7, 2018

Project No.: P18-023 AQ

NOISE SETTING

BACKGROUND

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise is unwanted sound. Sound is characterized by various parameters that describe the rate of oscillation of sound waves, the distance between successive troughs or crests, the speed of propagation, and the pressure level or energy content of a given sound. In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. The decibel (dB) scale is used to quantify sound intensity. Zero on the decibel scale is the faintest sound detectable by a person with good auditory acuity. The decibel scale is a logarithmic progression designed to allow for comparisons of widely varying sound pressure within an easily manageable range.

Humans perceive each increase of ten decibels to be a doubling of apparent loudness. The perceived loudness between a rural setting at 30 dBA versus near a rock concert at 100 dBA is a 100+-fold increase. Since the human ear is not equally sensitive to all sound frequencies within the entire spectrum, human response is factored into sound descriptions by weighting sounds within the range of human sensitivity more heavily (middle A and its higher harmonics) in a process called "A-weighting" written as dB(A). Any further reference to "dB" in this report should be understood to be A-weighted.

Time variations in noise exposure are typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called Leq), or alternately, as a statistical description of the sound level that is exceeded over some stated fraction of a given observation period. Finally, because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law requires that, for planning purposes, an artificial dBA increment be added to quiet time noise levels in a 24-hour noise metric called the Community Noise Equivalent Level (CNEL).

An interior CNEL of 45 dBA CNEL standard be expanded to include all habitable rooms in residential use, included single-family dwelling units. Since normal noise attenuation within residential structures with closed windows is about 20 dB, an exterior noise exposure of 65 dB CNEL allows the interior standard to be met without any specialized structural attenuation (dual paned windows, etc.). A noise level of 65 dBA is also the level at which ambient noise begins to intrude into the ability to have a quiet conversation. Exterior levels of 65 dB CNEL is therefore the most common noise standard for usable outdoor space in California.

While a moderately loud 65 dBA CNEL level might be acceptable in urbanized areas of California, a 65 dB CNEL noise exposure would likely be considered unacceptable in a semi-rural environment such as the Lee Vining community near the project site. The desirable maximum exterior noise level in rural areas of the state is generally 60 dBA CNEL. Traffic noise increases of more than +3 dBA CNEL are typically considered a significant impact.

BASELINE NOISE LEVELS

In order to establish an ambient noise level, short term area noise measurements were conducted on Tuesday October 18, 2016 from 11:30 a.m. – 12:30 p.m. at four locations. Measurement locations are shown in **Figure 1** and the monitoring results are summarized below.

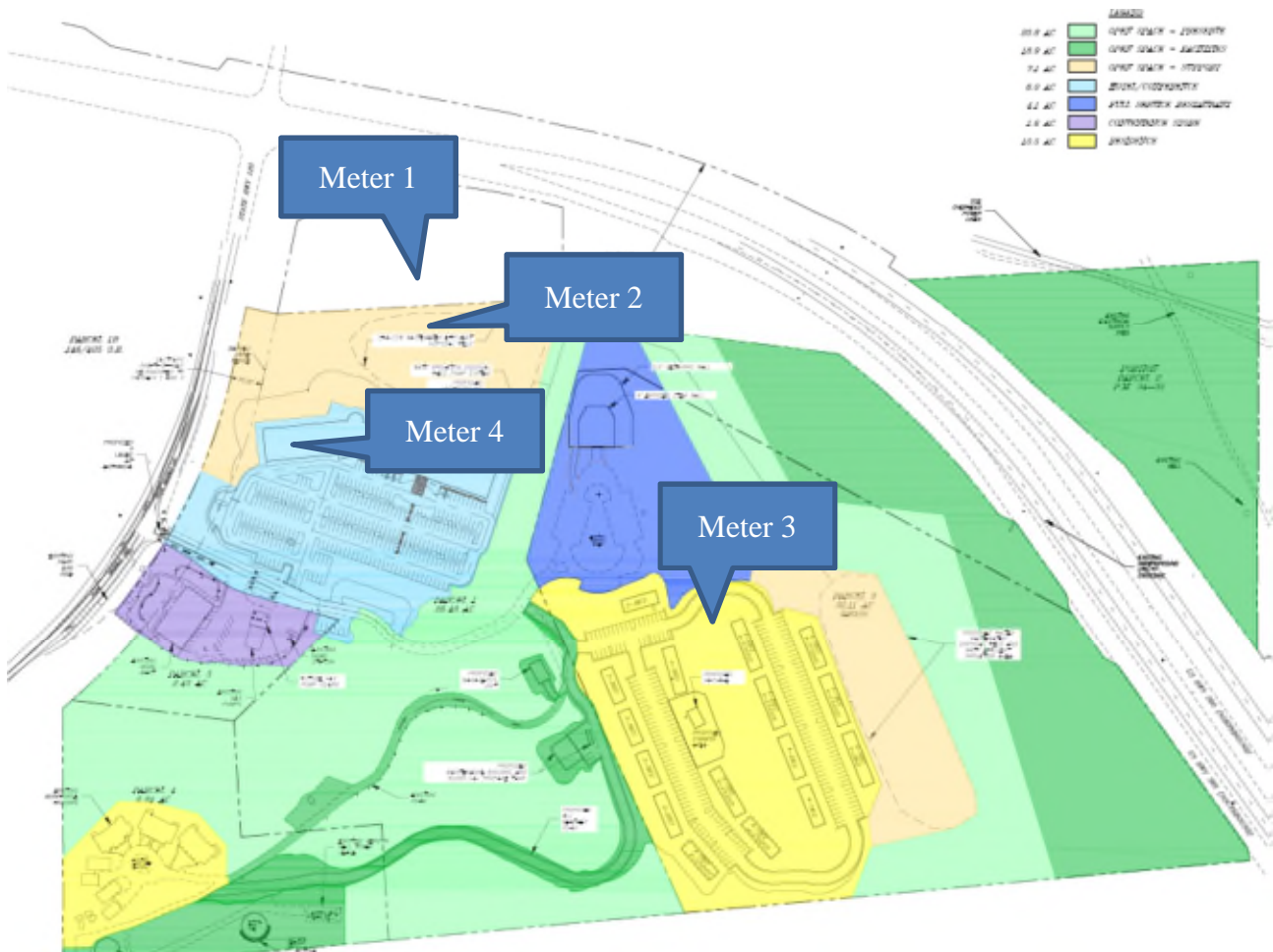
Measured Noise Levels (dBA)

	Leq	Lmax	Lmin	L10	L33	L50	L90
Meter 1	57	84	40	54	48	46	42
Meter 2	47	57	41	49	47	46	43
Meter 3	44	48	39	46	44	42	42
Meter 4	57	68	48	62	55	53	50

Meter 1 was located on the hill adjacent to Highway 395 and Meter 2 was placed in the existing parking lot. Meter 3 was placed at the location of the proposed housing and Meter 4 was sited near the proposed future hotel.

Monitoring experience shows that 24-hour weighted CNELs can be reasonably well estimated from mid-day noise readings. CNELs are approximately equal to afternoon hour Leq plus 2-3 dB (Caltrans Technical Noise Supplement, 2009). The observed Leqs of 44-57 dBA would translate into CNELs of 46-60 dBA.

Figure 1
Noise Monitoring Locations



NOISE IMPACTS

Sensitive uses will be subject to incremental increased noise levels from project related traffic and operations. Short-term construction activities may be audible. Because construction is more likely to be performed during warmer months rather than in winter, people are more likely to be outside or to have their windows open when construction is in progress.

The closest residences to the site are the existing hilltop residential units. The closest activities that may impact these uses is construction of the new water tank and paving the new access roadway. The closest off-site sensitive use to the project site, a residence, is in Lee Vining and is approximately 0.5 miles to the northwest with access from Lee Vining Avenue.

THRESHOLDS OF SIGNIFICANCE

Noise impacts are significant if they create a substantial temporary or permanent increase in noise levels, or if they cause a violation of adopted noise/land use compatibility standards in general plans or noise ordinances. Noise from one land use crossing the property line of an adjacent property, are regulated by Section 10.16.060 of the Mono County Code as shown below.

Maximum Allowable Exterior Noise Levels (excluding construction noise)

Land Use	Allowable Time	Noise Level (dBA)
Residential Single Family	Daytime (7 a.m.-10 p.m.)	55
	Nighttime (10 p.m.-7 a.m.)	50
Residential Multi-Family	Daytime (7 a.m.-10 p.m.)	55
	Nighttime (10 p.m.-7 a.m.)	50
Public Uses-Schools, Libraries, Hospitals	Daytime (7 a.m.-10 p.m.)	55
	Nighttime (10 p.m.-7 a.m.)	50
Passive Recreational Areas	Daytime (7 a.m.-10 p.m.)	55
	Nighttime (10 p.m.-7 a.m.)	50
Community Parks and Athletic Fields	Daytime (7 a.m.-10 p.m.)	55
	Nighttime (10 p.m.-7 a.m.)	50

These noise limits apply to activities occurring on private property. Mono County is pre-empted from regulating on-road traffic noise because such sources are exempt from local ordinance control. However, for new construction, when traffic noise exceeds the planning standard for an affected land use the County can use discretion regarding compatibility of that use.

Transportation noise impacts may be significant if they create either a substantial permanent or temporary increase. The term "substantial" is not quantified in CEQA guidelines. In most environmental analyses, "substantial" is taken to mean a level that is clearly perceptible to humans. In practice, this is at least a +3 dBA increase. Under ambient conditions, people generally do not perceive that noise has clearly changed until there is a 3 dBA difference.

Some agencies, such as Caltrans, require substantial increases to be +10 dBA. For purposes of this analysis, a +3 dBA increase is considered a substantial. For reference, a +3 dBA increase requires a doubling of traffic volumes because of the logarithmic nature of the decibel scale.

CONSTRUCTION NOISE SIGNIFICANCE

Mono County limits construction noise to daytime hours of lesser noise sensitivity. In addition, the County Code calls out maximum noise levels that are not to be exceeded at the nearest residence. Construction may not exceed the noise levels in the following schedule (Section 10.16.060 Mono County Code):

a. Mobile Equipment. Maximum noise levels from non-scheduled, intermittent, and short-term operation (less than 10 days) of mobile equipment:

	Single-family Residential (dBA)	Multi-family Residential (dBA)	Semi-residential/ Commercial (dBA)
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	75	80	85
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays.	60	65	70

b. Stationary Equipment Maximum noise level for repetitively scheduled and relatively long-term operation (period of 10 days or more) of stationary equipment:

	Single-family Residential (dBA)	Multi-family Residential (dBA)	Semi-residential/ Commercial (dBA)
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	60	65	70
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays.	50	55	60

Construction activities are limited by conditions on grading permits to daytime hours of lesser noise sensitivity. Construction noise generation is temporary, and is prohibited when people are sleeping or most likely to be recreating outside. However, an inability to meet the construction noise standards at the closest sensitive use could create a significant noise impact.

CONSTRUCTION ANALYSIS

Noise levels of construction equipment anticipated for use in this project were analyzed. In 2006, the Federal Highway Administration (FHWA) published the Roadway Construction Noise Model that includes a national database of construction equipment reference noise emissions levels. In addition, the database provides an acoustical usage factor to estimate the fraction of time each piece of construction equipment is operating at full power during a construction phase. The usage factor is a key input variable that is used to calculate the average Leq noise levels.

Table 1 identifies highest (L_{max}) noise levels associated with each type of equipment identified for use, then adjusts this noise level for distance to the closest sensitive receptor and the extent of equipment usage (usage factor), which is represented as Leq. The table is organized by activity and associated equipment.

Quantitatively, the primary noise prediction equation is expressed as follows for the hourly average noise level (Leq) at distance D between the source and receiver (dBA):

$$Leq = L_{max} @ 50' - 20 \log (D/50') + 10 \log (U.F\%/100) - I.L.(bar)$$

Where:

L_{max} @ 50' is the published reference noise level at 50 feet

U.F.% is the usage factor for full power operation per hour

I.L.(bar) is the insertion loss for intervening barriers

For the proposed project, the construction fleet could include equipment such as shown in **Table 1** which describes the noise level for each individual piece of equipment.

Table 1
Noise Levels at 50 foot reference

Activity/Equipment		Usage Factor ¹	Hours of Operation ²	Published Noise @ 50 feet (dBA)	Actual Measured Noise @ 50 feet (dBA)	Cumulative Noise Level @ 50 feet (dBA)
Water Tank						
Excavate	Bobcat	40%	3.2	80	79	75
	Loader/Backhoe	37%	3.0	80	78	74
Pour Concrete Pad	Mixer	40%	3.2	80	80	76
	Pump	20%	1.6	82	81	74
	Roller	38%	3.0	85	80	76
Install Tank	Crane	16%	1.3	85	81	73
	Forklift	20%	1.6	75	75	68
	Welder	46%	3.7	73	74	71
Propane Tank						
Excavate	Bobcat	40%	3.2	80	79	75
	Loader/Backhoe	37%	3.0	80	78	74
Pour Concrete Pad	Mixer	40%	3.2	80	80	76
	Pump	20%	1.6	82	81	74
	Roller	38%	3.0	85	80	76
Install Tank	Crane	16%	1.3	85	81	73
	Forklift	20%	1.6	75	75	68
	Welder	46%	3.7	73	74	71
Workforce Housing and Fueling Pumps						
Grade	Excavator	40%	3.2	85	81	78
	Grader	40%	3.2	85	85	81
	Dozer	40%	3.2	85	82	78
	Loader/Backhoe	37%	3.0	80	78	74
Construction	Crane	16%	1.3	85	81	73
	Forklift	20%	1.6	75	75	68
	Loader/Backhoe	37%	3.0	80	78	74
	Welder	46%	3.7	73	74	71
Roadway and Parking Lot Construction						
Demolition	Concrete Saw	20%	1.6	90	90	84
	Loader/Backhoe	37%	3.0	80	78	74
	Dozer	40%	3.2	85	82	78
Grade	Grader	40%	3.2	85	85	81
	Dozer	40%	3.2	85	82	78
	Loader/Backhoe	37%	3.0	80	78	74
Pave	Mixer	40%	3.2	80	80	76
	Roller	38%	3.0	85	80	76
	Pump	20%	1.6	82	81	74
	Loader/Backhoe	37%	3.0	80	78	74
Septic System						
Excavate	Bobcat	40%	3.2	80	79	75
	Loader/Backhoe	37%	3.0	80	78	74
Install	Crane	16%	1.3	85	81	73
	Loader/Backhoe	37%	3.0	80	78	74
	Welder	46%	3.7	73	74	71
	Forklift	20%	1.6	75	75	68

Source: FHWA's Roadway Construction Noise Model, 2006

1. Estimates the fraction of time each piece of equipment is operating at full power during a construction operation
2. Represents the actual hours of peak construction equipment activity out of a typical 8 hour day

Construction generated noise levels drop off at a rate of about 6 dBA per doubling of distance between the source and receptor. **Table 2** shows the distance from each proposed project component to the nearest residential uses on-site and in Lee Vining and the associated attenuation.

Table 2
Distances to Construction Activity and Associated Noise Attenuation

Element	On-Site Homes		Lee Vining Homes	
	Distance (feet)	Distance Attenuation (dBA)	Distance (miles)	Distance Attenuation (dBA)
Housing and Gas Pumps	500-900	-20 to -25	0.5	-34
Roadways and Parking	100	-6	0.4	-33
New Water Tank	170	-11	0.6	-36
New Propane Tank	800	-24	0.5	-34
Septic System	1,000	-26	0.6	-36

Table 3 shows the attenuated construction equipment noise level that would be experienced at the closest residence after adjusting for distance.

Table 3
Construction Equipment Noise Level at Closest Residences (dBA)

		On-Site Homes	Lee Vining Homes
Water Tank			
Excavate	Bobcat	64	39
	Loader/Backhoe	63	38
Pour Concrete Pad	Mixer	65	40
	Pump	63	38
	Roller	65	40
Install Tank	Crane	62	37
	Forklift	57	32
	Welder	60	35
Propane Tank			
Excavate	Bobcat	59	41
	Loader/Backhoe	58	40
Pour Concrete Pad	Mixer	60	42
	Pump	58	40
	Roller	60	42
Install Tank	Crane	57	39
	Forklift	52	34
	Welder	55	37
Workforce Housing			
Grade	Excavator	58	44
	Grader	61	47
	Dozer	58	44
	Loader/Backhoe	54	40
Construction	Crane	53	39
	Forklift	48	34
	Loader/Backhoe	54	40
	Welder	51	37
Roadway and Parking Lot			
Demolition	Concrete Saw	-	51
	Loader/Backhoe	68	41
	Dozer	72	45
Grade	Grader	75	48
	Dozer	72	45
	Loader/Backhoe	68	41
Pave	Mixer	70	43
	Roller	70	43
	Pump	68	41
	Loader/Backhoe	68	41
Septic			
Excavate	Bobcat	49	39
	Loader/Backhoe	48	38
Install	Crane	47	37
	Loader/Backhoe	48	38
	Welder	45	35
	Forklift	42	32

The anticipated construction fleet is mobile and not stationary and will move about the construction area. The construction noise standard for mobile equipment near an affected residence between 7 a.m. and 8 p.m., Monday through Saturday, is 75 dBA. As shown in **Table 3**, the most impacted residences are those on-site during construction of the new access roadway. A concrete saw will not be used for the new access roadway because it is a new road and no demolition of existing asphalt is necessary. All other equipment for other construction components is less than the 75 dBA threshold. In addition, equipment for the access roadway will only be near the homes for a short period of time as it moves down the alignment traveling away from the homes.

Homes in Lee Vining have enough distance separation to render all construction equipment less-than-significant. Noise thresholds will not be exceeded for any construction activity because of distance between the noise source and the receptors.

TRAFFIC NOISE IMPACTS

The project is expected to generate 724 additional daily vehicular trips. However, not all these vehicles will enter and leave the site on the same roadway. Vehicles disperse to travel east or west on Tioga Road and north or south on Highway 395. The roadway segment that will impact existing on-site homes is Tioga Road west of the site. The roadway segment that will impact residential uses in Lee Vining is Highway 395 north of Tioga Road.

Traffic noise was modeled using the California specific vehicle noise curves (CALVENO) in the federal roadway noise model (the FHWA Highway Traffic Noise Prediction Model, FHWA-RD-77-108).

The traffic report provided traffic data for both the existing time frame and opening year (2023). Year 2023 data includes cumulative area development such as the proposed hotel and restaurant. The results are shown in **Table 4**.

Table 4
Traffic Noise Impact Analysis
(dBA CNEL at 50 feet from centerline)

Roadway Segment	Existing No Project	Existing W Project	2023 No Project	2023 W Project
Highway 395 South of SR 120	64.9	65.3	65.9	66.1
Highway 395 North of SR 120	64.1	64.3	64.8	65.0
SR 120 West of Highway 395	60.2	61.8	62.9	63.8
SR 120 West of Project Access	60.2	60.9	62.0	62.4

Project-Related Noise Impact
(CNEL in dBA at 50 feet from Centerline)

Roadway Segment	Project Only Existing	Project Only 2023
Highway 395 South of SR 120	0.4	0.2

Highway 395 North of SR 120	0.2	0.2
SR 120 West of Highway 395	1.6	0.9
SR 120 West of Project Access	0.7	0.4

Because traffic volumes are lower on Tioga Road, any project impact is more pronounced than impacts on Highway 395 which are more diluted.

At the closest on-site sensitive use, the traffic noise increase is +1.6 dBA CNEL at 50 feet from the roadway centerline. The closest hilltop residence is more than 350 feet from the roadway centerline which would render the increase undetectable. In addition, the increase is less than the +3 dBA CNEL threshold.

At the closest sensitive use in Lee Vining, the traffic noise increase is calculated to be +0.2 dBA CNEL at 50 feet from roadway centerline. The closest Lee Vining residence is more than 150 feet from the roadway centerline. Regardless, this impact is less than the +3 dBA CNEL significance threshold and will not be audible at the residence.

Therefore, the project related traffic noise increases are considered to be less-than-significant.

BIO-HABITAT NOISE IMPACTS

The on-site housing will be located closer to existing off-site wildlife habitats. The additional fueling stations are in the same vicinity as the existing gas station and are not anticipated to create more noise than currently. Residential use is generally passive with little change to the noise environment. Every species has varying noise sensitivity that can also change from day to day or season to season. It is very difficult to generalize potential noise stress impacts. The USFWS employs a general noise protection standard of 60 dBA Leq in habitats of threatened or endangered avian species during nesting/breeding seasons. Noise from residential housing within the immediate vicinity of the activity itself is typically less than 60 dBA. Using the USFWS standard as a guideline, bio-habitats away from the proposed uses are not anticipated to be significantly noise-impacted.

WASTEWATER TREATMENT PACKAGE PLANT

The new package treatment plant will be installed underground at the northeast corner of the hotel. The entire system will be built inside an insulated fiberglass tank and installed underground.

There are several mechanical components of a package treatment plant. The potentially noisiest component is the motor and blower unit. The blower is the piece of equipment which provides air to the system and the motor drives the blower. Because the system is enclosed and underground the only potential source of noise above ground is the fan at the blower vent.

Fan noise for small industrial fans can have a sound pressure level as high as 85 dBA. The existing on-site residences are about 1,000 feet from the proposed package plant. With that setback blower noise would be reduced to 25-35 dBA and would be lower than the ambient noise level. It would also be less than the 50-55 dBA noise standard. Noise from the wastewater treatment plant is therefore less-than-significant.

CONCERT NOISE

The on-site Deli hosts live outdoor music events during Thursday evenings throughout the summer months. The frequency or location of these events is not expected to change as a result of project implementation. During one such concert the noise level was observed for 15 minutes at the Epic Cafe in Lee Vining. This café was selected to be most representative of residual noise in Lee Vining because it has the most direct exposure for any Lee Vining land use. No concert noise was observed. Concerts are an existing feature and future events will be held in the same location with the same frequency as in the past.

As a reference, measured amplified music noise from social events such as young participant weddings tend to be 80 dBA directly in front of the state of DJ booth. Side lobe noise is around 70 dBA and 60-65 dBA to the rear. Human response to various noise levels is somewhat as follows:

Background noise levels (Lee Vining)	50 dBA
On-set of conversation interference	65 dBA
Conversation becomes difficult	75 dBA
OSHA requires hearing protection	85 dBA
On-set of hearing loss (OSHA)	90 dBA

The deli concerts tend to be “mellow” music, but a worst-case noise generation of 80 dBA at 20 feet from the speakers has been assumed. Over irregular terrain, the distance drop-off is -7.5 dBA per distance doubling. The resulting deli concert noise is as follows:

Distance	Front	Side	Rear
20'	80 dBA	70 dBA	65 dBA
80'	65 dBA	55 dBA	50 dBA
320'	50 dBA	40 dBA	35 dBA

At worst, noise levels will decay to background conditions with 320 feet of the music source. Except directly facing the music source, levels will be well below the ambient background even be well below the ambient background even faster. Deli concert noise impacts to any off-site receivers will be far less than significant.

SUMMARY AND MITIGATION

Noise impact mitigation recommendations include:

- Performing construction activities during times of lesser noise sensitivity regulated by ordinance.

With adherence to these the time of day guidelines, construction noise at on and off-site uses is not expected to exceed the Mono County noise thresholds.

Project-related traffic noise changes on existing roadways are less than significant.

Operational noise from the proposed package treatment plan will be undetectable at on and off-site sensitive uses.

APPENDIX O

Minor Level Visual Analysis

MINOR LEVEL VISUAL IMPACT ASSESSMENT

Tioga Workforce Housing Project

Prepared by:

Bauer Planning and Environmental Services, Inc.

Date Prepared:

14 June 2018

PURPOSE OF STUDY AND ASSESSMENT METHOD

The purpose of this visual impact assessment (VIA) is to document potential visual impacts caused by the proposed project and propose measures to lessen any detrimental impacts that are identified. Visual impacts are demonstrated by identifying visual resources in the project area, measuring the amount of change that would occur as a result of the project, and predicting how the affected public would respond to or perceive those changes. This visual impact assessment follows the guidance outlined in the publication *Visual Impact Assessment for Highway Projects* published by the Federal Highway Administration (FHWA) in March 1981.

PROJECT DESCRIPTION

The Tioga Inn project proposal encompasses multiple elements, many of which were analyzed in a Final EIR and Specific Plan that was certified by the Mono County Board of Supervisors in 1993. The original concept, as reflected in the 1993 documents, was to provide a full range of services and facilities (hotel, full service restaurant, deli, convenience store, gas station, picnic area, oversize parking, air and water, public restrooms etc.) for tourists, and meeting facilities, jobs and employee housing opportunities for area residents.

The current proposal retains the goals and concepts developed in 1993, with several newly added elements. Most significantly, the current proposal would provide up to 150 new workforce housing bedrooms. The current proposal also provides for a third gas pump island and overhead canopy, expands the existing onsite septic system to increase capacity and incorporate a greywater reclamation system, replaces an existing water storage tank with a new and slightly larger tank on a nearby site, increases the number and capacity of the onsite propane tanks, modifies the acreage and boundaries of designated open space, and modifies the acreage and boundaries of project parcels.

Several of the uses approved in 1993 were constructed and placed into operation during the late 1990s. Construction of the hotel and restaurant elements was postponed due to a general economic downturn and other factors. The purpose of the current project proposal is to incorporate modifications and new elements to the approved Specific Plan to better respond to evolving trends in tourism, resource conservation and employment.

The proposed project elements are expected to have limited visibility or no visibility from surrounding scenic highways (including US 395-a State Scenic Highway, and SR120-a County Scenic Highway). The proposed workforce housing (including preparatory grading and permanent lighting and vegetation) will be visible from a short segment of US395 south of the project site, and the new water storage tank will be visible from SR 120, though less visible than the existing water storage tank (which is about 100' closer to SR120 and will be demolished). Other proposed new elements will be location out of the view from (or only nominally visible from) US395 and SR120, including the third gas pump island and overhead canopy, the expanded septic and greywater reclamation system, the new 30,000 gallon propane tank, and the open space and parcel boundary modifications.

The existing Mobile Mart and Whoa Nellie Deli development is widely acknowledged for its quality of food and views¹ and the proposed Specific Plan amendments will retain all but 2 project design guidelines: landscaping standards will be updated to reflect results of a recent biological survey of the site and incorporate enhanced habitat conservation features; and the specific measures to reduce glare will be replaced by compliance with all applicable standards from the Mono County Scenic Combining Element and Dark Skies Ordinance.

Project features designed to avoid or minimize adverse effects include the proposed graywater system (developed to provide a nonpotable source of irrigation supply for landscaping), use of solar panels on south-facing roofing slopes (to offset new energy demands from the workforce housing component), excavation of the workforce housing pad to lower the pad elevation reduce housing visibility), an updated landscape plan that requires use of native or native-compatible species and optimizes bitterbrush habitat to offset prior (unrelated) sage scrub habitat losses from fire, retention of the existing Specific Plan requirement for an earthtone color palette and use of wood and stone materials (to echo the form and color and materials of the natural environment), landscape screening (to minimize visibility and enhance blending of project element with the surroundings, and limited signage consistent with Specific Plan provisions.

PROJECT LOCATION AND SETTING

The project is located on the land directly southwest of the intersection of US395 and SR120, about 1 mile from the community of Lee Vining in Mono County. Site access is taken from SR 120 (SR 120 is the sole eastern access into Yosemite) about 600' south of the US395/SR120 intersection. Site elevations vary, but the existing project features (gas station, deli, convenience store) are about 200' higher than the Mono Lake level.

Mono Lake is a soda saline lake with strongly alkaline waters and high concentrations of carbonate salts, sodium chloride and other dissolved salts. Soda saline environments are among the most extreme of aquatic environments on earth, supporting highly productive ecosystems. Soda lakes are found in arid and semi-arid areas around the world, often associated with tectonic rifts such as occur in the East African and in Owens Valley which supports two soda saline lakes (Mono Lake and Owens Dry Lake).^{2 3} These natural conditions frequently result in highly unique, expansive and generally austere aesthetic conditions, such as occur in the largely undeveloped Mono basin. In combination with the dramatic Sierra escarpment leading into Yosemite National Park, the otherworldly beauty of Mono Lake is among the outstanding scenic vistas of the world. Tourism is highest during summer months, when SR120 (the only eastern access into Yosemite National Park) is open. Both highways that serve the project site are designated scenic highways: US395 is a State Scenic Highway, and SR120 is a County Scenic Highway (eligible for designation as a State Scenic Highway).

VISUAL RESOURCES AND RESOURCE CHANGE

Visual resources of the project setting are defined and identified below by assessing *visual character* and *visual quality* in the project corridor. *Resource change* is assessed by evaluating the visual character and the visual quality of the visual resources that comprise the project corridor before and after the construction of the proposed project.

The visual character of the proposed project will be compatible with the existing visual character of the corridor. The proposed project elements will conform to the style, color palette, building materials, and character of the existing project elements, with very limited visibility from off-site populated areas. The workforce housing development will be the most prominent of the newly proposed elements. Located on the land 'saddle' directly south of the existing 'flagpole,' this development will be higher than the adjoining slopes to the north and south. To minimize visibility, the workforce housing pad will be excavated near the ridgeline from its present elevation of

¹ <http://www.latimes.com/travel/la-tr-california-bucket-list-updates-1502840908-htmlstory.html> (LA Times, August 2017); <https://www.cntraveler.com/stories/2016-02-01/gas-stations-where-youll-want-to-fill-up-on-food> (Conde Nast, February 2016) <http://www.sacbee.com/entertainment/living/travel/sam-mcmanis/article2578395.html> (Sacramento Bee, August 2013).

² USGS, Geologic Map of Long Valley Caldera, E. California, Roy Bailey: https://pubs.usgs.gov/dds/dds-81/GeologicalMaps/ScannedMap/Bailey_1989.pdf

³ Wikipedia: https://en.wikipedia.org/wiki/Soda_lake.

approximately 6,950-6,955' to a future elevation of 6,936'-6,945', removing an estimated 60,800 cubic yards of material; a majority of the excess cut materials will be used as fill during construction of the hotel. The excavation, in combination with screening landscape materials (ornamental landscaping along the housing perimeter, and native landscaping on the slopes), will minimize the visual profile of the workforce housing structures. Intervening landforms will further reduce visibility of the area within which the workforce housing will be visible, with the result that direct proximate views of the new housing will be visible from roughly ¼-mile segment of US 395 extending south and north of the Picnic Grounds Road turnoff. The visual change in this location is depicted in Schematic Rendering 5.12-6. The housing will not be visible from any part of SR120 due to intervening ridgelines that exceed 7,200' in elevation and are higher than both the housing and SR 120 in this area.

VIEWS AND VIEWER RESPONSE

As described above, the visual impact of project development on highway motorists will be limited to the southern-most workforce housing units which will be visible from a roughly ¼ mile segment of US395. The housing area will also be directly visible from South Tufa Beach, and also from Panum Crater. However, the site is a very minor element when seen from these locations due to distance (the site is about 4 miles from Panum Crater, and 5 miles from South Tufa Beach) and due to the dominant Sierra Nevada backdrop, as shown in Exhibit 5.12-5.

Due to intervening topography, none of the newly proposed elements will be visible from Lee Vining or from County Park, or from the Epic Cafe (as shown in Exhibit 5.12-7), and none would be visible from SR120. It is anticipated that the average response of all viewer groups will be moderate to low.

VISUAL IMPACT

Visual impacts will include construction of project elements. The workforce housing development will involve the most extensive earthwork due to its size (the 150-bedroom complex will cover an area of roughly 30 acres), and due to the amount of excavation planned in order to minimize visibility (about 60,800 cy). Associated with the workforce housing new construction will be the demolition of 6 small housing units currently located south of the flagpole (the occupants will be relocated to the new units when completed). Other project elements that will involve varying degrees of earthwork include the hotel (with an estimated 6,100 cy of cut and 45,030 cy of fill, relocated from the housing excavation), and the restaurant (with an estimated 40 cubic yards of cut and 1,370 cy of fill). Minimal earthwork will be required for the addition of a third gas pump island, installation of the new wastewater treatment plan and construction of a new subsurface irrigation system, installation of the new propane tank, and demolition/replacement of the existing water tank. Most construction tasks will be completed during the low season (November to mid-May), with exclusions as needed for protection of sensitive and migrating species. Construction during the low season will minimize the loss of business and also minimize the visual impact of construction on a primary viewer group (tourists).

Changes proposed as part of Specific Plan Amendment #3 include replacement of the existing measures to reduce light and glare with a new requirement that the project will comply fully with the Mono County Scenic Combining Element and the Dark Sky Ordinance. This change is expected to reduce unwanted light and glare more effectively than the current Specific Plan provisions, even with the planned addition of solar panels on south-facing building roofs.

AVOIDANCE AND MINIMIZATION MEASURES

All visual impact avoidance and minimization measures to date have taken the form of design modifications and proposed changes to the Specific Plan implementation measures. Project features designed to avoid or minimize adverse effects include the proposed subsurface irrigation system (developed to provide a nonpotable source of irrigation supply for landscaping), use of solar panels on southfacing roofing slopes (to offset new energy demands from the workforce housing component), excavation of the workforce housing pad (to reduce housing visibility), an updated landscape plan that requires use of native or native-compatible species to offset prior (unrelated) sage scrub habitat losses from fire, use of the existing Specific Plan color palette and materials, landscape screening (to minimize visibility and enhance blending of project element with the surroundings), and

limited signage consistent with Specific Plan provisions. Mono County Community Development Department and the project applicant also intend to collaborate on submittal of a grant application to support construction of a safe access between the site and Lee Vining, as well as a new wildlife passageway under US 395 for migratory species, and improvements at the SR120/US395 intersection to reduce significant turning movement hazards; it is intended that this grant, if successful, will be used to augment future recommendations of Caltrans' ongoing traffic calming studies for US 395 in Lee Vining and environs.

CONCLUSIONS

The considerations outlined in this Minor Level Visual Impact Assessment, in combination with additional information provided in the Caltrans Visual Impact Assessment Questionnaire and Responses, provided in SEIR §5.12, indicate that visual impacts of the proposed Tioga Workforce Housing project will be noticeable and the average response of all viewer groups will be moderate to low.