

SAFETY ELEMENT

I. INTRODUCTION AND SUMMARY

The Safety Element, as mandated by the California Government Code, is designed to protect the community from any unreasonable risks associated with all types of natural hazards. State law mandates that the Safety Element contain maps depicting known natural hazard areas. These maps that form the bases of hazard related policies can be found in the Area Plan's Master Environmental Assessment.

The steep-walled mountains and canyons of the June Lake Loop are subject to numerous hazards, including, seismic, geologic, avalanche and volcanic dangers. The community's relatively remote location and the lack of reliable automobile access under winter conditions may also compound the effects of natural hazards.

II. ISSUES

GEOLOGIC HAZARDS

1) Under certain conditions, rock fall areas, debris fans, talus slopes and landslide areas associated with steep slopes and escarpments present safety hazards throughout the Loop (See June Lake MEA, P. II-55 to 58). Avalanches associated with these areas also present a problem. Disturbing the vegetative covering, increasing water runoff, or other practices that alter present land uses may increase the probability of occurrence of these natural hazards/occurrences.

Land or rock slides and avalanches present safety hazards.

VOLCANIC HAZARDS

2) June Lake is subject to both blast and flow hazards from the nearby Inyo-Mono Chain and the Long Valley Caldera. The annual probability of a violent eruption affecting June Lake is 1 in 1000 (See June Lake MEA, P. II-59 to 61).

SEISMIC HAZARDS

3) The June Lake Loop lies in an area subject to extreme earth-shaking intensities. A major earthquake would, at a minimum, cause considerable damage to masonry structures and other man-made features (See June Lake MEA, P. II-59 to 65).

4) Areas underlain by water-saturated lake sediments, water-saturated pumice over five feet thick, and landfills are high seismic risk areas.

5) Seismic activity could trigger rock slides and landslides and also avalanches. Areas especially susceptible include active and inactive rock fall and debris fan areas, talus slopes, glacial till and some alluvial areas.

6) Areas especially susceptible to seismic damage include: the Grant Lake Dam, the Southern California Edison Plant, the June Mountain Lodge, and the June Lake Public Utility District water storage facility. Fault-rupture hazard zones as determined under the Alquist-Priolo Act, also present zones of special concern.

FLOOD HAZARDS

7) Potential flood hazards in the June Lake Loop occur around streams and lakes. The areas most likely to be impacted in a 100-year flood include the western section of the Down Canyon area and the meadow area between June and Gull lakes. Floods in these areas have a 1% chance of occurring in any one year (See June Lake MEA, P. II-69).

AVALANCHE HAZARDS

8) State Route 158 near Oh! Ridge is susceptible to avalanche closures. Presently, Caltrans, the County and the USFS are examining alternatives that would reduce the risk of avalanche closures. The Loop's northern half, starting near the Southern California Edison plant, is closed during the winter months due to avalanches. Because of this closure, North Shore Drive was constructed to offer an alternative route when avalanche conditions are present off S.R. 158. Historic avalanche activity areas in the community have been identified by June Lake Avalanche Advisory Committee; land use restrictions for these historic avalanche areas are contained in the County Safety Element (See June Lake MEA, P. II-65 to 68).

S.R. 158 is susceptible to avalanche closures.

FIRE HAZARDS

9) According to the California Division of Forestry (CDF), all private lands in the Loop area are classified in the "very high hazard" fire danger category (See June Lake MEA, P. II-69).

10) The June Lake Fire Protection District has a good Insurance Services Office rating for fire protection services. The June Lake Public Utility District's Village water facility improvement program has improved fire-fighting capabilities. Improvements to the June Lake PUD's water facilities also have enhanced the fire-flow situation in the Down Canyon area.

11) The June Lake Fire Protection District, a volunteer department, provides fire protection to sections of the June Lake Loop. Figure 10 shows the FPD's boundaries and Sphere of Influence. The USFS provides wild-land fire protection on National Forest lands.

12) The Down Canyon and Oh! Ridge areas are ~~not~~ **now** included in the June Lake Fire Protection District. Property tax was transferred from Mono County at the time of annexation for the provision of fire services for these areas

13) A satellite fire station in the Down Canyon area would significantly reduce response times to fires and other emergencies in the area (see Figure 10). The satellite station plans are being considered by the USFS.

A satellite fire station in the Down Canyon area would reduce response times.

14) Inadequate road design combined with poor road conditions during or following severe winter storms can hinder fire-fighting efforts.

POLICE AND EMERGENCY SERVICES

15) Poor road conditions, the closure of S.R. 158 and physical obstructions such as illegally parked vehicles and unplowed roads can delay responses by the Mono County Sheriff's Department, California Highway Patrol, Paramedics, and the FPD.

16) Emergency services based in the Loop include a County-maintained Sheriff's Department Search and Rescue unit and a Mono County Paramedic unit (see Figure 10 and June Lake MEA, P. II-91).

17) Funding shortages jeopardize the continued provision of paramedic services. Since the closest full-service emergency medical facility is located in Mammoth Lakes, 15 miles away, retaining full-time emergency medical response is a high priority for the community.

18) Projected development in the Rodeo Grounds, the West Village and Pine Cliff areas will significantly increase the demand for fire, police and other emergency services.

Figure 10: Emergency services

III. POLICIES

GOAL

Assure that land use policies and development practices minimize risks to life and property, yet provide for new development and growth.

Minimize safety risks while allowing for new growth.

A. GENERAL

OBJECTIVE A

Limit land use activities in areas subject to the risk of severe natural hazards (1,2,3,4,5,6,7).

Policy 1: Limit land use activities that concentrate or attract people, are open to the General Public and provide essential community services in areas subject to severe seismic, geologic and snow avalanche hazards (1,3,4,5,6,8).

Action 1.1: Use the General Plan, County Zoning Regulations, the CEQA review and the Planning Permit processes to limit development in hazard zones (1,3,4,5,6,8).

Action 1.2: Use the CEQA review process and Land Development Technical Advisory Committee (LDTAC) review to ensure that land uses are compatible with high risk areas (1,3,4,5,6,8).

Policy 2: Regulate land use activities that may increase the potential for natural hazards such as those that disturb vegetative cover on steep slopes and increase water runoff (1).

Action 2.1: Use the Planning Permit process to ensure that developments on steep slopes submit proposals that contain: 1) topographic maps prepared by a person authorized to practice land surveying in California by the State Board of Registration for Professional Engineers, and 2) geotechnical studies performed by a state-certified engineer. Project-specific design/engineering measures should be incorporated into the development to mitigate the possible effects of unstable geologic features and increased water runoff (1).

Policy 3: Proposed developments in hazard areas such as Alquist-Priolo fault rupture zones, areas of high groundwater, rock slide areas and historic avalanche zones, shall be subject to full geotechnical analyses as well as design and engineering studies (1,8,9).

Action 3.1: Housing developments and uses that concentrate people in hazard areas shall be subject to the recommendations and findings of the special studies. These studies should identify potential hazards and set forth mitigation measures, which could include suggested land uses or design standards that reduce the effects of hazards (1,3,7,8).

Action 3.2: Use the Planning Permit and CEQA Review processes to ensure compliance (1,5,6).

Policy 4: Areas shall be designated for Open Space or less-intensive development in cases where geotechnical or other special studies have identified potentially unmitigatable hazards, associated with more intensive development (1,3,5,6,7,8).

Action 4.1: Use the Planning Permit, redevelopment, Specific Plan and CEQA review processes to ensure compliance (1,3,5,6,7,8).

Policy 5: Restrict the construction of public facilities such as power lines, water distribution pipes and sewer lines across hazard areas. Exemptions may be granted if other routing alternatives are unavailable or if additional safety devices such as valves or switches are used (3,6).

Action 5.1: Use the CEQA review, Specific Plan, Redevelopment Plan, and Planning Permit processes to ensure compliance (3,6).

Policy 6: Mitigate hazards using engineering and design measures (1,6).

Action 6.1: Where feasible, use native trees and other vegetation as protective measures (1).

Action 6.2: In hazard zones, allow new development if the project has been designed to withstand potential hazard impacts by a civil engineer, registered in California (1,3,7,8).

Policy 7: Promote USFS land exchanges in cases where the development potentials of private lands are severely restricted by natural hazards (1,5).

Action 7.1: The County shall work with the USFS on reverse land exchanges that transfer developable lands in the June Lake Loop into private ownership and lands severely influenced by natural hazards into public ownership (1).

OBJECTIVE B

Minimize the risks of severe hazards that may affect existing land uses (1,2,3,4,5,6,7,8).

Reduce hazard risks to existing land uses.

Policy 1: Limit the expansion of and promote the structural mitigation of existing structures/uses subject to high risks. This pertains to uses that concentrate or attract people, provide essential community services, or are open to the general public. Single-family residential uses are exempted (1,5,6,8,13).

Action 1.1: Use code compliance, USFS reverse land exchanges, redevelopment, and relocation programs to minimize the risk to uses subject to natural hazards (1,5,6).

Action 1.2: Where feasible, encourage existing uses in hazard areas to be redesigned to withstand hazard forces (1).

OBJECTIVE C

Provide and continue to promote emergency access to June Lake that is functional in all weather and hazard conditions (8).

Policy 1: Promote the development of strategically located snow sheds or other snow control along S.R. 158 above June Lake to avoid avalanche danger (8).

Action 1.1: The County should work with Caltrans and the USFS to develop snow sheds or other mitigation structures for S.R. 158 (8).

Action 1.2: Continue to support the maintenance and snow removal on North Shore Drive.

OBJECTIVE D

Provide residents and visitors with information on potential natural hazards (1,2,3,7,8,9).

Policy 1: Promote the full disclosure of information on potential natural hazards (1,2,3,7,8,9).

Action 1.1: Full disclosure of any hazardous conditions (seismic, volcanic, flooding, geologic and avalanche dangers) present on a parcel of land shall be made at the time of sale. The existence of hazards shall be disclosed to the buyer by the seller in any real estate transactions (1,2,3,7,8).

Policy 2: Promote the development of a comprehensive data base on natural hazards around the June Lake Loop (1,2,3,7,8).

Action 2.1: The County shall cooperate with other government agencies, as well as colleges and universities, to promote studies of local natural processes (hazards) (1,2,3,7,8).

B. GEOLOGIC, SEISMIC AND FLOOD HAZARDS

OBJECTIVE F

Prevent land uses or activities that may increase the severity or likelihood of damage from natural hazards and promote the usage of design measures that reduce the impacts of natural hazards (1,3,7).

Prevent land uses that increase the probability of damage from natural hazards.

GEOLOGIC HAZARDS

Policy 1: Minimize disturbances to vegetative cover that may lead to landslides or other geologic hazards (1).

Action 1.1: Identify areas where vegetative cover should be retained for public safety purposes (1).

Action 1.2: Use the Planning Permit, Specific Plan, Design Review or CEQA Review processes to ensure disturbances to these areas do not occur (1).

Policy 2: Ensure that structures and abutting usable areas constructed for residential uses in or near potential geologic hazard zones have adequate protection from down-slope rock falls (1).

Action 2.1: Require developments in or near rock fall zones to conduct geologic surveys to determine the extent of the hazard and engineering studies to mitigate those impacts, if feasible. Earth berms or other acceptable barriers, native trees, and surface stabilizing materials, among others, could be used to provide additional protection (1).

Action 2.2: Ensure that potential buyers are aware of the natural hazards affecting a property by requiring the seller to fully disclose information on geologic hazards (1).

Action 2.3: Use the Planning Permit, Design Review and CEQA Review processes to ensure that barriers or other measures provide adequate protection and are compatible with the surrounding environment (1).

SEISMIC HAZARDS

Policy 3: In Alquist-Priolo Earthquake Study Zones, require engineering and geologic studies to evaluate seismic risk prior to commencing development (3,5,6).

Action 3.1: Use the Plan Check and CEQA processes to ensure compliance with the adopted state criteria for development in Alquist-Priolo zones (3,5,6).

Action 3.2: In Alquist-Priolo fault rupture zones, prohibit structures designed for human occupancy (3,6).

Policy 4: Require new construction to meet the latest Mono County Building Code Standards for seismic safety (3).

Action 4.1: Use the Building Permit process to assure compliance (3).

Policy 5: Promote a program which ensures that structures open to the general public conform to the latest seismic safety standards (3).

Action 5.1: The County should examine existing structures and recommend measures to bring the structures into compliance with safety standards (3).

Action 5.2: The County should investigate the possibility of obtaining state and federal funds for retrofitting community-oriented structures that do not meet seismic safety standards (3,6).

FLOOD AND DRAINAGE HAZARDS

Policy 6: In potential flood hazard areas, limit development or require special designs and construction standards (7).

Action 6.1: Implement the County Flood Plain Ordinance contained in the General Plan requirements.

Policy 7: Encourage development near potential flood zones to provide drainage systems that minimize runoff. These systems should ensure that development does not alter the water balance that existed prior to construction (7).

Action 7.1: Require drainage control plans prior to the issuance of grading permits (7).

C. VOLCANIC HAZARDS

OBJECTIVE G

Provide for the safety of residents and visitors in the event of long recurring catastrophic events such as volcanic eruptions (2).

Policy 1: Where feasible, use current hazard information to update warning and evacuation procedures (2).

Action 1.1: Incorporate evacuation provisions from the Mono County Office of Emergency Services' updated County Emergency Service Plan into the General Plan (2).

Action 1.2: Work with the United States Geological Survey to develop a volcanic hazard warning policy. This policy must balance the real economic impacts of issuing a warning versus the safety of residents and visitors and property (2).

D. AVALANCHE HAZARDS

OBJECTIVE H

Promote the development of an avalanche hazard forecasting and warning program (8).

Policy 1: Develop a warning program to notify residents and visitors when conditions create a high avalanche danger (8).

Action 1.1: The County, the USFS, Caltrans, and the ski resort facility management should coordinate in identifying avalanche dangers (8).

Action 1.2: The County, the USFS and Caltrans should post warning signs on roadways subject to avalanche dangers (8).

Action 1.3: The County should encourage other entities to continue their avalanche abatement/mitigation programs (8).

OBJECTIVE I

Discourage development in high avalanche hazard zones (8).

Policy 1: Promote the exchange of private undeveloped parcels in historic avalanche hazard areas to the USFS; e.g., the three tiers of parcels above Lakeview Drive in the Village (8).

Action 1.1: The County and the USFS should organize and maintain an active exchange review program that targets strategic lands for exchange and reviews other privately generated exchanges (8).

Policy 2: In accordance with the County Safety Element, require engineering studies by state-certified civil engineers to mitigate potential structural damage from avalanche forces (8).

Action 2.1: Require special studies as part of the building permit and planning permit processes (8).

Action 2.2: Use the potential redevelopment program moneys to finance improvements; e.g., snow slide diversions (8).

E. FIRE, POLICE AND EMERGENCY SERVICES

OBJECTIVE J

Improve fire protection in unserved developed areas (9,10,11,12,13,14).

Policy 1: Locate a new fire station in the Down Canyon area (13).

Action 1.1: Use funding mechanisms such as redevelopment moneys, assessment districts, or bonds to finance new fire protection facilities (13).

Action 1.2: Work with the USFS to obtain public lands for the construction of a Down Canyon fire station (12,13).

OBJECTIVE K

Assure that new development has an adequate level of fire protection services (9,10,11,12,13,14).

Policy 1: Use the Planning Permit process to ensure that new development has adequate fire protection services.

Action 1.1: Coordinate efforts with the June Lake FPD to ensure that the District has the capability to adequately serve new development.

OBJECTIVE L

Minimize the impacts of wild-land fires on developed private lands in June Lake (9,10).

Policy 1: Develop a wild-land fire mitigation program that balances the threat or risk of fires on developed community areas against negative visual impacts and impacts on vegetation and wildlife (9).

Action 1.1: The County and the June Lake FPD should work with the California Department of Forestry and Fire Protection and other agencies to develop a fuel modification program (9).

OBJECTIVE M

Assure the protection of life and property by maintaining an adequate level of police services (15,16,17,18).

Policy 1: Maintain a level of police services commensurate with population growth and development (18).

Action 1.1: Study response times and the frequency of calls to determine the adequacy of police service. Where feasible, require new developers to fund increased police services when a sizable increase in response times or calls occurs (18).

OBJECTIVE N

Maintain a requisite level of emergency medical and rescue services in June Lake, and expand services when needed (17,18).

Policy 1: Maintain and, if demanded, expand inter-loop emergency response services (17).

Action 1.1: Where feasible, the County shall continue to maintain Paramedic and Search and Rescue services (17).

Action 1.2: Seek alternative funding programs such as increases in sales or bed taxes and user fees (17).

Policy 2: Promote the development of self-help emergency response programs for June Lake Loop residents (17,18).

Action 2.1: Coordinate activities with the local fire department or other agencies to teach periodic First Aid/CPR classes and if feasible, to distribute literature that helps residents prepare for and react in emergency situations (17,18).

REFERENCES

William Spangle and Associates, Inc. 1987. **Living with a Volcanic Threat; Response to Volcanic Hazards Long Valley, California.**