

V. SAFETY ELEMENT

The purpose of the Safety Element is to introduce safety considerations into the planning process in order to reduce loss of life, injuries, property damage, and social and economic dislocation due to seismic activity, fire, flooding, and other natural hazards. The major safety concerns in the City of Etna planning area are fires, wildfires, flooding, and the limited but possible impact of volcanic activity from Mount Shasta.

In addition to the information contained herein, the City of Etna participated in the development of a Multi-Jurisdiction Hazard Mitigation Plan (MJHMP) for the County of Siskiyou. The MJHMP was developed in accordance with the Disaster Mitigation Act of 2000 (DMA 2000) and followed FEMA's 2011 Multi-Jurisdiction Hazard Mitigation Plan guidance. The MJHMP incorporates a process where hazards are identified and profiled, the people and facilities at risk are analyzed, and mitigation actions are developed to reduce or eliminate hazard risk. The implementation of these mitigation actions, which include both short and long-term strategies, involve planning, policy changes, programs, projects, and other activities. The MJHMP is incorporated into the City of Etna General Plan Safety Element by reference and can be found on the City of Etna website at: www.cityofetna.org.

Fire Hazards - The primary fire hazard is from structural fires. Fire protection is provided by the City of Etna through a trained volunteer fire crew. Mutual aid agreements are in effect with the California Department of Forestry for wildfires outside the jurisdiction of the City. The fire station is centrally located on Main Street and Callahan Street. The City also operates an ambulance service.

While the area has not experienced wildfires in or near the City of Etna, forest lands do abut the City on its westerly edge. A fire in this area accompanied by high winds could severely impact the west side of the community.

Flood Hazards - Studies completed by the U.S. Federal Emergency Management Agency (FEMA) in March 4, 1980, identified the 100-year Flood Boundary on Etna Creek and Johnson Creeks. Additionally, two other smaller drainage areas exist which could flood. These are located southerly of Woodland Street and along a drainage swale which lies mostly north of Butcher Street, and crosses over Center Street.

The greatest flood potential exists within the southeastern part of Etna near Etna Creek. This large area can flood to depths of 1-3 feet over much of the identified flood plain. While most of this area is pastureland, there are numerous dwellings and a few businesses in this location. The Flood Insurance Rate Map (FIRM) (Figure 3), identifies these areas of flooding concern. Development in the flood plain must meet FEMA standards, or neither the City nor the property owner will qualify for flood insurance. Development typically is not permitted in areas designated as "floodways" where the main water-moving channel is located. The Etna Creek floodway lies outside the City along the main Etna Creek channel. The City has adopted flood plain regulations consistent with FEMA standards.

Seismic Hazards - Seismic safety consists of an identification and appraisal of seismic hazards, including surface ruptures, ground shaking and the possibility of mud and landslides. All of Siskiyou County is located in Seismic Zone 3 and all new construction must meet the applicable requirements of the California Building Code. It is currently impossible for any person or piece of equipment to predict the intensity, location or time of the next earthquake. From the technical

information in the County Seismic Safety Element (adopted January 21, 1976), the following are assumed regarding earthquakes in the Etna area:

1. *Maximum Intensity* - Moderate level (VI - VII Mercalli Scale).
2. *Location* - No evidence of quakes in the Etna area, however several large earthquakes have occurred in northeastern and north coastal California.
3. *Time* - Several occurrences over a decade in the area from Northern California to Southern Oregon and Western Nevada are likely.
4. *Structural Damage* - An earthquake of moderate intensity will probably cause damage to brick or un-reinforced concrete structure. Much of the Main Street historical area has construction of this type and buildings will probably suffer major structural damage.
5. *Infrastructure Damage* - Water and sewer mains will probably suffer from rupture from a moderate intensity earthquake. Electrical and telephone lines may be temporarily out of service. There are no natural gas mains within the City of Etna.

Volcanic activity from Mount Shasta is a probable event and represents a slight hazard to the City of Etna from ash, depending on the prevailing winds at the time.

Snow Removal - The management of snow accumulation can play an important role in the design of community facilities. When large accumulations do occur, removal and storage can become a significant problem. To relieve the problems associated with such an event, it is important to have snow storage areas in parking lots and adequate street width to maneuver plows, store snow and still provide for on street parking to the extent needed. Fortunately, Etna normally does not receive large quantities of snow. Regardless, City standards for street width and parking lot design should recognize this need and accommodate snow storage.

GOALS AND POLICIES – SAFETY ELEMENT

GOAL SF-6 PROTECT THE RESIDENTS AND VISITOR TO THE CITY OF ETNA FROM THE LOSS OF LIFE AND PROPERTY FROM FIRE.

Objective: The manner in which lands are developed can greatly influence the level of fire risk that could occur. It is the objective of this goal to reduce the likelihood of a fire loss through preventative measures in project development.

- Program 6-A: Ensure that all proposed developments are reviewed for fire safety standards by the Fire Chief, including adequate fire flow supply and access.
- Program 6-B: Coordinate project reviews with the California Department of Forestry on all projects located near a potential wildfire source.
- Program 6-C: Encourage continued use of educational programs in schools and service clubs by the fire protection personnel to foster public awareness.
- Program 6-D: Prepare a long-term capital needs budget for the fire, ambulance, water supply and storage, based on projected growth.

GOAL SF-7 PROTECT LIVES AND PROPERTY OF THE RESIDENTS OF ETNA FROM THE RISK OF FLOODING.

Objective: The location and relative risk from flooding has been identified, and loss from flooding can be significantly minimized through preventative measures.

Program 7-A: Permit only low density and intensity of development in identified flood plains. The density in the Etna Creek flood plain should not exceed 1 unit per 5 acres to reduce the quantity of structures ultimately affected by flooding, and to reduce the cumulative effect on the flood elevation caused by placing structures in the floodplain on landfills.

Program 7-B: Continue to work closely with FEMA and the U.S. Corps of Engineers to define and seek remedies for flooding problems and periodically update the flood ordinance.

Program 7-C: Prohibit fill or encroachments within the designated floodplain that would impair its ability to carry and discharge the waters resulting from a 100-year flood, except where the effect on flood heights is fully offset by stream improvements.

GOAL SF-8 *REDUCE THE POSSIBILITY OF INJURY, LOSS OF LIFE, AND PROPERTY DAMAGE AS A RESULT OF VOLCANIC ACTIVITY.*

Objective: Etna is located near enough to Mount Shasta to feel effects of earth movement should the mountain experience significant volcanic activity. It is the objective of this goal be prepared should such an event ever occur.

Program 8-A: To participate with Siskiyou County in the development or review of an Emergency Services Plan which integrates responses to natural disasters.

Program 8-B: Participate in planning issues for the development of an emergency plan for the possible eruption of Mount Shasta. Inform the residents of the plan's content and implications.

GOAL SF-9 *REDUCE THE LOSS OF LIFE, INJURIES, DAMAGE TO PROPERTY, AND SOCIAL AND ECONOMIC DISLOCATION RESULTING FROM SEISMIC ACTIVITY OR OTHER CATASTROPHIC EVENT.*

Objective:

Program 9-A: All emergency personnel and facilities should develop the capability to function when utility services are interrupted.

Program 9-B: The domestic water system should have a method for retaining stored treated water for emergency use

Program 9-C: Maintain enforcement of safety standards for new construction contained in the California Building Code for seismic zone 3.