

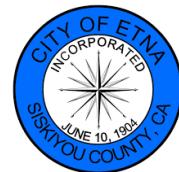
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**CITY OF ETNA**  
**GENERAL PLAN OPEN SPACE & CONSERVATION ELEMENT**

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DECEMBER 2, 2024

**CITY OF ETNA**  
442 MAIN STREET  
ETNA, CA 96027



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## 5.1 INTRODUCTION

Open space can provide relief from urbanization, improve access to natural areas in and around the community, and present opportunities for habitat preservation and enhancement. The General Plan recognizes that the planning area's open space resources and scenic views also help to define the character of the community, and that Etna's parks and recreation areas are critical to creating a high quality of life for city residents.

Conservation of natural resources is important to the City and is one of the State's three planning priorities (Gov. Code Sec. 65041.1(b)). The implementation of sustainable conservation practices helps to ensure that future generations will have access to the same resources for a healthy environment and economy. And while sustainability is a global issue that extends beyond the City, local land use planning and resource management affect the natural environment, economic vitality, and societal support that contribute to a sustainable community.

For these reasons, the Open Space & Conservation Element identifies natural resources in the planning area; a plan to protect, retain, enhance, and/or develop these resources; areas of the City that provide value in a natural state; and a plan to preserve such areas. In doing so, the Open Space and Conservation Element implements a vision, in coordination with the Land Use Element, to preserve, enhance, and manage the City's open space and natural resources.

## 5.2 STATUTORY REQUIREMENTS

### 5.2.1 Open Space Element Requirements

State law requires that general plans include an open space element for the comprehensive and long-range preservation and conservation of open-space land within the jurisdiction. State law defines open space land as any parcel or area of land or water that is devoted to an open-space use and that is designated on a local, regional, or state open-space plan as open space for any of the following purposes:

*Preservation of Natural Resources.* This category of open space consists of areas necessary for the preservation of natural resources, including areas required for the preservation of plant and animal life, including fish and wildlife habitat; areas required for ecologic and other scientific study purposes; and bays, estuaries, coastal beaches, rivers, streams, banks of rivers and streams, lakeshores, and watershed lands.

*Managed Production of Resources.* This category consists of open space areas used for the managed production of resources, including forestland, rangeland, agricultural land, and areas of economic importance for food or fiber production; areas required for recharge of groundwater basins; bays, estuaries, marshes, rivers, and streams that are important for the management of commercial fisheries; and areas containing major mineral deposits.

*Outdoor Recreation.* This category of open space consists of areas used for outdoor recreation, including areas of outstanding scenic, historic, and cultural value; areas particularly suited for park and recreation purposes, including access to lakeshores, beaches, and rivers and streams; and areas that serve as links between major recreation and open-space reservations, including utility easements, banks of rivers and streams, trails, and scenic highway corridors.

*Public Health and Safety.* This category consists of open space areas established for public health and safety, including areas required for the protection of water quality and water reservoirs, areas required for the protection and enhancement of air quality, and areas that require special

management or regulation because of hazardous or special conditions, such as earthquake fault zones, unstable soil areas, flood plains, watersheds, and areas presenting high fire risks.

*Military Installation Mission Support.* This category consists of open space areas used to support the mission of military installations, including areas adjacent to military installations, military training routes, and underlying restricted airspace that can provide additional buffer zones to military activities and complement the resource value of the military lands.

*Tribal Cultural Resources Protection.* This category consists of open space areas established on public property for the protection of Native American historical, cultural, and sacred sites, including sanctified cemeteries, places of worship, religious or ceremonial sites, and sacred shrines.

### **5.2.2 Conservation Element Requirements**

In accordance with state law, general plans are required to include a conservation element that addresses the conservation, development, and utilization of natural resources, including water and its hydraulic force, forests, soils, rivers and other waters, harbors and fisheries, wildlife, and minerals and other natural resources. State law further requires that conservation elements consider the effect of development within the jurisdiction, as described in the land use element, on natural resources located on public lands, including military installations. And conservation elements must identify rivers, creeks, streams, flood corridors, riparian habitats, and land that may accommodate floodwater for purposes of groundwater recharge and stormwater management.

State law provides that conservation elements may also address reclamation of land and waters; prevention and control of water pollution; regulation of land in stream channels and other areas as part of a conservation plan; prevention, control, and correction of erosion; watershed protection; rock, sand, and gravel resources; and flood control.

### **5.2.3 Other Considerations**

In addition to requiring that general plans include open space and conservation elements, state law allows for general plans to be “adopted in any format deemed appropriate or convenient by the legislative body, including the combining of elements” (Gov. Code Sec. 65301(a)). Given the strong interrelationship between open space and conservation issues, the City has chosen to combine discussion of these items into a single Open Space & Conservation Element.

Because not all subject matter addressed by open space and conservation elements will be germane to every city and county, state law provides that general plans address the required subject matter “to the extent that the subject of the element exists in the planning area” (Gov. Code Sec. 65301(c)). Consequently, where a particular subject is not relevant to Etna, it is not addressed by the City’s Open Space & Conservation Element except perhaps to note its absence from the planning area. For example, because the planning area does not contain areas required for ecologic and other scientific study purposes; areas adjacent to military installations, military training routes, and underlying restricted airspace; areas required for the protection and enhancement of air quality; bays, harbors, estuaries, marshes, and rivers that are important for the management of commercial fisheries; coastal beaches and lakeshores; earthquake fault zones; and unstable soil areas, the Open Space & Conservation Element does not discuss these considerations.

## 5.3 NATURAL RESOURCES

It is desirable through the General Plan process to identify lands or areas that contain natural resources that are an asset to, or are a product of, open space. Undeveloped areas of Etna contain minor drainages, wildlife habitat, and agriculture that help to define the character of the area, as well as floodplains and wetlands that constrain development, facilitate groundwater recharge, and protect water quality. The policies provided in this Open Space & Conservation Element can be an effective means of preserving these resources, especially when paired with the Land Use Element.

### 5.3.1 Water

#### 5.3.1.1 Streams and Other Surface Waters

The City of Etna is located within the Scott River Watershed of the Klamath River Basin. The watershed encompasses approximately 812 square miles and includes several perennial and ephemeral streams that are tributary to the Scott River. The river and its tributaries are part of the watershed's interconnected surface and groundwater systems that support Etna and other communities in the Scott Valley, numerous agricultural operations, and essential fish habitat, including cold water refugia for coho and chinook salmon. The Scott River flows past Etna a short distance (< 1.6 miles) east of the planning area on its approximately 58-mile long journey to



Figure 5-1, Etna Creek upstream from Hwy 3

its confluence with the Klamath River. Within the City's planning area, surface water features include Etna Creek, Johnson Creek, ditches and intermittent drainages, wastewater treatment plant effluent ponds, wetlands, and small ponds used for stock, wildlife, and recreation.

The headwaters to Etna Creek and Johnson Creek are in the Marble Mountains located west of Etna. From there the streams flow in a northeasterly direction, with Johnson Creek passing through the City's northern end and Etna Creek situated just beyond city limits to the south. Once the streams are outside the planning area, Etna Creek merges with the Scott River a few miles northeast of the City and Johnson Creek feeds its way through agricultural operations to join Crystal Creek and Patterson Creek in the north.

Etna Creek is a critical stream system for the Scott River, as well as the sole source of Etna's municipal water supply. In 1980, the City of Etna was adjudicated a right to 2.40 cubic feet per second from Etna Creek, which the City obtains via a diversion southwest of city limits. As discussed in the Circulation Element, the City is entirely dependent upon its Etna Creek diversion, and California law requires the City and other diverters to leave water instream for the benefit of other diverters, as well as wildlife. Thus, as instream flows decrease over the dry summer months, so too does the amount of water the City can lawfully divert. For this reason, the City adopted a Water Conservation Plan in 2021 and relies heavily on volunteer measures to conserve water during dry years. Most recently, to address ongoing drought conditions and curtailment orders from the State, the City applied for and was awarded grant funding to develop an emergency

water source. The project, which entails developing up to two groundwater wells at Johnson-Joss Memorial Park, is scheduled to be completed in 2025.

#### **5.3.1.2 Floodplains**

Floodplains are critically important components of a watershed because of their ability to convey and store stormwater, protect water quality, and recharge groundwater. As mapped by the Federal Emergency Management Agency (FEMA) National Flood Insurance Program (FIRM Map 06093C1585D) and shown in **Figure 5-6, Natural Resource Constraints**, large areas of the City are within the 100-year and 500-year floodplains of Etna Creek and Johnson Creek. This includes approximately 129.3 acres within the 100-year floodplains and 30.6 acres within the 500-year floodplains. As shown in **Figure 5-6**, Etna Creek's 100-year floodplain extends north into the City and encompasses much of the southeastern portion of the City, including several developed properties, whereas Johnson Creek's 100-year floodplain is significantly better confined to the stream corridor.<sup>1</sup>

To prevent flood damage resulting from development in special flood hazard areas, the City enforces flood damage prevention regulations codified in Etna Municipal Code Title 14 (Flood Damage Prevention). This occurs at the time of development and on as-needed-basis in response to violations. Additionally, the City maintains compliance with and good standing in FEMA's National Flood Insurance Program.

#### **5.3.1.3 Wetlands**

Wetlands store water, reduce flood risks, and support wildlife. The U.S. Fish and Wildlife Service (USFWS) maintains the National Wetland Inventory, which is a database of wetlands throughout the United States. The Inventory indicates the presence of wetlands within and adjacent to Etna consisting of "freshwater pond," "freshwater emergent wetland," "freshwater forested/shrub wetland," and "riverine" habitats. The wetland features found in Etna include the surface water features described in Section 5.3.1.1 (Streams and Other Surface Waters) above and are identified according to their National Wetland Inventory classification in **Figure 5-6, Natural Resources Constraints**.

#### **5.3.1.4 Groundwater Recharge and Water Quality**

Etna's watershed is a vital asset to the community in that supplies the City's drinking water, supports agriculture, and provides essential fish and wildlife habitat. Protection and conservation of the watershed resources, both groundwater and surface water, are essential.

Urbanization can have a substantial impact on groundwater recharge and water quality. This is due in large part to the development of impervious surfaces (e.g., roofs, streets, sidewalks, etc.) that increase the volume and rate of runoff and which limit the ability of stormwater to percolate into and be filtered by the soil. Runoff from urban areas often includes contaminants, such as oil and gas, and increased volumes and rates of runoff increase the potential for erosion and sedimentation of surface waters. When these contaminants and sediments are deposited into a

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<sup>1</sup> In response to concerns regarding inaccurate flood hazard maps for the Scott Valley, FEMA conducted a detailed study of the Scott Valley that indicates considerable revisions are needed to the effective flood maps for Etna and the surrounding area. Based on FEMA's findings, once the revised maps become effective, the size and extent of Etna Creek's 100-year floodplain through Etna will be significantly reduced.

receiving waterbody, it can result in impairment of the water body and the loss of fish and wildlife habitat.

In areas unaffected by the creation of impermeable surfaces, groundwater recharge is largely dependent upon the permeability of the overlying soil, the geology of the underlying basin, and the amount of water received. As discussed in Section 5.3.2 (Soils), the two predominant soil types underlying most of the City are classified as having moderately slow permeability, and a third soil type that occurs within a large area of Etna Creek's 100-year floodplain is classified as having rapid permeability.

There has long been interest in the Scott Valley's groundwater system and its connection to surface waters due to competing interests and needs in the valley. With the passage of the Sustainable Groundwater Management Act in 2014, however, groundwater sustainability agencies were formed throughout California to evaluate groundwater inputs and uses within the State's groundwater basins. As a result, studies to better understand the specifics of groundwater use in Scott Valley are giving local agencies and the public a better idea of the scope and extent of this vital natural resource underlying the City.

According to the *Scott Valley Groundwater Sustainability Plan* adopted by the Siskiyou County Flood Control and Water Conservation District in 2021, the Scott Valley Groundwater Basin has two major geologic components, the alluvial deposits in the valley and the underlying bedrock, which also forms the surrounding mountains. As it relates to groundwater recharge, the most permeable alluvium underlies the east side of Scott Valley between Etna and Fort Jones in an area averaging 1½ miles in width on the floodplain of the Scott River. Further, the major source of recharge into stream channel and floodplain deposits between Etna and Fort Jones is underflows and surface runoff originating upstream of the vicinity of Etna and from the Scott River's western tributaries. As a result, the most important locations for groundwater recharge of the underlying groundwater basin are outside the City. Within the planning area, groundwater recharge is best facilitated within and adjacent to Etna Creek's 100-year floodplain.

According to the California Department of Water Resource (DWR), water quality in the Scott Valley Groundwater Basin is characterized as calcium-magnesium bicarbonate-type water, with some areas of the basin affected by high iron, manganese, sodium, chloride, total dissolved solids, calcium, and increased sodium hazards (i.e., Adjusted Sodium Adsorption Ratio). DWR notes that waters originating in the mountains west of the Scott Valley (e.g., Etna Creek and Johnson Creek) are lower in mineralization with a higher ratio of sodium and potassium than waters derived from other sources in the Scott Valley.

## **5.3.2 Soils & Mineral Resources**

### **5.3.2.1 Soil Types and Their Characteristics**

According to the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS), which classifies soils throughout the United States, the predominant soil types in Etna are various types of Atter loam (23.9 percent), Boomer loam (35.2 percent), Diyoo loam (39.9 percent), and Marpa-Kinkel-Boomer complex (less than one percent). The characteristics of these soil types are summarized in **Table 5-1, Soil Types, Locations & Characteristics**.



**TABLE 5-1  
SOIL TYPES, LOCATIONS & CHARACTERISTICS**

Soil Type	Location	Characteristics
#104 - Atter very gravelly sandy loam, 0 to 5 percent slopes	Large areas within and adjacent to the 100-year floodplain for Etna Creek as well as a small area northwest of the High School. (Approx. 123 acres)	Very deep, somewhat excessively drained soils that formed in recent cobbly alluvium from metamorphic rocks, low shrink-swell potential, rapid permeability, slow to medium runoff, and slight to moderate hazard of wind and water erosion.
#105 - Atter very cobbly sandy loam, 0 to 5 percent slopes		
#106 - Atter very bouldery loamy fine sand, 5 to 30 percent slopes		
#115 - Boomer loam, cool, 5 to 30 percent slopes	Much of the City adjacent to and west of Howell Avenue. (Approx. 181 acres)	Deep and very deep, well drained soils that formed in material weathered from metavolcanic and basic igneous rocks, low to moderate shrink-swell potential, moderately slow permeability, slow to very rapid runoff, and slight to moderate hazard of wind and water erosion.
#136 - Diyou loam	Much of the City east of Howell Avenue south to Pleasure Park Road and Callahan Street. (Approx. 205 acres)	Very deep, somewhat poorly drained soils that formed in alluvium derived from mixed sources, low to moderate shrink-swell potential, moderately slow permeability, medium runoff, and slight to moderate hazard of wind and water erosion.
#137 - Diyou loam, drained		
#184 - Marpa-Kinkel-Boomer, cool complex, 15 to 50 percent slopes	Approx. three acres at water treatment plant.	Deep, well-drained soil with high runoff and low to moderate shrink-swell potential formed from residuum weathered from metamorphic rock.

### 5.3.2.2 Mineral Resources

The Surface Mining and Reclamation Act (SMARA) of 1975 mandates that the State Mining and Geology Board (SMGB) and California Department of Conservation Division of Mines and Geology (currently the California Geological Survey) prepare a mineral resource report for each county to help identify and protect mineral resources in areas subject to urban expansion or other land use changes that preclude mineral extraction. If the SMGB classifies an area of statewide significance, the city or county with land use authority is required to establish a mineral resource management policy and designate the area in its general plan as having important minerals to be protected. SMARA further requires that prior to the city or county permitting a use that may threaten the potential to extract minerals in a designated area, the city or county would need to prepare a statement specifying its reasons for permitting the use. The State has not yet prepared a mineral resource report for Siskiyou County or classified any areas within or adjacent to Etna as being of statewide significance.

For many years following the discovery of gold near the mouth of the Scott River in 1850 and near Black Gulch outside Yreka in 1851, gold mining remained an important industry in Siskiyou County. Mountains and streams near Etna were worked heavily by miners for nearly 100 years following those discoveries, and miners and mule packers helped to fuel Etna's economy in its early years. The pursuit of gold, however, came with dramatic and adverse impacts to the environment and native cultures. During World War II, gold mining was largely shut down in the United States to focus efforts on the war. Since that time, gold mining in Siskiyou County has persisted at a greatly reduced level, fluctuating to some degree with the economy and the value of gold. Most mining in the Scott Valley these days involves sand and gravel skimming operations rather than prospecting for gold. Nevertheless, with limited sand and gravel resources in Etna's planning area, no commercial mining operations have been established and none are anticipated in the future.

### **5.3.3 Forests and Vegetation**

There are varying densities of mixed or uniform stands of marketable timber west of Etna, and forestry remains an important, albeit significantly reduced, industry in Siskiyou County. However, most parcels in the City are too small and lack significant tree cover to support forestry and no lands within the planning area are zoned for timber production. Vegetative cover in or near the City includes irrigated farmlands, open land, dry farmland, and some brushy areas. Cover in these brushy areas include thorn-apple thickets, willows, wild chokecherry, and cottonwoods. The under story vegetation is annual and perennial grasses, wild rose bushes, weeds, and hemlock.

According to the California Wildlife Habitat Relationships (CWHHR) System maintained by the California Department of Fish and Wildlife (CDFW), large areas west of Etna as well as forested areas north and west of the City's water treatment plant are classified as Klamath mixed conifer. Outside these areas, habitats in the City are classified as "urban" or "annual grassland." Additionally, the National Land Cover Database (2021) maintained by the U.S. Geological Survey (USGS) classifies ground cover in most of Etna as "developed" at varying intensities with pockets of "grasslands/herbaceous," "shrub/scrub," "evergreen forest," "mixed forest," "pasture/hay," "emergent herbaceous wetlands," and "cultivated crops." Lands in the Sphere of Influence are predominantly classified by USGS as "grasslands/herbaceous," "shrub/scrub," "cultivated crops," and "evergreen forest."

### **5.3.4 Fish and Wildlife**

Most notable of the fish and wildlife species in the planning area are the mule deer (*Odocoileus hemionus*) often seen strolling through town and eating the landscaping in residents' yards. While natural and developed areas of the City offer forage for the "yard deer" or "town deer," as they are affectionally known, the City does not provide critical habitat for the species, such as wintering habitat essential to their survival. These areas are located south and east of the City outside of the planning area. And though concerns have been raised about the decline of the mule deer population in several areas of the State, including in Siskiyou County, the species is not at risk or potentially at risk of extinction or extirpation, and no state or federal protection status has been afforded to or proposed for the species.

#### **5.3.4.1 Special-Status Species**

Species whose persistence are at risk or potentially at risk in a given area or across their native habitats are designated for protection by governmental agencies such as the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS). These

species are commonly referred to as special-status species. Risk factors to a special-status species' persistence or population's persistence include habitat loss, increased mortality (take, electrocution, etc.), invasive species, and toxins.

According to the California Natural Diversity Database (CNDDDB) maintained by the CDFW, there are a variety of special-status wildlife, insect, and plant species with the potential to occur in Etna's planning area. These species include American goshawk (*Accipiter atricapillus*), sharp-shinned hawk (*Accipiter striatus*), northern spotted owl (*Strix occidentalis caurina*), fischer (*Pekania pennanti*), coho salmon (*Oncorhynchus kisutch*), steelhead (*Oncorhynchus mykiss irideus*), Crotch's bumble bee (*Bombus crotchii*), western bumblebee (*Bombus occidentalis*), Cascades frog (*Rana cascadae*), southern long-toed salamander (*Ambystoma macrodactylum sigillatum*), Shasta chaenactis (*Chaenactis suffrutescens*), northwestern moonwort (*Botrychium pinnatum*), timber blue grass (*Poa rhizomata*), Scott Valley buckwheat (*Eriogonum umbellatum* var. *lautum*), and Scott Mountain bedstraw (*Galium serpticum* ssp. *scotticum*).

No public lands in the planning area have been identified as containing critical habitat for these species, with the nearest USFWS identified critical habitat located approximately 2.6 miles southwest of Etna. Streams in the Scott Valley, however, are classified as Essential Fish Habitat under the Magnusen Stevenson Act (MSA). In accordance with the MSA, consultation with NOAA Fisheries is required whenever a federal agency, such as the U.S. Forest Service, works in an area that will adversely affect Essential Fish Habitat.



Figure 5-2, Migrating salmon

### 5.3.5 Air Quality

The federal Clean Air Act requires the U.S. Environmental Protection Agency to establish ambient air quality standards for six criteria air pollutants: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, lead, and suspended particulate matter. The California Clean Air Act also sets ambient air quality standards, which are more stringent than the federal standards and which include four additional pollutants. When the air quality in a geographic area meets or is cleaner than federal and/or state standards, the area is considered to be in attainment of the standard. Because air contaminants can result from activity outside the area and are not geographically contained, however, an exceedance of a standard is not necessarily related to a violation of the standard for the area.

Different air quality pollutants have been monitored in Siskiyou County over the years, however, the only pollutants that currently receive continuous monitoring are ozone (O<sub>3</sub>) and fine suspended particulate matter (PM<sub>2.5</sub>). Ozone monitoring has been in place in Siskiyou County since 1981 and PM<sub>2.5</sub> monitoring was added in 2005. The air quality monitoring station is operated by the Siskiyou County Air Pollution Control District in Yreka, approximately 22.5 miles northeast of Etna.

Ozone occurs naturally in the upper atmosphere; however, it can also be created in the lower atmosphere when exhaust emissions and other pollutants react with sunlight. Exposure to ozone can irritate the respiratory system and result in decreased lung function, aggravated asthma, and possible lung damage with persistent exposure. According to the California Air Resources Board, ozone levels in Siskiyou County consistently meet federal and state air quality standards.



Figure 5-3, Wildfire burning on forest land

Fine suspended particulate matter, or  $PM_{2.5}$ , consists of tiny solid or liquid particles (approx. 0.0001 inch or less) that can easily enter and be deposited in the lungs. Although the composition of  $PM_{2.5}$  varies, typical sources include power plants, wildfires, industrial facilities, automobiles, and other sources of combustion. Inhalation of fine suspended particulate matter can cause coughing, phlegm, wheezing, and other physical discomfort, as well as increased rates of respiratory and cardiovascular illness with long-term exposure. Recent research has found that long-term exposure to  $PM_{2.5}$  can also substantially increase a person's risk of developing Alzheimer's disease and related dementia. According to the California Air Resources Board, Siskiyou County remains classified as being in attainment of state and federal  $PM_{2.5}$  standards, despite ongoing seasonal exceedances of  $PM_{2.5}$  for the past several years due to regional wildfires.

## 5.4 PALEONTOLOGICAL, CULTURAL, AND HISTORIC RESOURCES

### 5.4.1 Paleontological Resources

Paleontological resources, or fossils, are the evidence of once-living organisms preserved in the geologic record. They include both the fossilized remains of prehistoric plants and animals as well as signs of their existence (e.g., tracks, imprints, burrows, etc.). Fossils are considered to be greater than 5,000 years old and are typically preserved in sedimentary rocks. Although rare, fossils can also be preserved in volcanic rocks and low-grade metamorphic rocks under certain conditions. Intrusive igneous rocks, high-grade metasedimentary, and metavolcanic rocks are incapable of preserving paleontological resources due to the high temperatures and/or pressures required for their formation.

Although several fossils have been found in Siskiyou County, and pre-Cambrian, Paleozoic, Mesozoic, and Pleistocene sedimentary and metasedimentary deposits in the County are classified as having a high potential to yield paleontological resources, no unique geological or paleontological resources have been documented within the City or are known to occur in Etna.

### 5.4.2 Tribal Cultural Resources

The City of Etna is within the ethnographic territory of the Shasta people. Traditional Shasta land extends from just north of the Oregon state line south to the Scott Mountains and east from Mount

Shasta to the Salmon and Marble Mountains in the west. It is estimated that prior to Euro-American contact, the Shasta's population was approximately 6,000 but that due to introduced diseases and violent conflict with settlers and soldiers, the population was reduced to around 300 people within a few short decades. Today, the descendants are principally affiliated with the Shasta Indian Nation, Shasta Nation, and Quartz Valley Indian Community, which also includes Klamath and Karuk tribal members.

Consultation with the Shasta is essential to accurately identifying open spaces opportunities and to protecting sensitive cultural resources, including sanctified cemeteries, places of worship, religious or ceremonial sites, and sacred shrines, if any are present. In accordance Government Code Section 65352.3, the City contacted tribal representatives identified by the California Native American Heritage Commission (NAHC) to invite formal consultation for the purpose of protecting tribal cultural resources as part of the General Plan update. Individuals contacted included representatives of the Shasta Indian Nation and Shasta Nation. No tribal representative requested formal consultation or submitted comments or concerns regarding the City's General Plan update. Additionally, the NAHC completed a Sacred Lands File search of the planning area at the request of the City, the results of which were negative (i.e., no records of tribal cultural resources were located).

Although no responses were received and no tribal cultural resources are known to occur in Etna, the City recognizes the potential for the inadvertent discovery of tribal cultural resources during future development activities in the City, as provided for in the Land Use Element. This includes the possibility of the unanticipated and accidental discovery of human remains. For this reason, the City complies with and requires compliance with state law, including California Public Resources Code Section 5097.98 and California Health and Safety Code Section 7050.5.

### 5.4.3 Historic Resources

Etna, or Rough and Ready as the City was known in its early years, was founded in 1853 with the development of a sawmill and the first housing in the present townsite. Within five years, the community had grown to include several businesses supported, in part, by miners working claims along the Scott and Salmon Rivers and the mule packers that supplied them. Following a flood that badly damaged the nearby community and commercial center of Aetna Mills in 1861-62, its post office and many of its residences and businesses relocated to Rough and Ready, fueling growth of the community.

In 1874, the community's name was changed to Etna, and in 1878, the City of Etna incorporated. Due to its pioneer past and early miner days, there are numerous historic structures in the City that help to define Etna's character and which add to the City's charm. Although none of the buildings are listed in the National Register of Historic Places or the California Register of Historical Resources, and no official historic district has been established as a means to preserve these structures, most of the structures are in closely proximity to one another such that a district could readily be formed. This includes eight commercial structures in the downtown area that date to the late 1800s, as well as several residential dwellings of similar age that may also be worthy of historic recognition and preservation. Therefore, to better protect

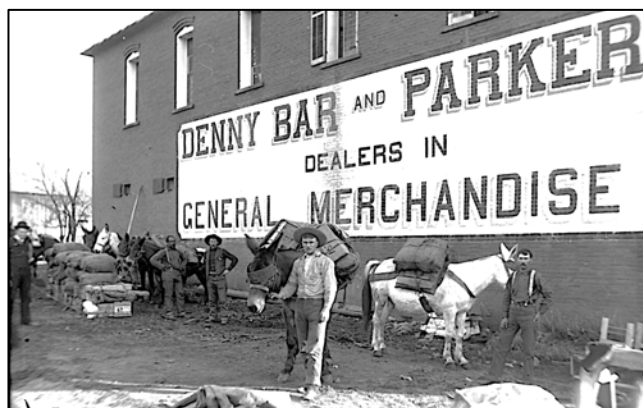


Figure 5-4, Mule packers ca. 1895 (Source: CSU Chico)



and preserve Etna's historic character and charm, the City desires to work with owners of historic properties, particularly those in the downtown area, to evaluate their historic status and mechanisms for their preservation.

## **5.5 AGRICULTURAL RESOURCES**

Agricultural land conservation can be a foundation for more permanently preserving lands at the edge of cities for their intrinsic open space values. When agricultural activities produce self-sustaining revenue, agricultural conservation can be amongst the most cost-effective means of protecting open space, promoting infill development, and preserving the unique rural cultural character of communities. Agricultural lands can also play an important role in maintaining connectivity of conserved lands and preserving wildlife corridors and wetlands.

There is relatively little agriculture in the City when compared to unincorporated lands surrounding the City. Whereas the agricultural uses found in Etna consist primarily of grazing, 4-H projects, and non-commercial agriculture, which the City supports through its application of land use and zoning regulations, there are vast fields of alfalfa just outside city limits and throughout much of the Scott Valley.

As outlined in the U.S. Department of Agriculture's *Land Inventory and Monitoring (LIM) Project for Siskiyou County, Central Part, and Butte Valley-Tule Lake Area Soil Surveys*, the only soil type in Etna that meets the criteria for "prime farmland" is Diyou loam, drained (#137). This soil type is limited to approximately 87.6 acres in a central, mostly developed area of the community where commercial agriculture, were it to occur and depending upon how it occurs, may not be compatible with surrounding uses. Nevertheless, undeveloped property in this area could potentially support development of less intensive agricultural uses, including community gardens. Additionally, one of the closely related soil types in Etna, Diyou loam, (#136), meets the criteria for "farmland of statewide importance." Diyou loam underlies approximately 49.5 acres between Main Street and Callahan Steet in the City's southeast. This is a largely undeveloped area of the City within Etna Creek's 100-year floodplain that is used periodically for grazing.

The California Department of Conservation Farmland Mapping and Monitoring Program (FMMP) classifies most lands in Etna as "urban and built-up land" due to development, with the largely undeveloped area in the City's southeast classified as "farmland of statewide importance." Lands within the Sphere of Influence are principally classified by the FMMP as "farmland of local importance" and "other land."

An important tool for preserving land for agricultural uses is the California Land Conservation Act, better known as the Williamson Act. The Williamson Act program was envisioned as a way for local governments to integrate the protection of open space and agricultural resources into their overall strategies for planning urban growth patterns. To do so, the Williamson Act program enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. Private land within locally designated agricultural preserve areas is eligible for enrollment under contract. The minimum acreage for enrollment under the Williamson Act is 100 acres and the term for contracts is ten years. However, since the contract term automatically renews on each anniversary date of the contract, the actual term is essentially indefinite. Landowners receive substantially reduced property tax assessments in return for enrollment under Williamson Act contract. Despite the savings, there are no agricultural properties subject to a Williamson Act contract within the City or Sphere of Influence.

## 5.6 ENERGY

As discussed in the Circulation Element, there are no electrical energy production facilities in Etna. Pacific Power provides electrical service to the City and surrounding area.

State and local agencies regulate the use and consumption of energy through various methods and programs. As a result of the passage of Assembly Bill 32 (the California Global Warming Solutions Act of 2006), which seeks to reduce the effects of Greenhouse Gas (GHG) emissions, a multitude of state regulations have been enacted to reduce energy use and GHG emissions. Many of these regulations are implemented and enforced at the local level through energy efficiency requirements in the building permit application process.

The Siskiyou County Building Department, which the City contracts with for plan check and building inspection services, ensures that all new construction complies with the standards in effect on the date a building permit application is made, including the Energy Efficiency Standards and Green Building Standards in Title 24 of the California Code of Regulations. Although the City does not have any additional energy conservation requirements or standards in place, energy and efficiency incentive programs for residential and commercial customers are regularly offered by Pacific Power and the State of California.

## 5.7 PARKS AND RECREATION

The City aims to preserve, maintain, and enhance a network of open space that connects compatible natural resource areas, parks, and recreation areas and which provides access to key destinations in the community. This will allow for pedestrian, bicycle, and wildlife circulation, as well as opportunities for passive recreation.

### 5.7.1 Existing Parks and Recreation Areas

Public parks and recreation areas in Etna are currently owned and maintained by the City, with the Scott Valley Unified School District providing additional outdoor recreation areas and facilities for youth-related activities at the Elementary School and High School. Two local non-profits also own recreation facilities in the planning area. The Etna Beautification Project maintains a small park for public use on Main Street and the Scott Valley Pleasure Park Association maintains



Figure 5-5, Scott Valley Community Pool

facilities adjacent to city limits for community activities, including rodeos, clinics, community riding, 4H/FFA events, and softball. Among the various entities, recreational amenities in the planning area presently include ballfields, playgrounds, tennis courts, picnic areas, a community pool, and rodeo grounds. Etna's current open space areas for outdoor recreation are summarized in **Table 5-2** below and are shown on **Figure 5-7, Parks and Recreation**.

**TABLE 5-2, INVENTORY OF PARKS AND RECREATION AREAS**

<b>Ownership</b>	<b>Facility</b>	<b>Acres</b>
City Parks & Recreation Areas	Johnson-Joss Memorial Park	6.0
	Scott Valley Community Pool	1.8
	Little League Ballfield	1.3
Other Public Agencies with Outdoor Recreation Areas	Etna Elementary School	3.4
	Etna High School	37.9
Non-Profit Parks & Recreation Areas	Scott Valley Pleasure Park	11.1
	The Little Lot	0.2
<b>TOTAL</b>		<b>61.7</b>

### 5.7.2 Future Parks and Recreation Areas

At the start of the General Plan update, residents were surveyed and asked their opinions about a variety of issues, including the adequacy of the City's parks and recreation facilities. Respondents were split on the issue, with fewer than half (44.0%) indicating the City's existing parks and recreation facilities meet the needs of the community. When asked about desired improvements, a youth facility/skate park and walking/running trails were most frequently noted by respondents.

The Etna Police Activities League (PAL) has been working to address the first need identified by the community with its plan to develop a skate park, and a possible site for the facility has been identified. Nevertheless, project planning remains in the early stages and no permits or approvals have been obtained.

Etna is fortunate in that the City has property on which it can develop additional recreation facilities in the future. Johnson-Joss Memorial Park encompasses 6.0 acres and could readily accommodate development of a youth facility and/or other recreation facilities. However, city-owned land with which to develop a pedestrian and/or bicycle trail network on separate from automobiles is largely nonexistent. Further, funding for maintenance of the City's existing facilities, as well as for other core services, remains limited. For that reason, when evaluating the development of additional parks, trails, and recreation areas, or expansion of or improvements to existing areas, operations and maintenance costs must be fully considered, and use of partnerships should be promoted. With willing partners, additional lands could potentially be enhanced, including within Etna Creek's 100-year floodplain, and co-managed for public access and other purposes, and trails through these areas connected with other pedestrian and bike friendly areas in the community to promote recreation and active transportation.

Use of shade structures and shade trees should also be considered when planning future parks, trails, and recreation areas. Shade trees not only enhance community character and provide relief from the sun, but the "Urban Heat Island Effect" can occur in small or large cities, and even in suburban areas. Heat islands form as natural land cover is replaced with dark-colored rooftops, pavement for roads and parking lots, and other hardscapes that collect and retain heat. According to the U.S. Environmental Protection Agency, these dark surfaces can reach temperatures up to 60 degrees Fahrenheit (°F) warmer than the air, thereby increasing the ambient temperatures in areas 1-7 °F higher than in natural landscapes during the day and 2-5 °F higher at night. For these



reasons, the City will want to consider the use of shade trees and other passive cooling strategies when planning future parks, trails, and recreation areas.

### **5.7.3 Quimby Act**

Local governments in California provide an important role in the establishment of parkland and open space for recreational purposes. The Quimby Act (California Government Code Section 66477) authorizes cities and counties to pass ordinances requiring developers to set aside land, donate conservation easements, or pay in-lieu fees for park improvements. Revenues generated through the Quimby Act cannot be used for the operation and maintenance of existing park facilities, although they may be used for park rehabilitation.

The intent of the Quimby Act is to assist local municipalities in providing adequate open space for their citizenry by requiring developers to mitigate the impacts of residential development projects. The provisions give authority for passage of land dedication ordinances only to cities and counties. However, if an agency other than a city or county is responsible for providing recreational services, the agency ultimately is the recipient of the land dedication and/or fees.

Local Quimby Act ordinances must include definite standards for determining the proportion of land to be dedicated and the amount of the fee to be paid. Further, in order for the City to be able enforce a Quimby Act ordinance, the ordinance must be in effect for a period of at least thirty days prior to the filing of the tentative subdivision map or parcel map.

The City of Etna does not yet have a Quimby Act ordinance, which is understandable given the limited growth that has occurred in the past. Nevertheless, because the City of Etna periodically receives subdivision applications and has yet to pass such an ordinance, it may be in the interest of the City to incorporate the necessary Quimby Act language into City Code.

## **5.8 CONSERVATION, DEVELOPMENT & UTILIZATION OF NATURAL RESOURCES**

Natural resource conservation offers many rewards. The preservation of water-related resources can reduce flooding, improve water quality, and increase resiliency to drought. Trees planted in parks and yards and along streets and parking areas are an effective, low technology means of staying cool during summer, reducing energy demand, and achieving other social, environmental, and economic benefits. Conservation of environmental and agricultural resources is also one of the State's three planning priorities and helps to achieve State climate goals.

Understanding the natural resources within Etna and the methods for conserving them helps ensure community needs are balanced with environmental conservation and climate change considerations. Most natural resource conservation issues are closely related to open space preservation. Protection of open space is a means of protecting the watershed, reducing pollution, and conserving wetlands and other resources.

The goals, policies, and programs in this element, along with the Land Use, Safety, and Circulation Elements, seek to balance new development in the City with the conservation, development, and utilization of natural resources.

## **5.9 EFFECT OF DEVELOPMENT ON OPEN SPACE AND NATURAL RESOURCES**

Planning for new development in Etna should consider and protect natural resources within and around the City, and it does so in different ways. The City's municipal code includes building and

subdivision standards that protect public health and safety from development in flood hazard areas, and it provides for the protection of biological resources in open space areas. Additionally, **Figure 5-6, Natural Resources Constraints** is included below to identify the locations of natural resources in the City that may require permits or other approvals from state and federal agencies prior to development or disturbance of the underlying land.

The Natural Resources Constraints map does not restrict development of property by the City. Rather, the intent of the map is to help assure a sensitive form of development that protects identified natural resources, preserves biodiversity and important natural habitats, and reduces hazards due to flooding. To achieve this, the Natural Resource Constraints map combines FEMA's floodplain data with USFWS's National Wetlands Inventory data to indicate the presence of federal development regulations set forth by FEMA and USFWS to protect property owners from flood damage and to protect sensitive natural habitats. By including this information in the General Plan Open Space & Conservation Element, it indicates to property owners, developers, and city staff the presence of potential limitations to development in these areas and the need for additional review prior to building permit issuance and/or project approval. Importantly, however, because more accurate flood hazard information should be made available from FEMA in the near future, as discussed in Section 5.3.1.2 (Floodplains), the Natural Resource Constraints map will likely need to be updated at that time.

It is also important to note that in addition to permits or other approvals from FEMA and USFWS, prior to the disturbance of wetlands or the bed, bank, or channel of any surface waters, additional permits or other approvals may be required from the U.S. Army Corps of Engineers, California Department of Fish and Wildlife, and California Water Resources Control Board.

The goals, policies, and programs in this element, along with the Land Use, Safety, and Circulation Elements, seek to balance new development with the preservation of the City's natural resources.

## **5.10 CORRELATION WITH OTHER ELEMENTS**

Some of the topics addressed in the Open Space & Conservation Element overlap with and are also addressed by other elements of the General Plan. For example, floodplains and flood risk reduction are also addressed in the Safety Element, and Land Use Element policies that promote efficient use of land and infill development are intended to support growth of the community without unnecessarily converting agriculture or other open space to an urban use. As discussed in the Noise Element, open space can also be used to buffer incompatible land uses from one another, such as noise sensitive uses from noise generating sources. Accordingly, the Open Space & Conservation Element should be used in combination with the other Elements to ensure full implementation of all General Plan resource-related policies.

## **5.11 OPEN SPACE ACTION PLAN**

Government Code Section 65564 requires that every local open space plan contain an action program consisting of specific programs that the legislative body intends to pursue in implementing its open space plan. Thereafter, any action by the city or county by which open space land is acquired or disposed of, or its use restricted or regulated, needs to be consistent with the local open space plan. In the case of Etna, the open space plan is the Open Space & Conservation Element, and the open space program consists of the goals, policies, and programs in Section 5.12 (Open Space and Conservation Element Goals, Policies & Programs), which follows.

## 5.12 OPEN SPACE AND CONSERVATION ELEMENT GOALS, POLICIES & PROGRAMS

<b>GOAL OC-1:</b>	<b>Welcoming, inclusive, and safe parks, recreation facilities, and activities to serve city residents regardless of age, ability, or income.</b>
<b>GOAL OC-2:</b>	<b>A comprehensive system of interconnected open space areas that maximizes the potential for habitat preservation, compatible recreation, and scenic views.</b>
<b>GOAL OC-3:</b>	<b>Preservation of cultural, historical, and paleontological resources.</b>
<b>GOAL OC-4:</b>	<b>Protection of special-status species and other biological resources sensitive to human activities and development.</b>
<b>GOAL OC-5:</b>	<b>A sustainable and high-quality water supply.</b>
<b>GOAL OC-6:</b>	<b>Industries that support the local and regional economy, minimize adverse impacts to the public and environment, and are compatible with development in the City.</b>
<b>GOAL OC-7:</b>	<b>Etna's rural small town atmosphere conserved and enhanced.</b>
<b>GOAL OC-8:</b>	<b>Increased energy efficiency, where possible, to reduce costs and environmental impacts.</b>

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<b>GOAL OC-1:</b>	<b>Welcoming, inclusive, and safe parks, recreation facilities, and activities to serve city residents regardless of age, ability, or income.</b>
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**Policy OC-1.1:** The City supports investment in the maintenance, improvement, and development of parks, recreation facilities, and greenspace to promote active lifestyles, mental health, lifelong learning and development, and environmental health benefits for individual and community wellbeing.

**Policy OC-1.2:** The City supports investment in parks, trails, and programs, when feasible, to promote sports, fitness, active transportation, and active lifestyles.

**Program OC-1A:** Continue to evaluate and apply for grants and other sources of funding as they become available for the maintenance, improvement, and development of parks, recreation facilities, and greenspace.

**Program OC-1B:** Encourage residents, stakeholders, neighborhood groups, businesses, schools, social organizations, and public agencies to volunteer and partner in the maintenance and development of city-owned parks and recreation facilities.

**Program OC-1C:** Provide a variety of recreation facilities and activities that meet the diverse needs of the community.

**Program OC-1D:** Accommodate those with special needs in the City's parks and recreation facilities and programs, including seniors and people with disabilities, and meet the requirements of the Americans with Disabilities Act.

**Program OC-1E:** Coordinate with the Etna Police Department in the planning for safe and secure parks and recreation areas.

**Program OC-1F:** When planning park renovations and development, incorporate green infrastructure, shade, and vegetation where appropriate.

**Program OC-1G:** Design and develop parks, greenspace, and trail corridors to support community respite, wellness, and the mental health benefits found in connections to nature.

**Program OC-1H:** Support urban agriculture in private development and public spaces, including home gardens, community gardens, and urban farms.

**Program OC-1I:** When planning new parks, recreation facilities, open space, and greenways, ensure adequate funding is available for the ongoing maintenance and operation of these areas.

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**GOAL OC-2: A comprehensive system of interconnected open space areas that maximizes the potential for habitat preservation, compatible recreation, and scenic views.**

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**Policy OC-2.1:** The City recognizes that open-space land is a limited and valuable resource that should be conserved wherever possible.

**Policy OC-2.2:** The City, in cooperation with other agencies, organizations, and property owners endeavors to maintain, preserve, and enhance an interconnected system of open space for the community's use, appreciation, and enjoyment and for the preservation and enhancement of natural habitat.

**Program OC-2A:** Where practical, improve city-owned or managed open space with designated access points, parking, trails, and other amenities.

**Program OC-2B:** Provide access to public open space areas, excluding those areas determined to be sensitive to human presence, through a network of pedestrian and bicycle trails that can be adequately managed.

**Program OC-2C:** Integrate, where feasible, active and passive recreational opportunities with the protection of natural areas.

**Program OC-2D:** Amend the Subdivision Ordinance to require the dedication of land, improvement of parks and open space, and/or the payment of in lieu fees in accordance with the Quimby Act.

**Program OC-2E:** Maintain a ratio of not less than five acres of park and open space land per 1,000 city residents.

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**GOAL OC-3: Preservation of cultural, historical, and paleontological resources.**

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**Policy OC-3.1:** The City desires to strengthen Etna's identify, safeguard the cultural identity of previously displaced tribes, and preserve the fossil record through protection of the cultural, historical, and paleontological resources in the City.

**Policy OC-3.2:** The City recognizes that although no paleontological resources or tribal cultural resources, places, features, or objects have been identified in the planning area, projects resulting in ground disturbance have the potential to uncover previously unknown resources.

**Program OC-3A:** Consult with local Native American Tribes that are traditionally and culturally affiliated with resources that could be affected by city plans or projects, identify areas that may be of tribal cultural significance, and determine appropriate treatment for the areas.

**Program OC-3B:** When items of historical, cultural, or paleontological significance are discovered, contact a qualified archaeologist or historian to evaluate the find and recommend proper action.

**Program OC-3C:** Where feasible, incorporate significant archaeological and tribal cultural resource sites into open space areas.

**Program OC-3D:** Coordinate with the appropriate federal, state, local agencies, and Native American Tribes upon discovery of tribal cultural resources and artifacts.

**Program OC-3E** Work with affected property owners in the City's historic town center to evaluate the possible creation of a historic district or similar mechanism to protect the historic character and charm of the downtown area.

**Program OC-3F:** Support interested property owners in the preservation, maintenance, and/or renovation of significant historic resources, consistent with applicable Department of the Interior historic preservation standards.

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**GOAL OC-4: Protection of special-status species and other biological resources sensitive to human activities and development.**

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**Policy OC-4.1:** The City, in cooperation with other agencies, organizations, and property owners endeavors to preserve habitats necessary for the persistence of special-status species.

**Policy OC-4.2:** The City provides for the protection of special-status species during its review of discretionary projects.

**Policy OC-4.3:** The City supports the restoration and management of natural habitats to improve the resilience of the community and environment to flood, drought, and wildfire hazards.

**Program OC-4A:** Work with the Siskiyou County Flood Control District, Siskiyou Resource Conservation District, Scott River Watershed Council, Scott River Water Trust, interested property owners, and other appropriate entities to restore and preserve natural habitats in the planning area and improve the resilience of natural landscapes to hazards like drought, flood, and wildfire.

**Program OC-4B:** When activities involving modifications within or adjacent to wetland areas are planned or proposed, seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

**Program OC-4C:** Require buffer areas between development projects and significant watercourses, riparian vegetation, and wetlands.

**Program OC-4D:** Where practical and feasible, co-manage open space and wetlands for flood control.

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**GOAL OC-5: A sustainable and high-quality water supply.**

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**Policy OC-5.1:** The City collaborates with the State, regional water quality control boards, watermasters, water purveyors, and government agencies at all levels to ensure a safe supply of drinking water and a healthy environment.

**Policy OC-5.2:** The City supports the development, update, and implementation of groundwater and surface water management plans that emphasize sustainable use and/or water quality protection.

**Program OC-5A:** Work with local, state, and federal agencies, special districts, private landholders, and the Groundwater Sustainability Agency to promote management practices that protect the watershed and the City's municipal water supply.

**Program OC-5B:** Reduce soil erosion and sedimentation of water bodies to protect water quality by applying "best management practices" for projects in and around surface waters (e.g., storm drainage maintenance).

**Program OC-5C:** Integrate stormwater management techniques and low impact development best practices to minimize runoff.

**Program OC-5D:** Work with the Siskiyou Resource Conservation District, landowners, and other appropriate entities to implement flood and erosion control measures, manage watershed health, and promote sustainable agricultural practices that reduce the risk of soil degradation, water contamination, and flooding in the community.

**Program OC-5E:** Continue to implement the water conservation plan on an as-needed-basis to reduce the impact of drought on the City's water supply.

**Program OC-5F:** Encourage water conservation efforts by residents, businesses, and industry.

**Program OC-5G** Protect riparian areas and wetlands by requiring setbacks from these features during project review.

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**GOAL OC-6: Industries that support the local and regional economy, minimize adverse impacts to the public and environment, and are compatible with development in the City.**

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**Policy OC-6.1:** The City supports the conservation of agricultural operations that are sustainable, economically viable, and compatible with development in the City.

**Policy OC-6.2:** The City permits small-scale, non-water-intensive agriculture and silviculture where compatible with surrounding uses and the environment.

**Policy OC-6.3:** The City requires that all mining activity is properly permitted, conducted in accordance with the State Surface Mining and Reclamation Act of 1975 (SMARA), and that mines are effectively reclaimed.

**Policy OC-6.4:** The City supports state or local property tax incentives that allow property owners to preserve their land as open space.

**Program OC-6A:** Protect productive timberland and agricultural lands through buffers from sensitive uses as a means to prolong the economic use of this open space.

**Program OC-6B:** Amend the Zoning Code to provide additional opportunities for urban agriculture and to support limited ancillary retail sales of agricultural products produced in the City.

**Program OC-6C:** Ensure that non-exempt mineral extraction activities area comply with SMARA, including requirements for financial assurances and reclamation plans.

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**GOAL OC-7: Etna's rural small town atmosphere conserved and enhanced.**

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**Policy OC-7.1:** The City supports efforts to improve the appearance of properties in the planning area.

**Policy OC-7.2:** The City endeavors to safeguard the community from the effects of urban blight.

**Program OC-7A:** Continue to utilize code enforcement as a means to eliminate property deterioration, and the accumulation of trash and junk that negatively impacts adjacent properties and the appearance of the community.

**Program OC-7B:** Work with property owners to improve the scenic quality along State Highway 3 as it proceeds through the community.

**Program OC-7C:** Amend the Zoning Code to include landscaping requirements for parking lots to reduce the visual impact of large paved areas.

**Program OC-7D:** Update the sign regulations to ensure outdoor advertising remains at a scale appropriate for the size of the community, and where feasible, complements the City's historic downtown area.

**Program OC-7E:** Amend the Subdivision Ordinance to require that developers include street trees in frontage improvements and protect significant trees, creeks, and wetlands.

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**GOAL OC-8: Increased energy efficiency, where possible, to reduce costs and environmental impacts.**

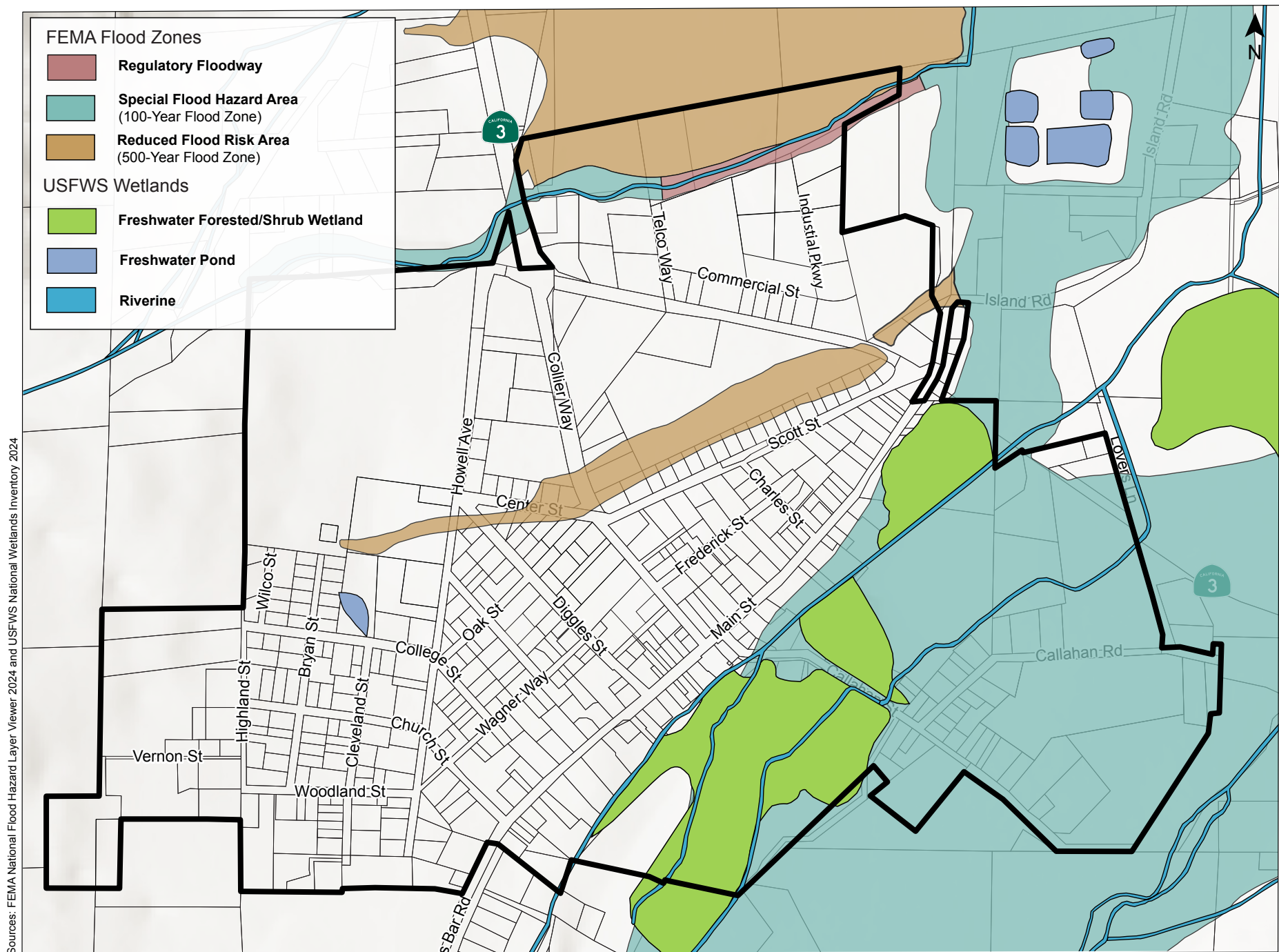
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**Policy OC-8.1:** The City supports increased energy efficiency and the use and deployment of sustainable energy sources.

**Program OC-8A:** Continue to identify energy efficiency improvements that can be implemented by the City to reduce energy demand and cost, and seek grant funding for implementation of the improvements, if necessary.

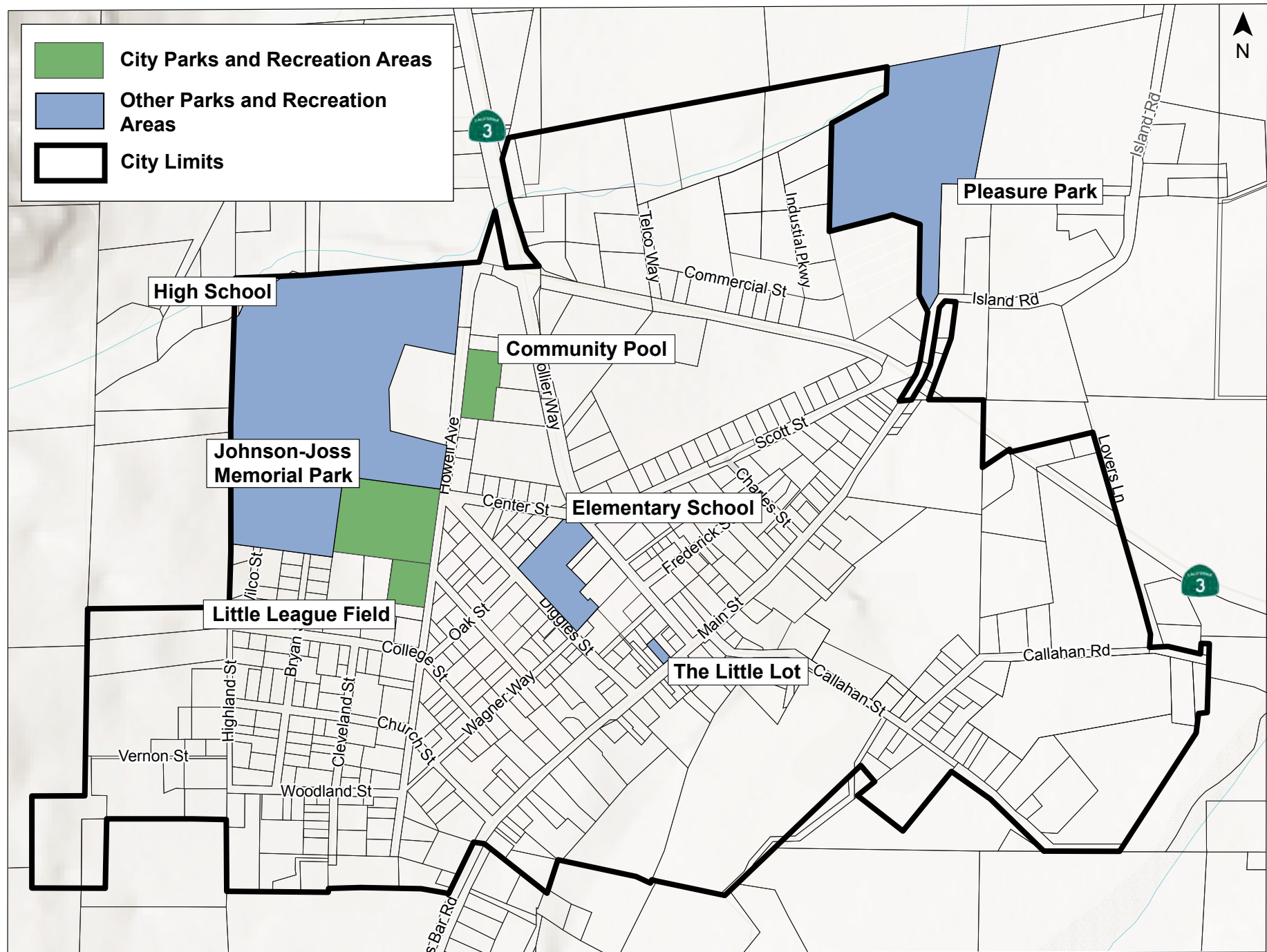
**Program OC-8B:** Cooperate with federal, state and local governments and other appropriate entities to accomplish energy conservation objectives throughout the State, and inform city employees, contractors, staff, and the general public of the need for and methods of energy conservation.





Sources: FEMA National Flood Hazard Layer Viewer 2024 and USFWS National Wetlands Inventory 2024

Figure 5-6, Natural Resources Constraints



**Figure 5-7, Parks and Recreation Areas**