CITY OF MONTAGUE
DRAFT OPEN SPACE & CIRCULATION ELEMENT UPDATE

October 10, 2024

CITY OF MONTAGUE
230 S. 13TH STREET
MONTAGUE, CA 96064

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 Montague'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 and 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 and 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 Montague, 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, rivers, and streams that are important for the management of commercial fisheries; coastal beaches, lakeshores, and riverbanks; earthquake fault zones; unstable soil areas; or areas presenting high fire risks, the Open Space and 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 Montague 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

Figure 5-1, Shasta River outside of Montague

The City of Montague is located within the Shasta River Basin of the Klamath River Watershed. The basin is primarily spring-fed and encompasses an area of approximately 793 square miles. The Shasta River and its tributaries are part of the basin's interconnected surface water system. The river begins its journey south of Montague near the base of Mt. Eddy and flows northwest through the Shasta Valley to its confluence with the Klamath River, a distance of approximately 58 miles. Over its course, the Shasta River supports numerous agricultural operations and provides essential fish and wildlife habitat, including cold water refugia for coho and chinook salmon. Although the river is located outside of Montague's planning area, it is the most significant hydrologic feature in the vicinity of Montague as well as the source of much of the City's water supply. Within the City's planning area, surface water features include Oregon Slu (or Oregon Slough), which is a tributary to the Shasta River, Montague Water Conservation District canals, water treatment plant settling ponds, wastewater treatment plant effluent ponds, stock ponds, intermittent drainages, and drainage ditches.

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 5-5, Natural Resource Constraints**, there are approximately 36.3 acres in Montague within Oregon Slu's 100-year floodplain and an additional 48.8 acres in the City within the slough's 500-year floodplain. The 500-year floodplain extends south from Oregon Slu at the north end of the City through much of the western half of the community and affects numerous developed properties. The 100-year floodplain is significantly better confined to the area surrounding the slough, and the lands affected by it are largely undeveloped.

To prevent flood damage resulting from development in special flood hazard areas, the City enforces flood damage prevention regulations codified in Montague Municipal Code Chapter 15.16 (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 Montague consisting of "freshwater pond," "freshwater emergent wetland," "freshwater forested/shrub wetland," and "riverine" habitats. The wetland features found in Montague are the same as the surface water features described in Section 5.3.1.1 (Streams and Other Surface Waters) above. These surface waters/wetlands are identified according to their National Wetland Inventory classification in **Figure 5-5, Natural Resources Constraints**.

5.3.1.4 Groundwater Recharge and Water Quality

Montague'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 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) below, the predominant soil types in Montague are classified as having slow permeability, which is not particularly conducive to groundwater recharge.

Due to the unique volcanic geology of the area, scientists have long known that the Shasta Valley's groundwater system is highly complex. With the passage of the Sustainable Groundwater Management Act in 2014, 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 Shasta 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 *Shasta Valley Groundwater Sustainability Plan (GSP)*, as adopted by the Siskiyou County Flood Control and Water Conservation District in 2021, the Shasta Valley Groundwater Basin includes nine distinct geologic units. Although the units are hydrologically interconnected, groundwater availability and groundwater recharge are highly variable among the units. The geologic unit underlying the City of Montague (i.e., the Pleistocene Debris Avalanche)

was formed by a catastrophic debris avalanche on ancestral Mount Shasta that deposited volcanic rock and other materials across approximately 260 square miles of the Shasta Valley. The deposits range in thickness from about 650 to 1,000 feet on the lower slopes of Mount Shasta to about 20 feet along the Shasta River near Montague. As it relates to groundwater recharge, the GSP notes that the Pluto's Cave Basalt, which is an adjacent geologic unit in the southeastern portion of the Shasta Valley "critically influences groundwater storage and recharge in the Valley, contributing large volumes of water to wells and springs." Recharge to Pluto's Cave Basalt is reported to occur from "precipitation, percolation from irrigation and leaky water conveyance ditch losses, and groundwater underflow associated with meltwater from snowfall on the Cascade Range." As a result, the most important locations for groundwater recharge of the underlying groundwater basin are situated well outside of the City's planning area. Within the planning area, groundwater recharge is best facilitated within and adjacent to drainage ditches, irrigation canals, and Oregon Slu.

According to the California Department of Water Resource (DWR), water quality in the Shasta Valley Groundwater Basin is characterized as magnesium bicarbonate and calcium bicarbonate type water, with some areas affected by high magnesium, iron, fluoride, nitrate, chloride, sodium, sulfate, hardness, and total dissolved solids. Due to persistent taste and odor-related issues with Montague's water supply, significant upgrades were made to the City's water treatment plant in 2012 that resolved these issues.

5.3.1.5 Municipal Water Supply

Montague has long been challenged by the lack of available water in the area and by the quality of its water. During the City's formative years, attempts were made to convey water from the Klamath River and from the headwaters of the Sacramento River to Montague, both of which ended in failure. To address this challenge and supply irrigation water to users in the Shasta Valley, the Montague Irrigation District was formed in 1925. Shortly thereafter, Dwinnell Dam was completed near Weed, which impounded the upper reaches of the Shasta River and Parks Creek, and canals were developed to convey the stored water to District customers. Ever since that time, the City of Montague has contracted with the District, presently known as the Montague Water Conservation District (MWCD) for its water supply. The MWCD provides the City with water from two different sources depending upon the time of the year. During mid-April through mid-October, the City is typically supplied water from Dwinnell Dam and Reservoir (i.e., Lake Shastina), and during the remainder of the year, the City receives its water from a nearby diversion on the Shasta River. As discussed in the Circulation Element, due to emergency drought conditions and a lawsuit challenging the legality of Dwinnell Dam and Reservoir, the Shasta River diversion was constructed in 2014 to serve Montague more efficiently. At first proposed as a temporary solution to address an emergency situation, the newly established point of diversion has remained in use with the State Water Resources Control Board, Division of Water Rights recently approving its permanent use.

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 Montague are various types of Montague clay (61.3 percent), Salisbury loam (10.4 percent), Settlemeyer loam (8.2 percent), and Lithic Haploxerolls-Rock outcrop complex (5.1 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
#192 - Montague clay, 0 to 2 percent slopes	Majority of land within City, including large portion of airport property. (Approx. 716 acres)	Moderately deep, well drained soils that formed in fine textured alluvium weathered from tertiary volcanic rocks, high shrink-swell potential, slow permeability, slow runoff, and slight to moderate hazard of wind and water erosion.
#193 - Montague clay, 2 to 9 percent slopes		
#194 - Montague cobbly clay, 0 to 9 percent slopes		
#195 - Montague variant clay, 0 to 9 percent slopes		
#217 - Salisbury clay loam, 0 to 2 percent slopes	Approx. 122 acres between E. Scobie Street and southern city limits boundary.	Moderately deep, well drained soils that formed in mixed materials weathered from metamorphic sediments, rhyolite, tuff and basalt, moderate shrink-swell potential, slow permeability, medium to high runoff, and slight to moderate hazard of wind and water erosion.
#218 - Salisbury clay loam, 2 to 9 percent slopes		
#220 - Salisbury gravelly clay loam, 5 to 9 percent slopes		
#221 - Salisbury cobbly loam, 0 to 9 percent slopes		
#222 - Settlemeyer loam, 0 to 2 percent slopes	Approx. 96 acres between Oregon Slough and UPRR railroad tracks.	Very deep, poorly drained soils that formed in alluvium from mixed rock, moderate shrink-swell potential, slow permeability, very slow to slow runoff, and moderate hazard of wind and water erosion.
#177 - Lithic Haploxerolls-Rock outcrop complex, 0 to 65 percent slopes	Approx. 85 acres comprised of landslide deposits associated with ancestral Mount Shasta.	Very shallow, excessively drained soil with very high runoff formed from igneous and metamorphic rock.
#185 - Mary loam, 2 to 9 percent slopes	Approx. 46 acres at the southeast corner or city limits.	Moderately deep, well drained soils with medium to rapid runoff and moderately slow permeability that formed in material weathered from coarse grained extrusive igneous bedrock.
#186 - Mary loam, 9 to 15 percent slopes		
#187 - Mary stony loam, 2 to 50 percent slopes		
#159 – Jenny clay, 0 to 2 percent slopes	Approx. 29 acres within Oregon Slu's 500-year floodplain	Very deep, well drained soils with medium to rapid runoff and slow permeability that formed in alluvium from extrusive igneous rocks.

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 Montague as being of statewide significance.

Figure 5-2, Shasta Valley avalanche debris pile

Mining has been an important industry in Siskiyou County since gold was discovered near Yreka in 1851, and mining does occur in the City, albeit not for gold. The only mining operation in Montague is an approximately 11.47-acre quarry located at the southern entrance to the City along S. 11th Street. The quarry mines aggregate from a small hill, or hummock, deposited there by a massive debris avalanche on ancestral Mount Shasta roughly 380,000 to 330,000 years ago. A few hundred of these deposits are distributed throughout the Shasta Valley; however, few exist in the planning area. and where they do occur, residential uses have been established on adjacent parcels or nearby. For this reason, no other mineral extraction operations presently occur within the planning area and none are anticipated in the future.

In accordance with SMARA, Montague's only mine operates with an approved reclamation plan and financial assurances are in place to ensure reclamation of the site occurs (Mine ID 91-47-0048). The quarry operates on land designated and zoned for heavy industrial uses and is well-buffered from potentially incompatible uses. Consistent with the site's zoning, the mine's reclamation plan provides for the site to be leveled and made suitable for industrial uses with an all-weather, graveled surface once mining is complete.

5.3.3 Forests and Vegetation

Although forestry remains an important, albeit significantly reduced, industry in Siskiyou County, there are no forested lands within the planning area. According to the California Wildlife Habitat Relationships System maintained by the California Department of Fish and Wildlife, vegetation in Montague consists of "annual grassland." Additionally, the National Land Cover Database (2021) maintained by the U.S. Geological Survey (USGS) classifies most of Montague as "developed" at varying intensities with pockets of "grasslands/herbaceous," "shrub/scrub," and "cultivated crops" ground cover. Lands in the Sphere of Influence are predominantly classified by USGS as "pasture/hay," "cultivated crops," and "grasslands/herbaceous."

There are no forests in the planning area. According to the California Wildlife Habitat Relationships System maintained by CDFW, habitat within the planning area consists of "annual grassland." Additionally, the National Land Cover Database (2021) maintained by the U.S. Geological Survey (USGS) classifies most of the City as "developed" at varying intensities with pockets of "grasslands/herbaceous," "shrub/scrub, and "cultivated crops" ground cover, while lands in the Sphere of Influence are predominantly classified as "pasture/hay," "cultivated crops," and "grasslands/herbaceous."

5.3.4 Fish and Wildlife

Most notable of the fish and wildlife species in the planning area are the mule deer (*Odocoileus hemionus*) known for comfortably strolling through Montague and eating the landscaping in residents' yards. While natural area (and developed areas) of the City offer forage for the species, the "yard deer," as they are affectionally known, are likely spillovers from the Little Shasta Valley and other preferred habitats east of Montague where the herd spends most of its time. 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 (UFWS). 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.

Figure 5-3, Greater sandhill crane at the Shasta Valley Wildlife Area

According to the California Natural Diversity Database (CNDDB) maintained by the CDFW, there are a variety of special-status wildlife, insect, and plant species with the potential to occur in Montague's planning area. These species include golden eagle (*Aquila chrysaetos*), greater sandhill crane (*Antigone canadensis tabida*), tricolored blackbird (*Agelaius tricolor*), American badger (*Taxidea taxus*), northwestern pond turtle (*Actinemys marmorata*), Lower Klamath marbled sculpin (*Cottus klamathensis polyporus*), steelhead (*Oncorhynchus mykiss irideus*), Crotchs bumble bee (*Bombus crotchii*), Franklins bumble bee (*Bombus franklini*), western bumblebee (*Bombus occidentalis*), woolly balsamroot (*Balsamorhiza lanata*), serpentine cryptantha (*Cryptantha dissita*), Siskiyou clover (*Trifolium siskiyouense*), single-flowered mariposa-lily (*Calochortus monanthus*), and Yreka phlox (*Phlox hirsuta*). 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 9.5 miles west of Montague.

5.3.4.2 Shasta Valley Wildlife Area

Located a short distance (< 2 miles) east of Montague, the Shasta Valley Wildlife Area provides City residents and others additional opportunities for passive and active recreational opportunities, as well as the State and region excellent occasions for wildlife conservation. According to CDFW, which manages the property, the Shasta Valley Wildlife Area contains approximately 4,700 acres of Great Basin juniper woodland, riparian forest, seasonal wetlands, and crop lands with 14,179' Mt. Shasta as a backdrop. Wildlife encountered there include some of special-status species noted above, such as greater sandhill crane, as well as North American porcupine (*Erethizon dorsatum*), hoary marmot (*Marmota caligata*), and coyote (*Canis latrans*), and various species of waterfowl, raptors, and shorebirds

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_3) and fine suspended particulate matter ($PM_{2.5}$). Ozone monitoring has been in place in Siskiyou County since 1981 and $PM_{2.5}$ monitoring was added in 2005. The air quality monitoring station is operated by the Siskiyou County Air Pollution Control District in Yreka, approximately 4.5 miles west of Montague.

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 5-4, Wildfire burning on nearby national 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, although Siskiyou County remains classified as being in attainment of state and federal $PM_{2.5}$ standards, there have been ongoing, seasonal exceedances of $PM_{2.5}$ for the past several years due to 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 Montague.

5.4.2 Tribal Cultural Resources

The City of Montague 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 Euroamerican 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, Quartz Valley Indian Community, and Shasta Nation.

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 include representatives of the Shasta Indian Nation, Quartz Valley Indian Community, Shasta Nation, Karuk Tribe, Modoc Tribe, and several others. 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 Montague, 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

Montague was founded in 1887 with the completion of the railroad through the Shasta Valley. As a result, there are numerous historic structures in the City that help to define Montague'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 14 commercial structures in downtown area that date to the late 1800s and early 1900s, and a few residential dwellings that may also be worthy of historic recognition and preservation. Therefore, to better protect and preserve Montague's historic character and charm, the City desires to work with owners of historic properties in the downtown area to evaluate the potential creation of a historic district or similar mechanism for protection of these resources.

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. The agricultural uses found in Montague consist primarily of grazing and hay production, 4-H projects, and non-commercial agriculture, such as keeping horses. The City supports these uses through its application of land use and zoning regulations. Most agricultural uses are located in the southeast area of the City where sewer and water utilities are limited.

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 occurring in the City that meets the criteria for "prime farmland" is Jenny Clay, 0 to 2 percent slopes (#159). This soil type is limited to approximately 29 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 support development of less intensive agricultural uses, such as a community garden. Additionally, a few of Montague's predominant soil types, Montague clay (#192) and Salisbury clay loams (#217 and #218), meet the criteria for "farmland of statewide importance." Montague clay underlies much of the community, including substantial development, and

Salisbury clay loams are located in the southeast area of the City and support residential and limited agricultural uses.

The California Department of Conservation Farmland Mapping and Monitoring Program (FMMP) classifies most lands within the City as “urban and built-up land” due to development. Additionally, small areas are classified as “grazing land,” “other land,” and “farmland of statewide importance.” Lands within the Sphere of Influence are classified as grazing land and farmland of statewide importance.

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 Acy 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.

There is one property under a Williamson Act contract within the Sphere of Influence, and no Williamson Act contract lands within the City.

5.6 ENERGY

As discussed in the Circulation Element, there are no electrical energy production facilities in Montague. 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

Figure 5-4, Montague City Pool

Public parks and recreation areas in Montague are currently owned and managed by the City, with the Montague Elementary School District providing additional recreation area and facilities for youth-related activities. Montague's recreational amenities presently include tennis and pickleball courts, baseball fields, rodeo grounds, playgrounds, picnic areas, basketball courts, horseshoe pits, and a swimming pool.

During the General Plan update, residents were surveyed and asked their opinions about the adequacy of the City's parks and recreation facilities. A majority of respondents indicated the City's existing parks and recreation facilities adequately address the needs of the community, with some offering recommendations for minor improvements and maintenance. However, when asked about desired improvements, most respondents noted at least one or two improvements that they would like to see added to the community. Of those, walking and running trails were most frequently noted.

Trails are also an important element of outdoor recreation. As discussed in the Circulation Element, the City presently has a very limited active transportation network that it would like to build upon. City-owned land east of the airport, particularly land within the floodplains associated with Oregon Slu, could be enhanced and co-managed for public access and flood control, and trails connected with other pedestrian and bike friendly areas in the community to promote recreation and active transportation.

The City's current open space for outdoor recreation is summarized in **Table 5-2** below and shown on **Figure 5-6, Parks and Recreation**.

TABLE 5-2, INVENTORY OF PARKS AND RECREATION AREAS

		Acres
City Parks / Recreation Areas	City Park	2.75
	Railroad Park	0.92
	Hoag Park	2.98
	Diggles Field	5.11
	Rodeo Grounds	5.48
	SUBTOTAL	**21.24**
Other Facilities	Elementary School	5.71
	TOTAL	**26.95**

5.7.2 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 in-lieu 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 map of the subdivision or parcel map.

In accordance with the Quimby Act, the City of Montague maintains park and recreation land dedication requirements in Montague Municipal Code Chapter 16.42 (Park and Recreational Land Dedications and In Lieu Fees), which the City implements at the time of subdivision approval.

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 Montague 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 Montague 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 5-5, 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.

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 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

Sone 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 Montague, the open space plan is the Open Space and 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

GOAL OSC-1: Welcoming, inclusive, and safe parks, recreation facilities, and activities to serve city residents regardless of age, ability, or income.

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

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

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

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

GOAL OSC-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.

GOAL OSC-7: Increased energy efficiency, where possible, to reduce costs and environmental impacts.

GOAL OSC-8: Montague's rural small town atmosphere conserved and enhanced.

GOAL OSC-1: Welcoming, inclusive, and safe parks, recreation facilities, and activities to serve city residents regardless of age, ability, or income.

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

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

Program OSC-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 OSC-1E: Coordinate with the Siskiyou County Sheriff's Office in the planning for safe and secure parks and recreation areas.

Program OSC-1E: When planning park renovations and development, incorporate green infrastructure, shade, and vegetation where appropriate.

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

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

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

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

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

Policy OSC-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 OSC-2A: Where practical, improve city-owned 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: Continue 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 and the City's Subdivision Ordinance.

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

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

Policy OC-3.1: The City desires to strengthen Montague'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.

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

Policy OC-4.1: 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, Shasta Valley Resource Conservation District, interested property owners, and other appropriate entities to restore 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.

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

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 Shasta Valley 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: Develop a water conservation plan 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.

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.

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 where compatible with surrounding uses.

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.

Program OC-6A: Ensure that non-exempt mineral extraction activities within the City's planning area comply with SMARA, including requirements financial assurances and reclamation plans.

Program OC-6B: Monitor mineral extraction activities to ensure that the operation and reclamation of mined lands is consistent with SMARA.

Program OC-6C: Coordinate with Siskiyou County regarding proposed activities within the Sphere of Influence to ensure that activities which threaten the potential to extract mineral resources on approved sites are not permitted.

Program OC-6D: To protect agricultural uses from urban development, require new development adjacent to agricultural uses to provide fencing and/or establish buffer areas between the urban and agricultural uses.

Program OC-6E: 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.

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

Policy OC-7.1: 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.

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

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, seek grant funding for implementation of the improvements, if necessary, and implement the improvements in a timely manner upon securing funds.

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

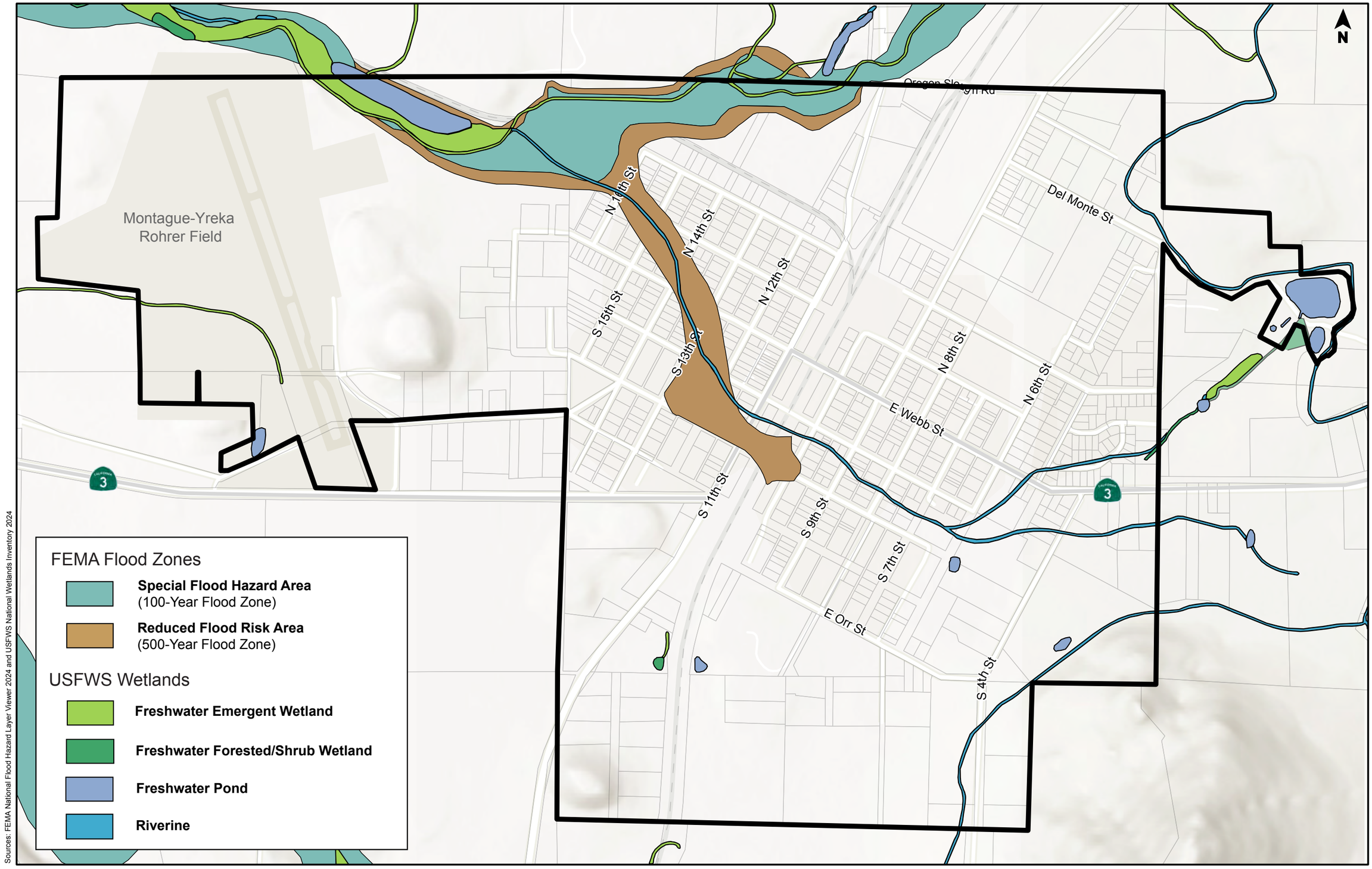

Figure 5-5, Natural Resources Constraints

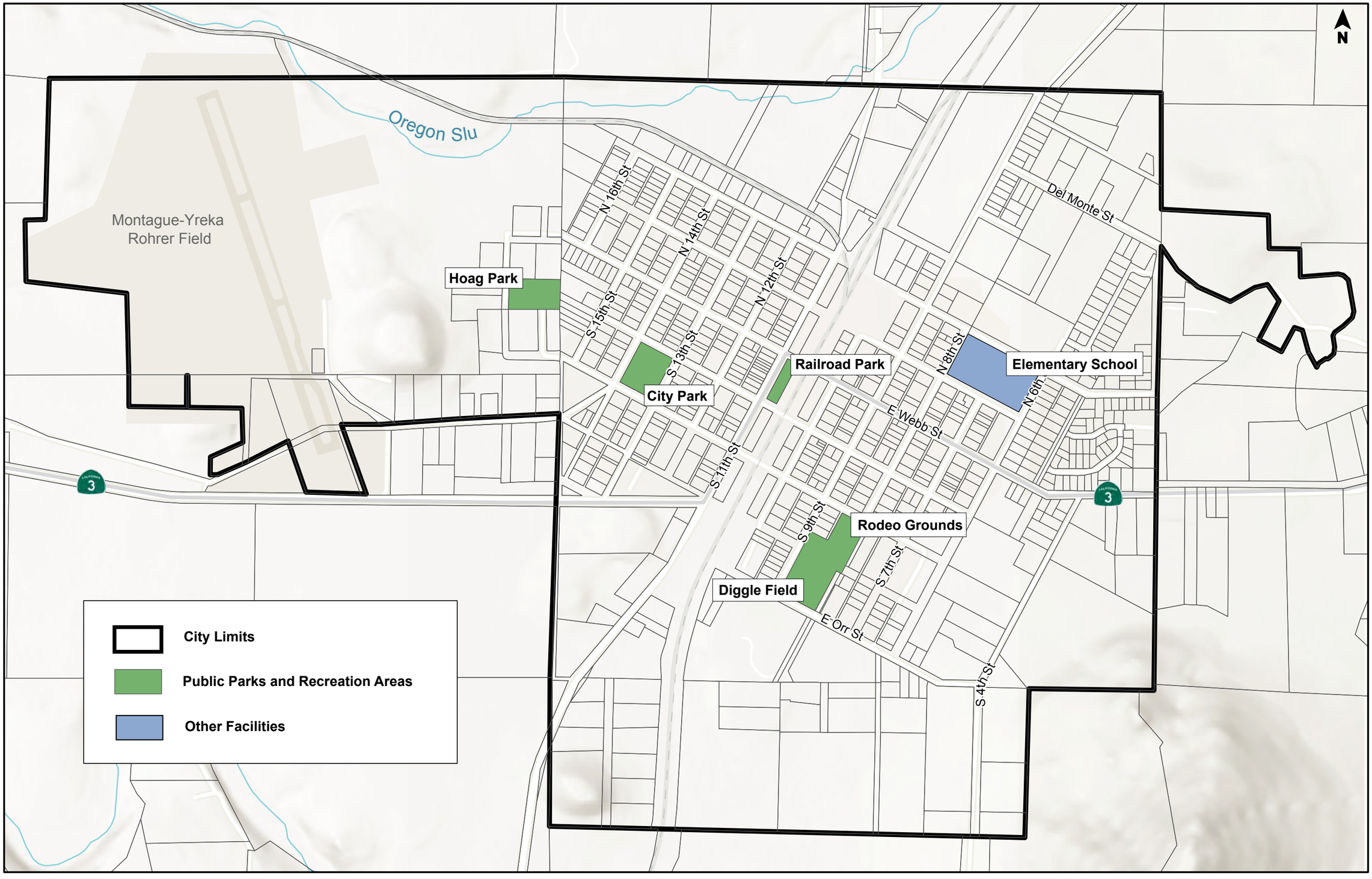

Figure 5-6, Parks and Recreation Areas