
CITY OF DORRIS

GENERAL PLAN SAFETY ELEMENT

October 6, 2025

CITY OF DORRIS
307 S. MAIN STREET
DORRIS, CA 96023



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* The maps included herein are provided for information purposes only and are subject to change. Lines, roads, topography, and other planimetric features shown on the maps are compiled from different sources and may not be current or reliable. The City of Dorris assumes no liability for the accuracy of the data shown on the maps.

7.1 INTRODUCTION

The purpose of the Safety Element is to promote public safety and the protection of residents and property in the City through identification of natural and human-derived hazards with the potential to impact Dorris, by incorporating identified hazard and risk considerations into the land use planning process, and through the inclusion of strategies to mitigate such hazards to the extent feasible.

7.2 STATUTORY REQUIREMENTS

California Government Code Section 65302(g) requires that each city and county develop a Safety Element, "... for the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence; liquefaction; and other seismic hazards ... and other geologic hazards known to the legislative body; flooding; and wildland and urban fires." In accordance with Government Code Section 65302(g)(3), information regarding fire protection and emergency services agencies must be included along with information on fire hazards, such as historical wildfire data, fire hazard severity zone maps, wildfire hazard areas, and the general location and distribution of existing and planned uses of land in very high fire hazard severity zones. The Safety Element must also identify residential developments in hazard areas lacking sufficient emergency egress; include mapping of known fire, flood, and seismic and other geologic hazards; and address evacuation routes, military installations, water supply requirements, and minimum road widths and clearances around structures as they relate to fire and geologic hazards.¹ Climate change impacts and adaptation strategies must be addressed in the Safety Element or through adoption of a Local Hazard Mitigation Plan or other document that includes this information.

7.3 EMERGENCY SERVICES

7.3.1 Law Enforcement

Police protection services for the City are provided under contract by the Siskiyou County Sheriff's Office. Dorris has contracted with the County for law enforcement services since 1996, with the level of service periodically adjusted to address escalating costs. As of 2025, the City receives approximately 2,800 hours of law enforcement coverage per year. The Sheriff's Office is located at 305 Butte Street in Yreka, approximately 67 road miles southwest of Dorris. Due to the distance to Yreka, the Sheriff's Office maintains a Butte Valley Substation at 304 N Pine Street in Dorris. The Siskiyou County Sheriff's Office maintains mutual aid agreements with surrounding jurisdictions, including California and Oregon counties, city police departments, the California Highway Patrol (CHP), and the California Department of Forestry and Fire Prevention (CAL FIRE). In addition to the Sheriff's Office, CHP provides law enforcement along US Route 97 (US 97).

7.3.2 Fire Protection

Fire protection services for the City are provided by the City of Dorris Fire Department. In 2025, the Fire Department is staffed by a chief, an assistant chief, and 5 volunteer firefighters. Because

¹ The nearest military installation is approximately 15 miles northeast of the City of Dorris. The City is not affected by operations at, or associated with, the installation, including aircraft training routes or special use airspace. Consequently, the Safety Element does not discuss hazards relative to these types of facilities.

there are presently fewer volunteer firefighters than there have typically been in the past, the Fire Department would like to add an additional 7-10 volunteer firefighters. The Fire Station is centrally located adjacent to Dorris City Hall at 307 S Main Street, and response times within city limits are routinely under five minutes. The fire station is in good condition, has three engine bays, and is capable of accommodating modern firefighting and medical equipment. In addition to protecting properties in the City, the Dorris Fire Department provides fire protection services and responds to medical calls within its approximately 15 square mile response area. The response area includes the Pleasant Valley Fire Zone (PVFZ) via contractual agreement. When responding to calls in the PVFZ, the Dorris Fire Department utilizes the PVFZ station and equipment at 2543 Durham Drive approximately two miles west of city limits. The Department maintains mutual aid agreements with the Butte Valley Fire Protection District (BVFPD) and the California Department of Forestry and Fire Protection (CAL FIRE). When requested, the Department also responds to calls east of Dorris between the City and the Tulelake Multi-County Fire Protection District. The Department has been in discussions with surrounding agencies, including the PVFZ and BVFPD, regarding consolidation of services, however, these discussions are temporarily on hold.

The Fire Suppression Rating Schedule (FSRS) is a scoring system used by the Insurance Services Office (ISO) to rank a community's fire protection capabilities on a scale of 1 to 10. A high score of 1 is awarded to communities with superior fire protection capabilities and a classification of 10 is assigned to communities with fire protection capabilities that do not meet minimum criteria for ISO recognition. At the time of the most recent ISO rating in 2017, the Dorris Fire Department received a Public Protection Classification (PPC) score of 4Y, indicating a superior fire department, but the water supply was not capable of meeting the minimum FSRS fire flow criteria of 250 gallons per minute (GPM) for two hours. Since that time, the system has been substantially improved and fire flows in Dorris now exceed minimum FSRS fire flow criteria.

7.3.3 Medical Services

The nearest hospital to the City of Dorris is the Sky Lakes Medical Center, located approximately 26 road miles northeast of the City in Klamath Falls, Oregon. Sky Lakes Medical Center is a community-owned medical center that provides a variety of healthcare services, including emergent, medical, surgical, and ancillary services, such as laboratory and imaging. The 176-bed hospital includes a 23-bed emergency department, a Level III Trauma Center, and a FAA LID: 9OR3 Heliport on its campus. Medical air transport is provided by AirLink Critical Care Transport, which maintains fixed-wing aircraft and a helicopter at the nearby Crater Lake-Klamath Regional Airport. Located slightly further away (60 road miles) to the southwest in Mt. Shasta is Dignity Health's Mercy Medical Center (MMC), a 25-bed hospital offering similar healthcare services as Sky Lakes Medical Center as well as its own Level III Trauma Center. Patients brought to MMC requiring a Level II Trauma Center are taken by air ambulance to Dignity Health's MMC in Redding. Medical air transport is provided by REACH Air Medical Services and PHI Air Medical, both of which operate air ambulances out of the Redding Municipal Airport. Depending upon the type of care needed, there are additional hospitals in Ashland, Medford, and Redding. The Butte Valley Ambulance Service and Basin Volunteer Ambulance Service provide advanced life support and emergency medical transport services in Dorris and the surrounding area.

7.3.4 Disaster Management

The Siskiyou County Office of Emergency Services (OES), located in the City of Yreka, is the primary disaster management agency for Siskiyou County. Siskiyou County OES coordinates with local, state, and federal agencies to prepare for, respond to, and recover from emergencies and

disasters. This includes helping communities like Dorris develop the resources to mitigate risks, such as emergency preparedness plans, and supporting training for first responders.

Through the Ready Siskiyou program, Siskiyou County OES makes resources for disaster preparation and response available to the public. During large-scale events, Siskiyou County OES activates and maintains the Emergency Operations Center that is used to coordinate and support responses among the various agencies. Following major incidents, Siskiyou OES facilitates post-disaster response and recovery by providing technical advice, assisting with emergency declarations, and working with the California Governor's Office of Emergency Services to obtain Presidential proclamations.

7.4 EMERGENCY PREPAREDNESS

7.4.1 Local Hazard Mitigation Plan

In addition to the information contained herein, the City of Dorris participated in the development of the 2025 Siskiyou County Local Hazard Mitigation Plan (LHMP). The LHMP was developed in accordance with the Disaster Mitigation Act of 2000 (DMA 2000) and followed FEMA's Local Hazard Mitigation Plan guidance. The LHMP incorporates a process where hazards are identified and profiled, the people and facilities at risk are analyzed, and mitigation actions are developed to reduce or eliminate hazard risk. The implementation of these mitigation actions, which include both short- and long-term strategies, involve planning, policy changes, programs, projects, and other activities. The LHMP is incorporated into the City of Dorris General Plan Safety Element by reference and is available on the City's website.

7.4.2 Community Wildfire Protection Plan

The primary purpose of the Community Wildfire Protection Plan for Siskiyou County (CWPP) is to provide guidance that enhances protection of human life and to help Siskiyou County communities become more adaptable to wildfire, while reducing the wildfire threat to community values such as structures, critical infrastructure, businesses, and natural and historic resources. The CWPP is designed to guide future actions by residents, property owners, business owners, homeowners associations, fire safe councils, agencies, and citizens. It provides an understanding of how to plan and implement specific actions to reduce wildfire threat, live more safely in a wildfire prone environment, and build more resilient communities.

7.4.3 Water Conservation

To better plan for and mitigate potential water shortages, the City Council adopted the City's Water Conservation Ordinance in 2007. In accordance with the Water Conservation Ordinance, the City monitors the projected water supply and demand daily to determine the degree to which water conservation measures are required. When the potential for a shortage exists, the City progressively implements the following conservation stages, as needed: Water Watch (Stage 1), Water Alert (Stage 2), Water Warning (Stage 3), and Water Emergency (Stage 4). Compliance with Stage 1 is voluntary and entails implementing Stage 2 water conservation measures. These include restrictions, but not prohibitions, on water use in restaurants, irrigation, washing of vehicles, rinsing of hardscape, and hydrant use. Once Stage 2 is reached, compliance with these measures becomes mandatory. If conditions continue to grow worse, Stage 3 places additional restrictions on water usage, and it establishes prohibitions on certain uses of water, such as for construction. Once Stage 4 is reached, reductions in water use also become mandatory. Noncompliance with the City's Water Conservation Ordinance is subject to the penalties and civil liabilities established by California Water Code Section 377.

7.4.4 Evacuation and Preparedness Plan

The Siskiyou County Local Transportation Commission (SCLTC) is in the process of developing the Siskiyou County Evacuation and Preparedness Plan in coordination with the County of Siskiyou, tribal governments, and the nine cities in Siskiyou County, including Dorris. The objectives of the Evacuation and Preparedness Plan are to:

- Develop an understanding of current emergency preparedness plans and how transportation organizations, assets, and services are included in them.
- Analyze infrastructure deficiencies and recommend improvements to help mitigate risks related to natural disasters.
- Create and adopt a region-wide evacuation and preparedness plan detailing standardized practices and protocols for transportation services and evacuation centers for use by Siskiyou County OES, local and regional fire departments, local law enforcement personnel, transit and other transportation providers, the County, cities, and other local jurisdictions.
- Work to ensure regional cooperation, coordination, and capacity building with respect to emergency plans.
- Educate the public, with an emphasis on vulnerable communities, on related emergency protocols developed in the plan (e.g., designated locations for transportation evacuation, emergency shelters, etc.).

7.4.5 CAL FIRE Unit Plans

CAL FIRE utilizes strategic plans to guide its operations and resource allocation in wildfire prevention and suppression, as well as natural resource management. These plans are developed collaboratively with input from various stakeholders and focus on reducing wildfire risk, protecting lives and property, and managing California's forests. CAL FIRE's unit plans are specific to each of CAL FIRE's administrative units and focus on pre-fire management, hazard reduction, and wildfire response within their respective areas. They complement other planning documents like community wildfire protection plans and general plan safety elements. Unit fire plans often address issues like ingress/egress routes, operational training, and fuels reduction. The Unit Strategic Fire Plan for CAL FIRE's Siskiyou Unit was most recently updated in May 2025 and includes the following goals:

- Identify and evaluate wildland fire hazards and recognize life, property, and natural resource assets at risk, including watershed, habitat, social, and other values of functioning ecosystems.
- Facilitate the collaborative development and sharing of all analyses and data collection across all ownerships for consistency in type and kind.
- Promote and support local land use planning processes as they relate to individual landowner objectives and responsibilities and the protection of life, property, and natural resources from risks associated with wildland fire.
- Support and participate in the collaborative development and implementation of local, county, and regional plans that address fire protection and landowner objectives.
- Increase fire prevention awareness, knowledge, and actions implemented by individuals and communities to reduce human loss, property damage, and impacts to natural resources from wildland fires.

- Integrate fire and fuels management practices with landowner/land manager priorities across jurisdictions.
- Determine the level of resources necessary to effectively identify, plan, and implement fire prevention using adaptive management strategies.
- Determine the level of fire suppression resources necessary to protect the values and assets at risk identified during planning processes.
- Implement post-fire assessments and programs for the protection of life, property, and natural resource recovery.

7.4.6 Other Disaster Preparedness Resources

7.4.6.1 Emergency Preparedness Guidebook

The Siskiyou County Department of Public Health and Siskiyou County OES collaboratively developed The Siskiyou County Emergency Preparedness Guidebook to help prepare and keep Siskiyou County residents safe in the event of an emergency. The Guidebook includes a list of resources for staying informed prior to and during an incident, it details the steps to take when planning to evacuate, it describes the evacuation process, and it includes instructions for preparing for wildfires, smoke-related hazards, contaminated water supplies, earthquakes, volcanic eruptions, flood hazards, and power outages. Opportunities and programs for public involvement to increase a community's emergency response capacity are also identified. The Siskiyou County Department of Public Health prints and makes hardcopies of the Guidebook available to the public, and it publishes a digital version to the Department's website along with other resources, such as an Access and Functional Needs registry that is used to identify individuals who require additional assistance during emergencies or disasters.

7.4.6.2 ReadySiskiyou

ReadySiskiyou is a public notification system utilized by Siskiyou County OES that allows the public to sign up for and receive time-sensitive phone, text, and email alerts about emergencies and other important community information, including severe weather, evacuations, unexpected road closures, and missing persons.

7.4.6.3 Genasys Protect

Genasys Protect (formerly Zonehaven Aware) is an evacuation management tool utilized by Siskiyou County OES that helps first responders and communities more effectively plan, communicate, and execute evacuations through evacuation zones developed and approved in close collaboration with law, fire, and emergency service agencies. Using Genasys Protect, emergency responders and the public can identify Siskiyou County addresses and evacuation zones on an online map and view current evacuation information for the area. Evacuation zones in and around the City of Dorris, as identified by Genasys Protect, are shown on **Figure 7-1, Evacuation Zones** at the end of the Safety Element.

7.4.7 Evacuation Routes

The City of Dorris strives to be prepared for natural disasters or other emergency events requiring evacuation in partnership with surrounding jurisdictions and Siskiyou County OES. In accordance with California Government Code Section 65302.15(a), which requires that cities and counties identify evacuation routes and their capacity, safety, and viability under a range of emergency scenarios, the City of Dorris has identified US Route 97 (US 97) as the City's evacuation route,

with S Butte Street/W 1st Street serving as an alternate route through the downtown area should US 97 become blocked or compromised (see **Figure 7-2, Evacuation Routes**).² These roadways were identified by the City due to their higher capacity relative to other streets in the City in accordance with the functional classifications assigned to them by the California Department of Transportation (Caltrans). As discussed in the Circulation Element, Caltrans has classified US 97 as an “other principal arterial” and S Butte Street and W 1st Street as “minor collectors.” The areas adjacent to these roadways are largely free of significant fuel loading and overhead vegetation, however, additional vegetation clearance and on-street parking restrictions should be implemented to improve public safety during emergency events. Further, ongoing coordination with the County and Caltrans will be necessary to ensure evacuation routes under their ownership and control provide sufficient capacity, safety, and viability for evacuations under a range of emergency scenarios.

Which direction evacuations will proceed will depend upon the specific disaster, but in general evacuations are expected to move people north or south out of the City on US 97 and away from the hazard. US 97 has the highest capacity of any roadway in the Butte Valley and it quickly leads out of the valley to the north. Travelling US 97 from Dorris south toward the City of Weed is a 50-mile journey through extensive farmland, grasslands, conifer forests, fire scars, and lava flows. For this reason, most evacuations are expected to move northward.

The use of US 97 as the City’s evacuation route under a variety of scenarios is discussed below.

- Following a volcanic eruption, or in advance of an eruption if there is sufficient warning, residents will be directed to either evacuate or shelter in place depending upon the nature of the eruption and distance to the hazard. For ash fall, the most likely direct impact to the City from an eruption of either the Mount Shasta or Medicine Lake volcanoes, sheltering in place is likely to be sufficient. However, if there are secondary effects, such as a fast moving wildfire sparked by a lateral blast or pyroclastic flows, the Incident Commander will make an assessment of areas at risk in close coordination with other agencies, and the Siskiyou County Sheriff’s Office will direct the evacuation, if needed, accordingly.
- Earthquakes occur suddenly and for the most part without warning. Evacuation may be necessary post-disaster if the ground shaking causes a secondary disaster, such as a fire, hazardous materials spill, or landslide. The direction of the evacuation would be determined by the Siskiyou County Sheriff’s Office based on an assessment of which areas are at risk from secondary hazards. If a landslide were to affect Dorris, it would most likely occur on the slopes of Dorris Hill at the north end of the City. Should this occur, it could potentially restrict or impede passage on US 97.
- Wildfires in the area have historically occurred in the hills and mountainous areas surrounding the Butte Valley with relatively little fire activity on the valley floor. Nevertheless, a significant portion of the City is identified as Wildland Urban Interface and High and the State Fire Marshal has identified a Very High Fire Hazard Severity Zone located along and adjacent to Dorris Hill in the north. Should winds driven by an afternoon thunderstorm spread a wildfire into the City, evacuation of potentially affected neighborhoods would likely be required. The direction to evacuate would be determined by the Siskiyou County Sheriff’s Office based on an assessment of the areas at risk.

² The use of US 97 consistent as the City’s evacuation route is consistent with the Siskiyou County General Plan Safety Element.

- There are no special flood hazards in the City. Though localized flooding following significant storm events can and does occur within the planning area, typically where low spots in the topography capture storm water, evacuation is unlikely to be necessary. If determined necessary, evacuation may involve merely getting out of the low spots and onto higher ground. Should a major flood occur in the Butte Valley, US 97 would become impassable south of Dorris prior to the floodwaters reaching the City.
- Releases of hazardous materials, either as a result of a leak or due to an accidental spill, generally will require the evacuation of a relatively small area, generally within a one- to two-mile radius of the release. However, due to the small size of the City, that potentially encompasses all of Dorris. The direction to evacuate would be designated by the Siskiyou County Sheriff's Office based on an assessment of the leak location, prevailing wind directions, traffic flow, and location of the emergency shelter, if any, opened for the event.

7.4.7.1 Single-Access Roadways

A key element of being able to safely evacuate is having access to multiple ingress and egress routes in case one roadway becomes blocked. Although multiple access points are not explicitly required in the City's Subdivision Ordinance, the City has been developed with an interconnected, grid-based road network and continuation of the grid is required. With the recent identification of a Very High Fire Hazard Severity Zone in the northern area of the City, the development of roadways in this area must comply with the State's Minimum Fire Safe Regulations (Title 14 of the California Code of Regulations (CCR), Division 1.5, Chapter 7. Subchapter 2, Articles 1-5). In accordance with 14 CCR Section 1273.08 (Dead End Roads), roads without more than one access point are limited to 800 feet in length when they serve parcels zoned for less than one acre, which are most lots in the City. Accordingly, such a requirement is enforced during the City's review and approval of subdivision maps, when needed, to ensure public safety. However, because older subdivisions may have been approved without such a requirement, and in an effort to eventually improve access to all areas of the City, an assessment of dead-end roadways throughout Dorris was prepared. These roadways are shown on **Figure 7-3, Single-Access Roadways** at the end of the Safety Element.

As determined through the City's assessment, there are no dead-end roads in the Very High Fire Hazard Severity Zone or elsewhere in Dorris that exceed 800 feet in length. The longest dead-end road in the City is a 525-foot stretch of Triangle Street located south of W 3rd Street that serves a single use, California Oregon Telephone Company. Other single access roadways in Dorris include an approximately 350-foot long, unimproved segment of Seattle Street that serves two residential properties; a 280-foot long, unimproved segment of S Pine Street that serves two residential properties; an approximately 140-foot extension of W 3rd Street constructed for access to the library; and an approximately 140-foot extension of W 4th Street that solely serves California Oregon Telephone Company. None of the single-access roadways are located in the Very High Fire Hazard Severity Zone.

7.4.8 Road Minimum Widths and Turnouts

Minimum road widths and turnouts are essential for designing a safe environment so that emergency vehicles can access all areas of the City. Although Dorris has yet to adopt minimum street standards, nearly all streets in Dorris have been developed within a 60-foot right-of-way and include two 12-foot paved travel lanes. A few roadways are limited to two 10-foot travel lanes, and two roads located at the northern and southern ends of the City are partly owned by the City and are unpaved. A few other short road segments that serve two or fewer dwellings and are

used as driveways are similarly unpaved. There are no bridges or one-way roads in Dorris to necessitate the development of turnouts.

With the recent identification of a Very High Fire Hazard Severity Zone that includes approximately 23 acres in the northern part of the City, roadways in this area are subject to Article 2 (Ingress and Egress) of the State Minimum Fire Safe Regulations. Where existing roadways in the Very High Fire Hazard Severity Zone do not meet State standards, improvements are scheduled in the Siskiyou County Regional Transportation Plan (RTP) as funding allows. The City's Public Works, Engineering, and Fire Departments are responsible for implementing and ensuring public roads are designed to these standards.

7.4.9 Municipal & Emergency Water Supplies

The City of Dorris has historically obtained its water from two wells. Because of problems with one of the wells, including elevated arsenic levels and excess sand during startup of the pump, the City has been forced to rely upon a single well for many years. The groundwater from the City's one active well is treated and then conveyed via booster pump to two elevated tanks outside city limits that have a combined storage capacity of 2.0 million gallons.

To ensure the City maintains adequate water supply and fire flows for existing and future development, the City has an ongoing program of upgrading its water system as funding allows, and the City has been successful at obtaining grants for this purpose. Recent grant funded water system improvements include construction of a second tank that doubled the City's water storage capacity; installation of residential and nonresidential water meters; repair and replacement of leaking distribution lines; improvements to the City's primary well; and water treatment plant upgrades. Most recently in 2021, the City was awarded funding through the State's Small Community Drought Relief Program to improve its inactive well and return it to service or, if infeasible, develop a new groundwater well. The new well was recently completed and will be connected to the water system in 2025. With these improvements to the water system, except for the new well which is not yet connected, the City's water delivery system is capable of delivering 1,350 gallons per minute (GPM) for 48 hours, including during those times when system demand is at its highest (i.e., peak load conditions).³ Once the City's water storage is depleted, the supply of water available to meet the City's domestic water and firefighting needs drops to 1,000 GPM.

7.4.10 Fuel Breaks

By reducing the amount of fuel available to burn, fuel breaks help to slow or stop the spread of fire and are crucial for wildfire management, conducting prescribed burns, and protecting communities. Fuel breaks can be natural, such as along rivers and rocky ridges, and they can be constructed, such as through vegetation thinning and clearing activities, tilling of fields, and developing roadways. Though no fuel break has been established for purposes of fire safety adjacent to Dorris, the City is significantly buffered by irrigated farmlands to the north, south, east, and west. Only a small area of the City on and adjacent to Dorris Hill remains unbuffered. This is the same area of the City that has been identified as being in a Very High Fire Hazard Severity Zone. Vegetation on Dorris Hill consists of sagebrush, rabbit brush, junipers, and bunch grasses, with tree cover densest on the lower slopes. Development and ongoing maintenance of a fuel break within this currently unbuffered area should be evaluated in coordination with landowners, Fire Safe Councils, CAL FIRE, and other agencies.

³ There is expected to be some variability in pressure depending upon location within the distribution system.

7.4.11 Defensible Space

Defensible space is the area around a structure where vegetation and other combustible materials are managed to slow or stop the spread of wildfire. Defensible space can protect structures from direct flame impingement and radiant heat, as well as reduce the number of burning embers. It also helps to safeguard fire fighters who may be attempting to save the structure during a fire. It is considered crucial for structure survivability during wildfires.

California Government Code Section 51182 requires that any person owning, leasing, controlling, operating, or maintaining an occupied structure in a Very High Fire Hazard Severity Zone maintain 100 feet of defensible space around that structure. In the immediate five feet surrounding the structure, the most intense fuel modification is required. This zone must be kept ember-resistant through use of non-combustible hardscaping, pruning overhead vegetation, removing branches within 10 feet of chimneys, regular debris removal, and relocating combustibles outside this zone. In the intermediate area surrounding the structure (5-30 feet or to the property line), grass must be kept short, trees kept trim, dead and dying plants and dry vegetation removed, and trees, shrubs, and other combustible items kept separate. In the extended zone surrounding the structure (30-100 feet or to the property line), grass must be kept short, dried vegetation removed, vertical and horizontal spacing established between lawn, shrubs, and trees, and the areas around wood piles, outbuildings, and propane tanks kept clear.

Because a portion of the City has only recently been identified as being in a Very High Fire Hazard Severity Zone, the creation of defensible space, while advisory, has never been a city requirement. With recent changes to the Fire Hazard Severity Zone map for Dorris, the creation and maintenance of defensible space has become mandatory in the Very High Fire Hazard Severity Zone in the City. Accordingly, the City is working to improve resident awareness of the defensible space requirements and to obtain grant funding for defensible space improvements.

7.5 HAZARDS

Emergency preparedness measures in the City of Dorris and elsewhere are driven by the risks and potential hazards affecting the area. For Dorris, vulnerabilities include the City's climate and setting, seismic and geologic hazards, urban and wildland fires, hazardous materials spills, and the effects of climate change, particularly drought and severe weather.

7.5.1 Climate and Setting

The City of Dorris is located at an average elevation of 4,246 feet above sea level in the approximately 125-square mile Butte Valley. The Butte Valley is comprised of an ancient lakebed that filled with sediment washed down from the surrounding mountains long ago. Meiss Lake, approximately eight miles southwest of Dorris, is the remnant of the lake that once filled the entire valley. The surrounding watershed is roughly three times the valley's size. Topography within the Butte Valley is relatively flat, gaining only nine feet of elevation between Meiss Lake and the City of Dorris 7.5 miles away. Like the Butte Valley, the topography throughout most of Dorris is relatively level, sloping very gently to the southwest. At the far northern end of the City, Dorris Hill abruptly rises from the valley floor.

The Butte Valley's climate is classified as Mediterranean, which is characterized by high seasonal variability, including warm, dry summers and cool, wet winters. The average high temperature in the Butte Valley in July is 83.3° F and the average low temperature in January is 15.9° F. Most precipitation in the Butte Valley falls over a roughly five-month period from late October/early

November until late March/early April, with snowfall common between late November and early March. The Butte Valley receives 11.29 inches of total annual average precipitation and 16.4 inches of total average snowfall. The least amount of precipitation occurs during the summer months, with July receiving an average of 0.37 inch. When precipitation does fall during the summer, it typically arrives in a thunderstorm.

Agricultural uses are widespread in the Butte Valley, particularly strawberry, grain, alfalfa, and hay production, and much of the land surrounding the City is irrigated between spring and early fall. Native vegetation in areas not under cultivation consists of sagebrush, rabbit brush, juniper, and bunch grasses.

Dorris's geographical setting presents several unique public safety concerns:

- The City of Dorris is susceptible to impacts resulting from volcanic activity at the Mount Shasta and Medicine Lake volcanoes. The most likely impacts would be from tephra ash, which are fine fragments of volcanic rock formed in an explosive eruption.
- The Butte Valley that encompasses the City of Dorris and was formed through long, complex and ongoing geologic processes that continue to generate seismic activity and faulting in the region.
- Steeper slopes along Dorris Hill north of the City are potentially unstable and susceptible to deep-seated landslide activity.
- Wildfires are a regular occurrence in the hills and mountains surrounding the Butte Valley, most of Dorris is considered wildland urban interface, and approximately 23 acres in the City are identified as being in a Very High Fire Hazard Severity Zone.
- A toxic or hazardous chemical accident on US 97, the railroad, or elsewhere in the City could have serious and immediate implications in Dorris.

7.5.2 Seismic and Geologic Hazards

The Cascade Range, where Dorris is located, is known for its large and recently active volcanoes, primarily composite and shield volcanoes formed by subduction. The Modoc Plateau, a short distance east of Dorris, is a high, relatively flat volcanic tableland with extensive lava flows and smaller volcanic features, like cinder cones, formed by extensional tectonics.

7.5.2.1 Volcanic Hazards

The two Cascade Range volcanoes nearest to the City of Dorris are Mount Shasta and Medicine Lake. Though Mount Shasta has not been active for more than two centuries and Medicine Lake for almost a millennium, both volcanoes are only dormant and will almost certainly erupt again. Experience with Cascade Range volcanoes, including Mount St. Helens (1980 to present) and Mt. Lassen (1911-1920), demonstrates that eruptive episodes can and do occur in present time involving volcanoes that are generally considered inactive. The Mount Shasta and Medicine Lake volcanoes and the potential hazards associated with them are discussed below.

Mount Shasta

Mount Shasta is a 14,179-foot-high stratovolcano located approximately 38 miles southwest of Dorris. The current volcano formed on the remnants of an older volcano that collapsed sometime roughly 380,000 to 330,000 years ago. The collapse created one of the largest landslides known on Earth, depositing volcanic rock and other materials across approximately 260 square miles of

the Shasta Valley to the northwest. Since then, Mount Shasta has had long lulls in eruptive activity punctuated by brief periods of many eruptions. Eruptions around 11,000 years ago built nearby Black Butte and the Shastina dome on the west flank of Mount Shasta. In the last few millennia, there have been eruptions at the volcano's summit and from vents on Mount Shasta's east flank. The most recent well-documented eruption occurred around 3,000 years ago. According to the United States Geological Survey (USGS), small, short-lived blasts of steam and ash may have occurred as recently as 1,800 to 200 years ago, but additional field verification is required.

Research published to date suggest that Mount Shasta may have erupted about once every 800 to 600 years over the last 10,000 years. This corresponds to a 3.5 percent chance of eruption within the next 30 years. USGS seismometers and GPS receivers operated by EarthScope Consortium, formerly UNAVCO, form the monitoring network for Mount Shasta. The volcano has been relatively quiet for at least the past 15 years, with only a handful of small-magnitude earthquakes and no demonstrable ground deformation. Although geophysically quiet, periodic geochemical surveys indicate that volcanic gas emanates from a fumarole at the summit of Mount Shasta from a deep-seated reservoir of partly molten rock. According to USGS, Mount Shasta is the most likely Cascade Range volcano to produce an explosive eruption of very large volume. Future eruptions, like those of the last 10,000 years, are likely to produce deposits of ash, lava flows, domes, and pyroclastic flows, and could endanger infrastructure and lives within several miles of the volcano. It is ranked by USGS as the fifth highest threat volcano in the United States.

Medicine Lake

Medicine Lake volcano is a large, shield volcano located roughly 30 miles to the southeast of Dorris. Located at the volcano's summit (elevation 7,913 feet) is a water-filled caldera formed by withdrawal of magma during eruptions. The caldera is eight miles wide and 14 miles across. The hundreds of mostly nonexplosive eruptions over the last half million years produced expansive lava flows, some covering as much as 100 square miles. The volcano has erupted nine times during the past 5,200 years, and seven of those eruptions began with an explosive phase. The two youngest eruptions produced ash clouds that drifted tens of miles downwind before explosions ceased and thick, glassy lava flows began oozing from the vents forming Little Glass Mountain (1,000 years ago) and Glass Mountain (950 years ago).

Medicine Lake volcano has one of the highest eruptive frequencies among Cascade volcanoes. Overall, the pattern of eruptions over the past 12,500 years suggests the likelihood of a future eruption from Medicine Lake volcano is one in 3,600 annually, which corresponds to about a one percent chance of eruption within the next 30 years. Seismometers and GPS receivers provide a modest volcano monitoring network at Medicine Lake volcano. Volcanic gas emissions suggest that partly molten rock lies beneath the volcano, which provides heat for a robust geothermal system underlying the caldera. Sporadic earthquake swarms are detected by the monitoring network as well as ground subsidence owing to motions on regional faults and "sagging" of rock softened by volcanic heat. The character of a future eruption is most likely to be effusive, with fountains of lava potentially rising hundreds of feet in the air. Over the course of weeks to months, a circular mound of cinder would form around the vent and slow-moving lava flows could impact areas many miles away. It is ranked by USGS as the 45th highest threat volcano in the United States.

Volcanic Activity

Several USGS reports describe the characteristics of volcanic activity likely to affect areas near each volcano, including Volcanic Hazards at Mount Shasta, California (1989), Volcano Hazards

Assessment for Medicine Lake Volcano, Northern California (2007) and California's Exposure to Volcanic Hazards (2019). These characteristics are discussed below along with their possible impact to the City of Dorris. The hazard areas associated with the two volcanos are shown on USGS's "Mount Shasta, CA Simplified Hazards Map" and USGS's "Medicine Lake, CA Simplified Hazards Map," which have been incorporated into the Safety Element as **Figure 7-3, Mount Shasta Volcanic Hazards** and **Figure 7-4, Medicine Lake Volcanic Hazards**. Because the City of Dorris is not shown on the USGS maps, the City's location is approximated on the maps included herein. The maps also do not show areas potentially affected by volcanic ash, which is often influenced by wind direction and distance from the source.

Pyroclastic Flows: Pyroclastic flows are streams of hot ash and rock fragments, mixed with hot air and other gases, that move rapidly along the ground surface during an eruption. These flows are especially dangerous due to their high temperatures and their high speeds which may exceed 100 miles per hour. Due to the speed of pyroclastic flows, escape is nearly impossible. They are best avoided by evacuation of threatened areas before an eruption. Dorris is located outside of the pyroclastic flow zones of both volcanoes.

Lateral Blasts: This type of blast is a sideways-directed volcanic explosion that carries large pieces of rock and ash at a very high speed along and above the ground surface. The rock debris carried by the lateral blast of Mount St. Helens in 1980 had an initial speed of more than 250 miles per hour, and it was still moving about 60 miles per hour near its outer limit about 15 miles from the volcano. Lateral blasts may cause fatalities as the result of impact, burial, or heat. Mount Shasta, like Mount St. Helens, is potentially subject to lateral blasts. Dorris is located outside of the area potentially affected by lateral blasts at Mount Shasta.

Lava Flows: Lava flows are rarely life-threatening because they move slowly enough for people to get out of their way and seldom occur at the outset of an eruption. Dorris' distance from both volcanoes is sufficient that lava flows are not considered directly life threatening from either volcano. However, the City is located in an area potentially affected by lava flows from vents dispersed between the two volcanoes. Lava flows can also affect critical transportation corridors, such as US Route 97, and ignite wildfires in the region.

Lahars/Volcanic Mudflows: A lahar, or volcanic mudflow, is a mass of water-saturated rock debris that moves downslope generally as a fluid. Lahars can form when lava flows, pyroclastic flows, or hot lateral blasts melt snow on the side of a volcano. Mudflows tend to follow stream valleys and can travel long distances generally at a rate of 10 to 20 miles per hour, but faster on steep slopes. The USGS does not identify lahars from either volcano as being a potential hazard to the City.

Landslides: A volcanic explosion, severe earthquake, or heavy rains could start landslides of rock debris from the side of Mount Shasta. A landslide triggered by an earthquake at Mount St. Helens on May 18, 1980, traveled about 14 miles beyond the volcano. Mount Shasta has also been subject to mudflows that have been triggered by heavy rains on top of snow. Nevertheless, USGS does not identify landslides from either volcano as being a potential hazard to Dorris.

Volcanic Ash: Ash resulting from an eruption of Mount Shasta could cover a large area and reach a depth of one inch or greater in and around Dorris, depending on the amount of ash released into the atmosphere and the direction of wind at the time. Because prevailing winds near Mount Shasta are from the northwest and southwest, ash fall on Dorris should be anticipated. Based on recent behavior, however, it is not likely that Mount Shasta will erupt catastrophic volumes of tephra and ash in the near future. Tephra accompanying eruptions of Medicine Lake volcano

could also be regionally widespread if the eruption column rises into the air high enough, which is expected. Although the prevailing wind direction at Medicine Lake is from the west, should the winds shift to the north, the City of Dorris, surrounding communities, and roads and highways could be impacted for days or weeks.

7.5.2.2 Surface Rupture

As shown on **Figure 7-5, Fault Activity Map** there are several faults in the region. The closest of these is an unnamed fault that runs along the base of Dorris Hill through the north end of the City. Though the fault is potentially active (i.e., it shows evidence of displacement during the past 1.6 million years), the closest active fault, one which has ruptured in the last 11,000 years, is located approximately 1.5 miles southwest of Dorris in the Mahogany Mountain fault zone. The Mahogany Mountain fault zone is a northwest-trending zone of normal faults with vertical displacement along the northwest border of Butte Valley. It is part of the larger Cedar Mountain fault system, which also includes the Cedar Mountain, Mt. Hebron, Meiss Lake, and Ikes Mountain faults. The fault zone has a preferred slip rate of 0.40 mm/year and is characterized by faults that offset older volcanic rocks and younger alluvium soils.

7.5.2.3 Ground Shaking

Regions of California near major active faults experience, on average, stronger earthquake shaking more frequently. According to the USGS, the nearest recorded earthquake affecting Dorris in the past 125 years was a magnitude 1.7 earthquake that occurred approximately one mile west of city limits on July 7, 1999. The earthquake, although close, had little impact. The largest recorded earthquake to affect Dorris was a doublet earthquake (i.e., an earthquake sequence having two main shocks of similar magnitude) with magnitudes of 6.0 and 5.9 that occurred roughly 32 miles northwest of city limits on September 20, 1993. The earthquakes, known as Klamath Falls earthquakes, resulted in two deaths and millions of dollars in damage, predominantly in the nearby City of Klamath Falls. After the initial shocks, tremors continued to be felt for more than two months. Due to their proximity to the City, the larger of the two earthquakes had an estimated Modified Mercalli Intensity (MMI) of VI in Dorris, which is classified as strong.⁴ According to the California Geological Survey, there is a 2.0 percent chance of shaking in Dorris exceeding a MMI of VIII or IX within the next 50 years (see **Figure 7-6, Earthquake Shaking Potential**). This is considered severe to violent shaking with the potential to crack the ground and cause considerable damage to structures and underground utilities.

7.5.2.4 Slope Instability

Slope failure is the movement of soil, rock, or other earth materials downhill in response to gravity. Slope failure includes rock falls, debris flows, debris avalanches, earthflows, mudflows, landslides, and erosion. While slope failure can result from erosive activity, especially as climate change increases occurrences of severe weather events, the planning area is relatively flat, such that slope instability is not a significant concern in most of the City. Along Dorris Hill at the northern end of the City, the potential for slope instability is much higher.

According to the California Department of Conservation, the nearest reported landslides to the City occurred in September 2021 and October 2021 on the north slope of Mount Shasta approximately 35 miles south of Dorris. The landslides were “shallow landslides,” a type of rapid debris flow caused by a period of intense rainfall and/or rapid snowmelt where the plane failure is

⁴ The Modified Mercalli Intensity scale describes perceived earthquake shaking and correlates strongly with earthquake-induced damage.

located 10 feet deep or less below ground. Shallow slides typically follow a long saturation period punctuated by an intense burst of precipitation over several hours or a few days. Deep-seated landslides, on the other hand, are a type of slower moving landslide where the depth of the plane failure ranges from ten feet to several hundreds of feet below the surface. These types of slides tend to result from changes in the geologic and hydrologic processes in the area of the landslide, such as earthquakes and increased groundwater levels. Once formed, deep-seated landslides can persist for a few years, even centuries. The relative likelihood of deep-seated landslides based on estimates of rock strength and steepness of slopes in and around the City is shown on **Figure 7-7, Deep Seated Landslide Susceptibility**.

7.5.2.5 Liquefaction

Liquefaction occurs when loose sand and silt that is saturated with water behaves like a liquid when shaken by an earthquake. Liquefaction can result in the following types of seismic-related ground failure:

- Loss of bearing strength – soils liquefy and lose the ability to support structures.
- Lateral spreading – soils slide down gentle slopes or toward stream banks.
- Flow failures – soils move down steep slopes with large displacement.
- Ground oscillation – surface soils, riding on a buried liquefied layer, are moved back and forth by shaking.
- Flotation – floating of light buried structures to the surface.
- Settlement – settling of ground surface as soils reconsolidate.
- Subsidence – compaction of soil and sediment.

Three factors are required for liquefaction to occur: (1) loose, granular sediment; (2) saturation of the sediment by groundwater; and (3) strong shaking. As discussed in the Open Space & Conservation Element, the soils underlying most of the City are moderately deep well-drained loams. These soils are not prone to liquefaction, and liquefaction has not been reported in the City in the past.

To inform local governments about potential hazards, the California Geological Survey designates areas of the State that are subject to potential liquefaction. The California Geological Survey does not identify Dorris as being located in an area of potential liquefaction. The nearest liquefaction zones identified by the California Geological Survey are located approximately 260 miles south of Dorris in the San Francisco Bay area.

7.5.2.6 Subsidence

Subsidence is the sinking of the ground due the underground movement of material. It is frequently caused by extracting water, oil, natural gas, and mineral resources by means of pumping, fracking, and mining activities. However, subsidence can also be caused by natural events, including earthquakes, soil compaction, glacial isostatic adjustment, erosion, sinkhole formation, and adding water to fine soils deposited by wind. It can happen over very large areas, such as a region of the State, or over very small areas, such as within a single parcel. The United States Geological Survey identifies areas of recorded subsidence, both historical and current, across California. The City of Dorris is not identified by the USGS as being affected by current or

historical subsidence. The USGS identifies an area located west of Sacramento as the nearest documented subsidence to Dorris.⁵

7.5.3 Wildland and Urban Fire Hazards

Wildfires are a regular feature of the landscape throughout much of California, including in the rugged Klamath National Forest (KNF) south and west of the Butte Valley, which typically experiences dozens of new fire starts each year. The fires are primarily the result of the region's warm, dry summer climate and recurrent afternoon and evening thunderstorms that form over the mountains in the unstable air during the heat of summer and early fall. According to the US Forest Service, approximately 80 percent of the wildfires that occur in the KNF each year are sparked by lightning, while the remaining 20 percent are caused by other activities, such as unattended burn piles, improperly extinguished campfires, and mowing. Other potential wildfire ignition sources include downed power lines, vehicle accidents, equipment malfunctions, and arson. According to CAL FIRE, which annually reports on large (i.e., 300 acres or more) fires in the State, approximately 84 percent of California's wildfires in 2024 were human caused, three percent had a natural source (e.g., lightning), and the source for 12 percent of the wildfires could not be determined.

Regardless of how a fire starts, once it has begun, strong winds can carry burning embers several miles from the main fire, allowing them to ignite new fires. This makes embers the primary cause of structural damage and home loss during wildfires, with some estimates suggesting they are responsible for up to 90 percent of homes destroyed. Structures within the wildland urban interface are particularly at risk.

When communities are impacted by wildfire, the destruction can be unimaginable. During the fire, residents may be given only moments to evacuate, and roadways can become blocked by flames and/or fallen debris, making it extremely difficult for residents to safely evacuate and for emergency responders to protect life and property. When residential, commercial, and industrial properties are damaged or destroyed by fire, a mess of dangerous debris and hazardous waste is left behind that must be cleaned up and removed before property owners can rebuild. Electrical transmission lines and communications equipment can be badly damaged or destroyed in a fire, leaving areas without power and/or phone service until facilities and equipment can be replaced and the power safely restored. Even when communities are spared from a fire's destruction and the wildfire is limited to wildlands, the air quality over large areas is badly impaired with the toxic particulate matter found in smoke.

The record of wildfires in the immediate vicinity of the City since 1878 is shown on **Figure 7-8, Historic Fire Perimeters**. Areas outside of the boundaries of the map, including the rest of the State, are shown on CAL FIRE's Fire and Resource Assessment Program (FRAP) website. A link to the FRAP website and the most up-to-date fire perimeters map is included in Section 7.8, Resources. As shown on **Figure 7-8**, wildfires near Dorris have so far been kept relatively small and have typically burned in the hills surrounding the Butte Valley. While it also appears wildfire activity on the irrigated valley floor has been less frequent, CAL FIRE cautions that the dataset reflected on the map is incomplete, and that users should be cautious when drawing conclusions based on the data. Nonetheless, the fires that are shown on **Figure 7-8** have all occurred since 2006, the largest of which occurred in 2017 and burned 155.2 acres in the Pleasant Valley

⁵ Although not presently shown on the USGS map, subsidence has recently been observed in the Upper Klamath Basin following years of curtailed water deliveries by the Bureau of Reclamation and increased reliance on groundwater.

Subdivision approximately two miles west of Dorris. Not shown are the map are the many recent large wildfires that have burned in the region beyond the boundaries of the map. These include the 35,111-acre Oregon Gulch Fire, which burned within 12 miles of city limits in 2014, the 10,591-acre Tennant Fire, which burned within 15 miles of Dorris in 2021, and the 145,632-acre Antelope Fire, which burned within 16 miles of the City in 2021. Several other recent wildfires in Siskiyou County (2016-2024) are identified in the Siskiyou County Local Hazard Mitigation Plan.

It should be noted that the Local Hazard Mitigation Plan includes additional wildfire information, such as: fire behavior by vegetation type; the National Fire Danger Rating System; consequences of a fire; collaborative efforts that are underway in Siskiyou County to mitigate future fire risk and severity; and the City of Dorris' fire risk, vulnerabilities, expected losses, and risk reduction measures, which are summarized herein below.

7.5.3.1 Wildland Urban Interface

The Wildland Urban Interface (WUI) is the zone where houses and other development meet or intermingle with undeveloped wildland vegetation. The two types of WUI, interface and intermix, differ in whether there is a clear demarcation of wildland vegetation and development (interface) or whether the two are intermingled (intermix). Because of the convergence of humans and the environment in the WUI, the WUI is a zone in which fire can move readily between structures and vegetation, potentially resulting in massive fires, or conflagrations, that can lead to widespread evacuations.

In an effort to provide a framework for scientific inquiries into the effects of housing growth on the environment, as well as inform national policymakers and local land managers about the WUI and associated issues, the US Forest Service prepares detailed assessments of WUI across the United States. **Figure 7-9, Wildland Urban Interface** reflects the findings of the Forest Service's 2020 WUI assessment relative to the City of Dorris. As shown on **Figure 7-9**, the Forest Service identifies most of the City east of Seattle Street and north of E 6th Street as intermix, an area north of E 1st Street and east of N Railroad Avenue principally as interface, much of the City west of Seattle Street as non-WUI vegetated, and pockets of the City as non-vegetated or agriculture.

7.5.3.2 Wildfire Hazard Severity Zones

California law requires the State Fire Marshal to designate areas, or make recommendations for local agency designation of areas, that are at risk from significant fire hazards based on fuels, terrain, weather, and other relevant factors. The State Fire Marshal does so through the publication and regular update of Fire Hazard Severity Zone (FHSZ) maps, which local agencies must adopt in compliance with state law.

According to the Office of the State Fire Marshal, the FHSZ maps are developed using a science-based and field-tested model that assigns a hazard score based on the factors that influence fire likelihood and fire behavior, such as fire history, existing and potential fuel (natural vegetation), predicted flame length, blowing embers, terrain, and typical fire weather for the area. There are three levels of fire hazard assigned: moderate, high, and very high. **Figure 7-10, Fire Hazard Severity Zones** shows the fire hazard severity zone ratings within and surrounding the City. The Office of the State Fire Marshal makes these maps publicly available on CAL FIRE's FRAP website. A link to the FRAP website and the most up-to-date FHSZ maps is included in Section 7.8, Resources. As shown on **Figure 7-10**, approximately 23 acres in the northeast part of the City on and adjacent to Dorris Hill are identified as being in a Very High Fire Hazard Severity Zone

and approximately 28 acres immediately adjacent to this area are identified as being in a High Fire Hazard Severity Zone.

It is important to note that the FHSZ maps evaluate “hazard,” not “risk”. In doing so, they are like FEMA flood maps where the probability level of a particular area being inundated by floodwaters is shown, not the potential impacts of the flooding. The degree of “hazard” is based on the physical conditions that create a likelihood and expected fire behavior over a 30 to 50-year period without consideration of mitigation measures, such as home hardening, recent wildfires, or fuel reduction efforts. “Risk” is the potential damage a fire can have on an area under existing conditions, accounting for any modifications, such as fuel reduction, defensible space, and use of ignition resistant construction materials and methods.

7.5.3.3 Wildfire Risk

To help communities better understand and reduce their wildfire risk, the USDA Forest Service developed Wildfire Risk to Communities, a publicly accessible online resource of interactive maps, charts, and other information developed using the best available science. Wildfire Risk to Communities allows users to determine how likely wildfire is in their area relative to other communities in California and the Nation, areas of their community where homes are most at risk of fire, which actions are most effective to reduce wildfire risk in the community, and where vulnerable populations exist in the community and how they can be reached.

According to the Wildfire Risk to Communities website, both the risk to homes and likelihood of wildfire in Dorris are higher than 56 percent of communities in California and 88 percent of communities in the United States. In general, areas of Dorris with the highest risk and likelihood of wildfire are located along and adjacent to Dorris Hill a distance of roughly 2,000 feet from its base, east of the lumber mill, south of 4th Street, and west of Triangle Street. No area of the City is identified as having a concentration of vulnerable residents. Most of the homes in Dorris (91%) are identified as being subject to indirect wildfire exposure, or possible ignition by embers or home-to-home ignition, and the other homes (9%) subject to direct exposure, or potential ignition by adjacent vegetation, flying embers, and nearby structures. In both instances, the Forest Service indicates that land use planning and use of wildfire-resistant building materials/landscaping should be employed to reduce fire risk. In areas of possible direct exposure, the Forest Service identifies hazardous fuel management and the ability to respond as also being critically important.

7.5.3.4 Existing and Future Development

When evaluating wildfire hazards relative to existing and future development in Dorris, it is important to recognize that approximately 23 acres in the northern part of the City are identified as being in a Very High Fire Hazard Severity Zone and most of the City east of Seattle Street is identified as Wildland Urban Interface. Consequently, existing and future development in these areas are particularly vulnerable to wildfire hazards and will be subject to efforts to mitigate wildfire risk and severity. City enforcement of the State’s Minimum Fire Safe Regulations in the Very High Fire Hazard Severity Zone in the Local Responsibility Area and County and CAL FIRE enforcement of same in State Responsibility Areas outside the City are part of that wildfire risk and severity reduction effort.

The existing and planned locations of residential, mixed-use, commercial, industrial, public agency, and open space development in the City are consistent with the land use classifications

shown on the City's General Plan Land Use Map (see Land Use Element **Figure 2-14**). The distribution of existing development in the City is also shown on the County of Siskiyou's "Siskiyou County Map Viewer," an online GIS resource of parcel ownership and other geographically referenced data. A link to the Siskiyou County Map Viewer is included in Section 7.8, Resources. Residential and mixed-use lands in the City comprise roughly 44 percent of the City's total land area, while nonresidential lands, such as commercial, manufacturing, public uses, and open space, comprise roughly 56 percent. Because of their importance to the resilience of the community, and to assist in planning for the expansion, hardening, and relocation of essential public facilities, the location of public facilities in the City relative to Fire Hazard Severity Zones and Wildland Urban Interface are shown on **Figure 7-11, Public Facilities and Natural Hazards**.

7.5.3.5 Fire Prevention and Resident Safety

Fire prevention, fire severity reduction, and resident safety are significant concerns for the City and region. Outside city limits, the Forest Service has been actively implementing strategies in the KNF to mitigate fire risks and create more resilient landscapes, such as prescribed fire and thinning. The California Department of Fish and Wildlife has likewise been employing prescribed fire as part of its management efforts in the Butte Valley Wildlife Area south of Dorris. To reduce fuels and improve safety during evacuations, the Butte Valley Fire Safe Council recently used mastication to thin vegetation along roadsides in the Pleasant Valley subdivision west of Dorris.

Presently key strategies being employed by the City to reduce fire risk and improve public safety in Dorris include:

- Maintaining a well-trained and staffed fire department and working cooperatively with other public agencies with responsibility for public safety.
- Ensuring adequate infrastructure for new development, including safe access for emergency response vehicles, visible street signs, and water supplies for structural fire suppression.
- Locating, when feasible, new essential public facilities outside of Very High Fire Hazard Severity Zones and identifying construction methods or other methods to minimize damage to these facilities.
- Working with property owners to ensure building construction materials and methods and landscaping reduce the potential for ignition.
- Creating and maintaining defensible space around structures to minimize fuels and fire spread.
- Identifying areas where there is significant fire risk and a history of losses.
- Avoiding or minimizing the wildfire hazards associated with new uses of land.
- Public education.

7.5.4 Flood and Dam Inundation Hazards

Flooding can cause significant harm to buildings, people, and infrastructure. Floodwaters can be deep and fast enough to prevent passage, erode roadways, and carry away people and large objects. Flooding can be caused by heavy rainfall, moderate rainfall over long periods, or even inadequate or clogged storm drains. In rarer instances, a break in a water main or breach of a dam can also cause flooding.

7.5.4.1 FEMA Flood Hazard Zones

According to the Federal Emergency Management Agency (FEMA), which identifies and maps flood hazard areas throughout the United States, there are no floodplains within or adjacent to Dorris. The nearest FEMA mapped floodplain is located approximately 1.8 miles northeast of the City and is associated with overspill of Indian Tom Lake and flooding of Hot Creek, both of which are located outside of the Butte Valley. Within the Butte Valley, the nearest floodplain to Dorris is associated with a small, managed wetland approximately 3.2 miles south of city limits. While elevation changes in the Butte Valley are minimal and less-than-permeable soils surrounding Meiss Lake facilitate flooding, Dorris is more than 7.5 miles outside of Meiss Lake's 100-year floodplain. Flood hazard areas in the vicinity of Dorris are shown on **Figure 7-12, FEMA Flood Hazards** at the end of the Safety Element.⁶

7.5.4.2 Dam Failure Inundation Hazards

Although dam failures are rare, when they do occur, they can result in significant damage and death since they may fail unexpectedly with little or no warning. To address this hazard, dams are regulated by state and federal agencies for safety, a process that includes routine inspections and classifying dams as low, significant, high, and extremely high hazard dams depending upon the type and severity of anticipated damage that may result from their failure. The hazard potential is not based on the condition of the dam or the risk of the dam failing. Owners of dams that pose significant, high, and extremely high hazards, are required to develop and maintain Emergency Action Plans (EAPs). These plans are crucial for minimizing potential loss of life and property damage during dam failures or other emergencies. The EAPs are based on inundation maps approved by the respective agency and include specific details on notification procedures, response actions, and roles and responsibilities.

There are no dams that pose a hazard to the City. The nearest dam to Dorris regulated by the State of California is roughly 29 miles distant to the southwest in the Shasta Valley, sufficiently distant that its failure would not affect the City. The nearest dam to Dorris regulated by the State of Oregon is the Patterson Reservoir Dam, a private dam located approximately 3.5 miles north/northeast of Dorris. Patterson Reservoir Dam is a low hazard dam located outside of the watershed that does not present a hazard to the City. The nearest federally operated dam is located approximately 18 miles east/northeast of Dorris on the Lost River. This is the Anderson-Rose Diversion Dam (formerly the Lower Lost River Diversion Dam), a low hazard dam operated by the Bureau of Reclamation for the purpose of serving reclaimed lands. Like the others, it is located outside of the watershed and does not pose a hazard to Dorris.

7.5.4.3 Localized Flooding

Though uncommon, localized flooding can also occur in or around the City's limited stormwater drainage facilities and in low-lying, non-draining areas during intense rainstorms. The primary causes of localized flooding in Dorris are excessive rainfall, particularly following a snow event, and the lack of a true storm drain network. Curb and gutter have yet to be constructed along most city streets and the storm drain system that exists consists of French drains, drainage pipes, a few drop inlets, and two small detention basins constructed by Caltrans for US 97. While this approach has adequately served the City in the past, increased storm severity resulting from

⁶ The 2025 Local Hazard Mitigation Plan identifies riverine flooding as a potential hazard to the City. The discrepancy with the LHMP is due to the use of flood hazard data for an area that encompasses the entire Butte Valley during development of the LHMP.

climate change may eventually require that the City plan for and develop a true storm drain system to accommodate increased runoff.

7.5.5 Hazardous Materials

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency, or if it has characteristics defined as hazardous by such an agency. A hazardous material is defined in Title 22 of the California Code of Regulations (CCR), Title 22, Section 662601.10, as follows:

A substance or combination of substances which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.

Most hazardous material regulation and enforcement in Siskiyou County is managed by the Siskiyou County Community Development Department - Environmental Health Division, which refers large cases of hazardous materials contamination or violations to the North Coast Regional Water Quality Control Board (RWQCB) and the California Department of Toxic Substances Control (DTSC). When issues of hazardous materials arise, it is not at all uncommon for other agencies to become involved, such as the Siskiyou County Air Pollution Control District and both the federal and state Occupational Safety and Health Administrations.

7.5.5.1 Hazardous Materials Sites

Pursuant to Government Code Section 65962.5, both DTSC and the State Water Resources Control Board (SWRCB) are required to maintain lists of sites known to have hazardous substances present in the environment. The agencies make these lists available on their websites. According to DTSC Envirostor and SWRCB GeoTracker databases, which were reviewed in May 2025, there are four SWRCB cases and no DTSC cases in the City of Dorris. Two of the SWRCB cases involve gasoline spilled from leaking underground storage tanks (i.e., LUST cases), one case involved gasoline spilled during a vehicle accident, and the other case involved a dry cleaning and metal degreasing solvent from an unknown source that was detected during monitoring for a separate SWRCB case. One of the LUST cases has since been remediated and the case closed, and the three other cases remain open. The North Coast Regional Water Quality Control Board monitors one of the open cases semi-annually, and the other two open cases are inactive. An additional closed LUST case is located at the agricultural inspection station south of Dorris. The location of each case and its status in 2025 is shown on **Figure 7-13, Hazardous Materials Cleanup Sites** at the end of the Safety Element.

7.5.5.2 Hazardous Materials Transport

Being located on two major transportation routes (i.e., US 97 and the Union Pacific Railroad), hazardous materials, including flammable and non-flammable gases, corrosives, oxidizers, and flammable liquids, are routinely transported through Dorris.

Concerning the transport of hazardous materials on US 97, a sweeping downslope curve approaching the City from the north and three 90-degree curves through the City increase the potential for tractor-trailer accidents and pose safety risks to residents and the general public. There is a history of vehicles accidents on US 97 at these curves, including a few hazardous

materials spills from overturned trucks. Notable accidents occurred in 1987 at the intersection of Fourth Street and Butte Street and in 1991 on First Street. These accidents involved tractor-trailers that rolled over, resulting in traffic delays and the clean-up of hazardous materials, including one toxic spill that required evacuation of residents in the vicinity. To reduce the risk to residents as much as possible, the City directs heavy truck traffic and possible hazardous materials transport away from residential areas and other sensitive land uses through a system of designated truck routes and penalties for noncompliance.

The alignment of the Union Pacific Railroad (UPRR) is direct through Dorris and lacks similar design deficiencies, however, two at-grade crossings, one along US 97 and a second at E 4th Street, increase the risk of accidents. To address the hazard, the City has been coordinating with the California Department of Transportation (Caltrans) and advocating for safety improvements to the highway-rail grade crossing on US 97. Improvements being requested by the City include installation of additional signs, lights, and a traffic channelization device on each side of the rail corridor.

The California Vehicle Code assigns the California Highway Patrol the responsibility for serving as statewide information, assistance, and notification coordinator on all hazardous material spill incidents occurring on state highways. CHP and UPRR each maintain hazardous material response units, however, these units are not locally based. Accordingly, the Dorris Fire Department and Siskiyou County Sheriff's Office are likely to be the first to respond to accidents involving hazardous materials in the City and surrounding area.

7.5.6 Climate Change

Over the past two hundred years, the Earth's climate has slowly been changing in response to increasing levels of heat trapping gases in the atmosphere. This long-term shift in temperature and weather is now well documented, as is the need to prepare for and adapt to the anticipated effects of climate change. Most people experience climate change as warmer temperatures and extreme weather events. This is true for residents of Dorris and elsewhere in Siskiyou County as well, however, climate change has also been intensifying the impacts of other climate-related hazards in the region, including drought, wildfire, extreme weather, and flooding. Potential impacts to water supply, water quality, public health, infrastructure, wildlife, and critical habitats also exist.

Because the level of impact from climate change-related events varies and is largely beyond the control of the City of Dorris, a vulnerability assessment was prepared as part of the Siskiyou County Local Hazard Mitigation Plan for each climate change-related impact. The assessment was completed using data available from California's Fourth Climate Change Assessment, FEMA's National Risk Index, and the California Energy Commission's Cal-Adapt data center. The vulnerability assessment estimates the impact of climate change and the City's capacity to adapt to and moderate the impacts climate change, known as "adaptive capacity." The impacts of climate change and adaptive capacity are combined to determine climate change vulnerability and prioritize mitigation actions consistent with the California Adaptation Planning Guide. The results of the assessment are summarized below.

7.5.6.1 Extreme Heat

Heat-related illnesses are a concern when it comes to extreme heat forecasts. That's because without the ability to stay cool and adequately hydrated during periods of prolonged heat exposure, health impacts that begin with fatigue and cramping can quickly escalate to heat stroke and death. Exposure to extreme heat can affect everyone, however, health risks are greater for

vulnerable members of society, including pregnant women, persons with a pre-existing chronic disease, the elderly and very young, and persons who are economically disadvantaged. Because of increased exposure to the environment, persons who work outdoors (e.g., farmworkers) are also at elevated risk.

Cities with highly modified urban landscapes may also be disproportionately affected during periods of extreme heat. That's because in addition to typically having fewer shade trees and less evapotranspiration than surrounding less developed areas, urban landscapes also tend to have higher concentrations of dark, thermally absorptive surfaces, such as roads, rooftops, parking lots, and buildings. After absorbing the sun's heat throughout the day, the asphalt and concrete used in urban areas continue to radiate heat long after sundown, such that nighttime temperatures are generally warmer in cities. This phenomenon, known as urban heat island effect, can result in temperatures in cities that are as much as 10°F warmer than in surrounding areas.

According to the vulnerability assessment prepared for the Local Hazard Mitigation Plan, the extreme heat risk index for Dorris is in the 39.7 percentile relative to the rest of the nation, which is considered relatively low. Nevertheless, due to current and projected summer temperatures for the City and region, which could increase by as much as 5.4°F over historic conditions by the middle of the century, both the Circulation Element and Open Space & Conservation Element recommend trees planting, where appropriate, as an effective, low technology means of staying cool during summer, reducing energy demand, and achieving other social, environmental, and economic benefits.

7.5.6.2 Drought

It is the forecast of drought that generates more concern than any other climate change impact. This is because droughts can diminish water levels in lakes, reservoirs, streams, and groundwater basins, and have the potential to rapidly spread fire, create food shortages, hurt economies, and dramatically alter the living environment and people's lives. Further, despite little variability in the frequency of droughts around the world for several decades, this century has already seen record droughts on every continent outside of Antarctica. However, not all droughts are the result of climate change. In many areas of the world, such as California, droughts are a natural part of the climate's inherent variability. In fact, climate scientists believe that the prolonged drought that gripped California between 2011 and 2017 was not due to climate change, but a recurring natural phenomenon that entailed a high-pressure ridge parking over the Pacific similar to historic droughts, albeit for an extended period of time. A study by climate scientists with the University of California Los Angeles and the National Oceanic and Atmospheric Administration, however, found that during California's 2020-2022 drought, "the higher temperatures caused by anthropogenic climate change made an ordinary drought into an exceptional drought."

As temperatures in the region continue to rise throughout the 21st century, they are expected to influence the frequency and severity of droughts in several ways, such as extended dry seasons, decreased snowpack, earlier snowmelt, increased evapotranspiration, greater variability in runoff and recharge, and increased water demand. Although nobody knows for certain how much more often droughts will occur, drought frequency in the region could increase approximately 50 percent by the end of the century. But it isn't simply the incidence of drought-like conditions that matters when it comes to understanding how this could affect Dorris and the region. This is because some droughts aren't as severe or long lasting as others, and it is the persistent strain of a drought or sequential droughts on communities, the environment, and agriculture that is so potentially detrimental.

During California's 2020-2022 drought, grant funding was made available through the California Department of Water Resources' Small Community Drought Relief Program to help small communities survive the then current and future droughts. The Small Community Drought Relief Program was authorized by the Legislature pursuant to the Budget Act of 2021 (Stats. 2021, ch. 240, § 80) and its Trailer Bill, (Wat. Code, § 13198 et seq.). The Trailer Bill authorized specified state agencies, subject to an appropriation for these purposes, to make grants and direct expenditures for interim or immediate relief in response to conditions arising from a drought scenario to address immediate impacts on human health and safety and on fish and wildlife resources and to provide water to persons or communities that lose or are threatened with the loss or contamination of water supplies.

The City responded to the drought and the opportunity for financial assistance by submitting a successful grant application to the Small Community Drought Relief Program in September 2021. The award provided for (1) installation of water meters for commercial uses, which completed the City's water meter installation process; (2) replacement of approximately two miles of old, steel water mains that had been causing leak losses for decades; (3) an assessment of Well No. 4 (i.e., "Old Sandy"), which was taken offline as the City's primary water source because of elevated arsenic levels and excess sand during startup of the pump; and (4) if the assessment found that it was not feasible to make the improvements to Well No. 4, a new municipal well would be constructed. The City's new municipal well was recently completed and is scheduled to be connected to the water system in 2025. With these improvements to the City's water supply and distribution system, as well as the construction of the City's second water tank in 2017, the City is much better prepared for future droughts.

7.5.6.3 Wildfire

There are several factors that affect the size and frequency of wildfires. The progressively warmer temperatures and associated drought stress projected for the City and region are expected to contribute to an increase in wildfire size and frequency that climate models predict will worsen over time, with some scientists noting that the probability of fire over a 30-year period is expected to increase across the region on average by 40 percent by the end of the century. Given that 19 of California's 20 largest wildfires on record have occurred since 2000, it is not surprising that climate scientists believe that the combined effects of increased heat and drought are already contributing to larger and more frequent wildfires in California. Nevertheless, a 2012 study of the Klamath, Mendocino, Shasta-Trinity, and Six Rivers National Forests found that despite wildfire size and frequency trending upward, the severity of wildfires has not been. This led the study's authors to conclude that, under appropriate conditions, fire could be more extensively used in the region to achieve management objectives. While the use of prescribed fire may not be appropriate inside city limits due to the proximity of people and structures, it is being successfully used to reduce fuels on large parcels within and adjacent to the Butte Valley.

7.5.6.4 Extreme Weather

Extreme weather events are often cited as a likely outcome of climate change. This is because for each 1°C (1.8°F) of warming, the atmosphere can hold approximately seven percent more water vapor, and with increased warming there is more water evaporating from the Earth's surface for the atmosphere to hold. Because this water vapor contains energy in the form of latent heat, more water in the atmosphere means there is more energy to feed the atmospheric instability that drives large storms. The effect of a warming climate on extreme weather is not consistent around the globe. This is because wetter areas of the planet have more water available to feed storms

than drier areas. For this reason, the greatest observed increases in storm severity in the United States have been in the wetter areas of the country.

Extreme winter weather encompasses multiple effects caused by winter storms and conditions, including strong winds, ice storms, heavy or prolonged snow, sleet, and extreme cold. In areas and regions that only see intermittent winter storms, such as Siskiyou County, winter storms may become increasingly hazardous. According to climate models, the region is likely to experience normal to slightly wetter winters as a result of climate change. While that alone is not expected to result in substantial increases in extreme weather, as the climate warms, more of the precipitation that does fall is expected to fall as rain. Further, climate models project less precipitation for the region during the spring and fall, essentially condensing the period of time that the region receives its annual precipitation. When these predicted shifts in the timing of runoff are combined with atmospheric rivers that already deliver most of the state's annual precipitation during relatively few days each year, increased localized flooding in the City due to winter storm events becomes more likely. According to the Local Hazard Mitigation Plan, the risk index for Dorris from winter weather (e.g., snow, sleet, and freezing rain) is relatively low (27.2 percentile nationwide), while the risk index for the City from cold waves is in the 95.6 percentile, which is relatively high.

7.6 CORRELATION WITH OTHER PLANS AND ELEMENTS

Many Safety Element policies are interrelated with topics in the Land Use, Circulation, Housing, and Open Space & Conservation Elements. For example, the Land Use Map seeks to minimize impacts as a result of future development in hazard-prone areas and to separate sensitive land uses, such as residential neighborhoods, from incompatible uses. It is important to remember, however, that policies in the Safety Element are tailored to address health and safety-related issues. The Safety Element is also closely related to the Local Hazard Mitigation Plan, which plans for mitigation of hazards in more detail and is required for access to federal and state financial assistance programs. The LHMP and this element discuss specific hazards with a high likelihood of occurrence or high impact severity that could potentially affect the City of Dorris, including seismic and geologic hazards, wildfire, and climate change. For these reasons, the most recent LHMP is incorporated as part of the Safety Element by reference.

7.7 SAFETY ELEMENT GOALS, POLICIES & PROGRAMS

- | | |
|------------------|--|
| GOAL S-1: | A city prepared for necessary action, including evacuation if needed, due to disasters, and primed for recovery following a disaster. |
| GOAL S-2: | A city that has reduced, to the extent feasible, the threat to life and property caused by fire. |
| GOAL S-3: | A city that has minimized, to the extent feasible, potential impacts to people, structures, and the environment resulting from flood. |
| GOAL S-4: | A city that has minimized, to the extent feasible, potential impacts to life and property caused by geologic and seismic hazards. |
| GOAL S-5: | A city that has minimized, to the extent feasible, risks to life and property resulting from hazardous materials spills. |

GOAL S-6: A city that has minimized, to the extent feasible, the risks to life and property resulting from climate change.

GOAL S-1: A city prepared for necessary action, including evacuation if needed, due to disasters, and primed for recovery following a disaster.

Policy S-1.1: The City creates and maintains a safe environment for its residents.

Policy S-1.2: The City plans for and strives to provide adequate facilities, equipment, and personnel to respond to emergencies.

Policy S-1.3: The City takes appropriate measures to prepare for natural and human-caused disasters and to protect residents should one occur.

Policy S-1.4: The City endeavors to minimize impacts to life, structures, and the environment should a disaster strike.

Policy S-1.5: The City takes appropriate measures to ensure that critical and essential city facilities remain operational during emergencies.

Policy S-1.6: The City participates in agreements for automatic and mutual aid with other local, state, federal, and nongovernmental emergency service providers to improve protection services and emergency response throughout the county.

Policy S-1.7: The City coordinates with and encourages the use of community-based networks to aid vulnerable populations prepare for emergencies and provide assistance with evacuation and recovery.

Policy S-1.8: The City engages with the community to increase awareness of and preparedness for emergencies and natural disasters.

Policy S-1.9: The City commits to the goals, objectives, and actions in the Local Hazard Mitigation Plan and subsequent amendments thereto.

Policy S-1.10: The City continues to assess and improve evacuation capacity, safety, and viability under a range of emergency evacuation scenarios.

Policy S-1.11: The City requires new development that requires additional levels of law enforcement and fire protection services to participate in offsetting costs for the additional services.

Policy S-1.12: The City strives to maintain adequate emergency response times for all existing and planned development within city limits, and for lands proposed for annexation.

Program S-1A: Coordinate with state, county, and other local agencies to build mutual aid capacity for emergency events, especially through disaster preparedness training. Develop and maintain mutual aid agreements with appropriate agencies.

Program S-1B: Periodically review, and update as necessary, plans that advise city staff, first responders, and residents on actions that should be taken in the event of an emergency. Plans should be distributed to and made readily available to the public.

Program S-1C: Expand emergency training and local expertise for emergency event response and recovery, including through volunteer roles.

Program S-1D: Locate essential public facilities outside of natural hazard areas, such as Wildland Urban Interface and Very High Fire Hazard Severity Zone, when feasible. If it is not possible to locate facilities outside of these natural hazard areas, reduce vulnerabilities to essential public facilities to the maximum extent feasible by identifying and implementing construction methods and/or other methods to protect and minimize damage to these facilities.

Program S-1E: Establish minimum levels of service thresholds for fire protection and law enforcement services and maintain services at or above those thresholds.

Program S-1F: Provide rapid and timely response to all law enforcement, fire, and other emergencies. Work to maintain minimum average response times.

Program S-1G: Work with SCLTC and other partners on the development of the countywide evacuation and preparedness plan and educate the public on related emergency protocols developed in the plan.

Program S-1H: Coordinate with SCLTC, Caltrans, the County Road Department, Siskiyou County Sheriff's Office, Siskiyou OES, CAL FIRE, and other local, state and federal agencies to identify strategies that ensure the maintenance and reliability of evacuation and supply transportation routes potentially compromised during an emergency.

Program S-1I: Provide for adequate evacuation routes in areas of high fire hazard and other natural disasters.

Program S-1J: Identify and publicize emergency shelters and sign and control evacuation routes for use during emergencies, working with Caltrans as appropriate for signs along US 97 and the County for signs along evacuation routes outside the City.

Program S-1K: Continue to promote and support the use of early warning notification systems (text messages, telephone calls, etc.) to notify residents by wireless emergency alert of the need to evacuate in the event of an emergency and the location of evacuation routes, points, and critical facilities such as schools and day care centers, particularly residents of vulnerable areas and neighborhoods with constrained emergency access.

Program S-1L: Where practical, improve emergency access to dwellings that are isolated due to narrow dead-end roads. Development on vacant lots in such areas should be limited until basic safety standards have been satisfied.

Program S-1M: Ensure that applications for projects that will house infirmed, non-ambulatory persons, seniors, and children in high hazard areas include adequate provisions to mitigate known hazards.

Program S-1N: Work with community groups, faith-based organizations, and other institutions to develop a network of conveniently located community resilience hubs (e.g., public facilities, businesses, and community-oriented facilities) that are centrally located, accessible, and equipped to provide aid to vulnerable populations during emergency events, periods of poor air quality, utility disruptions, and/or climate change-related hazards.

Program S-1O: Coordinate with the Siskiyou County Office of Emergency Services, the County of Siskiyou, and other cities in Siskiyou County to implement and regularly update the LHMP and stay in compliance with relevant FEMA and state requirements.

Program S-1P: Forward all land divisions and development applications that have the potential for public impacts to the Sheriff's Office and Dorris Fire Department for review.

Program S-1Q: Ensure developed properties are easily identifiable by emergency responders from the street.

Program S-1R: Work with utility companies to determine the feasibility of undergrounding utility lines during construction of new developments and in the most at-risk areas, and to identify funding mechanisms to support undergrounding activities.

Program S-1S: Prioritize the needs of at-risk, vulnerable, and disadvantaged populations during emergency response and disaster recovery efforts, including increasing awareness of defensible space requirements and promoting understanding of evacuation routes.

Program S-1T: Develop and adopt road standards for the VHFHSZ that meet or exceed Article 2 (Ingress and Egress) of the State Minimum Fire Safe Regulations.

GOAL S-2: A city that has reduced, to the maximum extent feasible, the threat to life and property caused by fire.

Policy S-2.1: The City endeavors to prevent fires, reduce fire severity, and safeguard residents, in part by:

- Maintaining a well-trained and staffed fire department and working cooperatively with other public agencies with responsibility for public safety.
- Ensuring adequate infrastructure for new development, including safe access for emergency response vehicles, visible street signs, and water supplies for structural fire suppression.
- Locating, when feasible, new essential public facilities outside of high fire risk areas and identifying construction methods or other methods to minimize damage to these facilities.
- Working with property owners to ensure building construction materials and methods and landscaping reduce the potential for ignition.
- Creating and maintaining defensible space around structures to minimize fuels and fire spread.
- Identifying areas where there is significant fire risk and a history of losses.
- Avoiding or minimizing the wildfire hazards associated with new uses of land.

- Public education.

Policy S-2.2: The City desires to sustain and grow the ability of the City of Dorris Fire Department to respond to fires in and around the City.

Policy S-2.3: The City considers fire-related hazards in the review of discretionary project proposals and ensures that new development in the Very High Fire Hazard Severity Zone is carefully sited and configured.

Policy S-2.4: The City coordinates with and supports the efforts of Fire Safe Councils throughout the region.

Policy S-2.5: The City supports programs to prevent and prepare for wildfires.

Program S-2A: Take appropriate measures to support a well-trained, equipped, and staffed volunteer fire department

Program S-2B: Identify existing public and private roadways in the Very High Fire Hazard Severity Zone and Wildland Urban Interface that are not in compliance with current fire safety regulations, including road standards for evacuation and emergency vehicle access, vegetation clearance, and other requirements of the California Minimum Fire Safe Regulations to the extent resources are available. Work at retrofitting city-owned roadways as needed to meet current standards and require private property owners to do the same, to the extent feasible and given the absence of other site constraints.

Program S-2C: Require proposed development and to the extent feasible, non-conforming development, in the Very High Fire Hazard Severity Zone to provide adequate access for fire and emergency vehicles and equipment, adequate infrastructure, proper vegetation clearance and maintenance on public and private roads that meets or exceeds the standards in the California Minimum Fire Safe Regulations.

Program S-2D: Reduce the risk of wildfires in the Wildland Urban Interface in and around Dorris through cooperative and timely implementation of the Community Wildfire Protection Plan.

Program S-2E: Require proactive vegetation management/hazard abatement to reduce fire hazards on existing public and private properties, along evacuation routes, and other land where applicable.

Program S-2F: Work with private property owners, Siskiyou County, and Caltrans to conduct roadside vegetation clearance along public and private roadways in Very High Fire Hazard Severity Zones in and around the City. Ensure that fuel reductions provide an appropriate fuel buffer for evacuees should the roadways become congested during an emergency incident.

Program S-2G: Continue to monitor fire flow capabilities throughout the City and make improvements at any locations with flow considered inadequate for fire protection.

Program S-2H: Ensure adequate fire flow is maintained within city limits through ongoing maintenance, capital improvement public infrastructure upgrades, and improvements

required in association with development projects and in compliance with applicable California Fire Safe Regulations.

Program S-2I: Maintain adequate fire flow during scheduled and unscheduled power outages and interruptions through incorporation of power source resiliency and redundancy within the City's water supply, treatment, and distribution infrastructure.

Program S-2J: Analyze known fire hazard information during the review of discretionary development applications and approve those applications only after ensuring there are adequate water storage capacity and fire flow for fire protection.

Program S-2K: Approve discretionary development proposals only when adequate fire suppression services and facilities are available or will be made available concurrent with development, considering the setting, type, intensity, and form of the proposed development.

Program S-2L: Identify streets and neighborhoods that are at increased risk of wildfire and restrict on-street parking, where needed, when fire risks are elevated to ensure full access for fire trucks and emergency vehicles and to increase roadway accessibility during evacuation events. Conduct community outreach to neighborhoods affected by the program and provide detailed information on how and when the parking restrictions will be implemented.

Program S-2M: Continue to inform residents about fire hazards, appropriate responses to fire, evacuation routes, plans to reach at-risk populations, and ways to prevent loss, including defensible space, home hardening, and landscaping improvements that can reduce the impact of fire.

Program S-2N: Identify residential areas that do not have at least two routes for emergency egress, lack adequate emergency water supply, or need vegetative fuel modification to reduce risk. Work with affected residents and the Dorris Fire Department to identify potential area-specific solutions to ensure risk reduction.

Program S-2O: Work with the Siskiyou County Department of Public Health and Siskiyou County Air Pollution Control District to ensure residents are educated on wildfire smoke hazards and how to protect themselves and their homes from smoke impacts.

Program S-2P: Ensure that new development projects include adequate measures to minimize fire hazards while remaining in compliance with housing laws regarding objective design standards and discretionary review.

Program S-2Q: Strive to improve the City's current Insurance Service Office (ISO) rating for public safety and associated benefits.

Program S-2R: Following revisions to the fire hazard severity zones maps by the Office of the State Fire Marshal, maintain compliance with Government Code Sections 51179 and 65302(g)(3) by updating fire hazard severity zone designations and the Safety Element, as needed.

Program S-2S: Amend Title 15, Buildings and Construction, of the Dorris Municipal Code to establish standards for development in the Very High Fire Hazard Severity Zone that

meet or exceed Title 14, CCR, Division 1.5, Chapter 7, Subchapter 2, Articles 1-5 (commencing with Section 1270) (State Minimum Fire Safe Regulations) and Title 14, CCR, Division 1.5, Chapter 7, Subchapter 3, Article 3 (commencing with Section 1299.01) (Fire Hazard Reduction Around Buildings and Structures Regulations).

Program S-2T: Ensure new dwellings, structures that will be occupied, and rebuilding of occupied dwellings and structures damaged by fire in VHFHSZ comply with all applicable state and local building standards, including defensible space and fire-resistant building material and design requirements.

Program S-2U: Require that discretionary development projects in VHFHSZ prepare and submit a fire protection plan that includes the following, at a minimum:

- A wildfire hazard assessment that considers location, topography, aspect, climate, and fire history.
- Conformance with applicable wildfire protection regulations, statutes, and ordinances.
- Fire safety requirements, including defensible space, infrastructure, and building ignition resistance, fire department access, egress, road and address signage, and water supply.
- Mitigation and design considerations for non-conforming fuel modification.
- Wildfire education, maintenance, and limitations.
- Fire response capabilities.
- Evacuation planning.

Program S-2V: Coordinate with CAL FIRE, Fire Safe Councils, the railroad, and other private landowners in the development and maintenance of a fuel break in the VHFHSZ along and adjacent to Dorris Hill.

Program S-2W: Identify and prioritize defensible space, structural hardening, and other improvements necessary to safeguard essential public facilities from wildfire.

GOAL S-3: A city that has minimized, to the extent feasible, potential impacts to people, structures, and the environment resulting from flood.

Policy S-3.1: The City supports efforts to protect public health and safety from flooding through sustainable and environmentally responsible floodplain management.

Policy S-3.2: The City strives to minimize localized flooding through ongoing improvements to the City's storm drain network.

Program S-3A: Continue to coordinate with local, regional, state, and federal agencies to maintain an adequate flood management information base, prepare risk assessments, and identify strategies to mitigate flooding impacts.

Program S-3B: Support and participate in the preparation of a countywide flood control plan to minimize impacts from existing and future flooding in the region.

Program S-3C: Continue to improve and to apply for funding to improve the City's storm drain network.

Program S-3D: Ensure proposed developments will not create or result in unacceptable exposure to flood hazards.

GOAL S-4: A city that has minimized, to the extent feasible, potential impacts to life and property caused by geologic and seismic hazards.

Policy S-4.1: The City strives to ensure a high level of safety and minimize the loss of life injury, and property damage from earthquake, landslide, volcanic activity, erosion, and other geologic hazards.

Policy S-4.2: The City requires that new development be designed to minimize the risk of damage from seismically induced ground shaking, ground failure, slope instability, and other seismic hazards.

Program S-4A: Identify and prioritize seismic retrofits needed on existing public buildings.

Program S-4B: Encourage upgrading of privately-owned, unreinforced masonry buildings to prevent earthquake damage.

Program S-4C: Continue to enforce regulations and programs to reduce geologic and seismic hazard vulnerability.

Program S-4D: Areas known to be susceptible to landslides should be evaluated, protected, and stabilized as necessary, including through cooperation with regional stakeholders to ensure evacuation routes, such as US 97, remain open and safe for passage.

Program S-4E: Limit development in areas subject to landslides or other geologic threat and undertake efforts to limit erosion from new development.

Program S-4F: Coordinate with county, state and federal agencies monitoring volcanic activity and hazards.

GOAL S-5: A city that has minimized, to the extent feasible, risks to life and property resulting from hazardous materials spills.

Policy S-5.1: The City takes necessary steps to prevent and prepare for hazardous materials spills, as well as protect its residents should one occur.

Policy S-5.2: To diminish the likelihood of hazardous materials spills along US 97 and the UPRR, the City advocates for its concerns regarding highway and rail safety.

Program S-5A: Maintain an open dialogue with Caltrans and the California Highway Patrol to ensure those agencies are aware of and responsive to the City's concerns about vehicle safety and hazardous materials transport along US 97.

Program S-5B: Ensure that the Union Pacific Railroad and Federal Railroad Administration are aware of and responsive to the City's concerns about rail safety and hazardous materials transport through the City.

Program S-5C: Continue to enforce designated truck routes for the transportation of hazardous materials through the City and prohibit routes that pass through residential neighborhoods to the maximum extent feasible.

Program S-5D: Identify necessary steps to be taken to protect residents in the case of a hazardous materials spill and be prepared to quickly implement these measures in the event of an accident.

Program S-5E: Maintain an up-to-date list of emergency contacts that are to be notified in the event of a hazardous materials spill, make the list readily available to city staff and first responders to facilitate a rapid response, and work with the Siskiyou County Sheriff's Office and California Highway Patrol to ensure rapid notification of residents in the event of a spill on US 97.

Program S-5F: Continue to promote the training of, and the provision of appropriate protection equipment for, local first responders who would respond to hazardous material spills in the Dorris area.

GOAL S-6: A city that has minimized the risks to life and property resulting from climate change.

Policy S-6.1: The City integrates regional collaboration as a key component of the City's climate adaptation planning strategy, recognizing the regional nature of climate impacts and climate adaptation strategies.

Policy S-6.2: The City incorporates climate change considerations into city processes and planning efforts, utilizing best available data to understand climate predictions and the potential impacts on community resources and facilities.

Program S-6A: Actively participate in regional discussions on infrastructure improvements and adaptation strategies related to climate resiliency and addressing potential community impacts.

Program S-6B: Continue to collaborate with Siskiyou County, other local communities, and community organizations to establish and maintain shelters in the City and Butte Valley to reduce public exposure to extreme heat, cold, and smoke.

Program S-6C: Assess existing public infrastructure systems vulnerable to changes in key climate variables and incorporate upgrades to critical infrastructure in the City's Capital Improvement Program planning process.

Program S-6D: When updating the Capital Improvement Program, engineering specifications and standards, and planning documents, incorporate climate projection data, risk modeling, and adaptive management, as appropriate, to account for future changes in key climate variables (e.g., changes in precipitation and flooding behavior, fire and smoke risk, maximum daily temperatures, etc.).

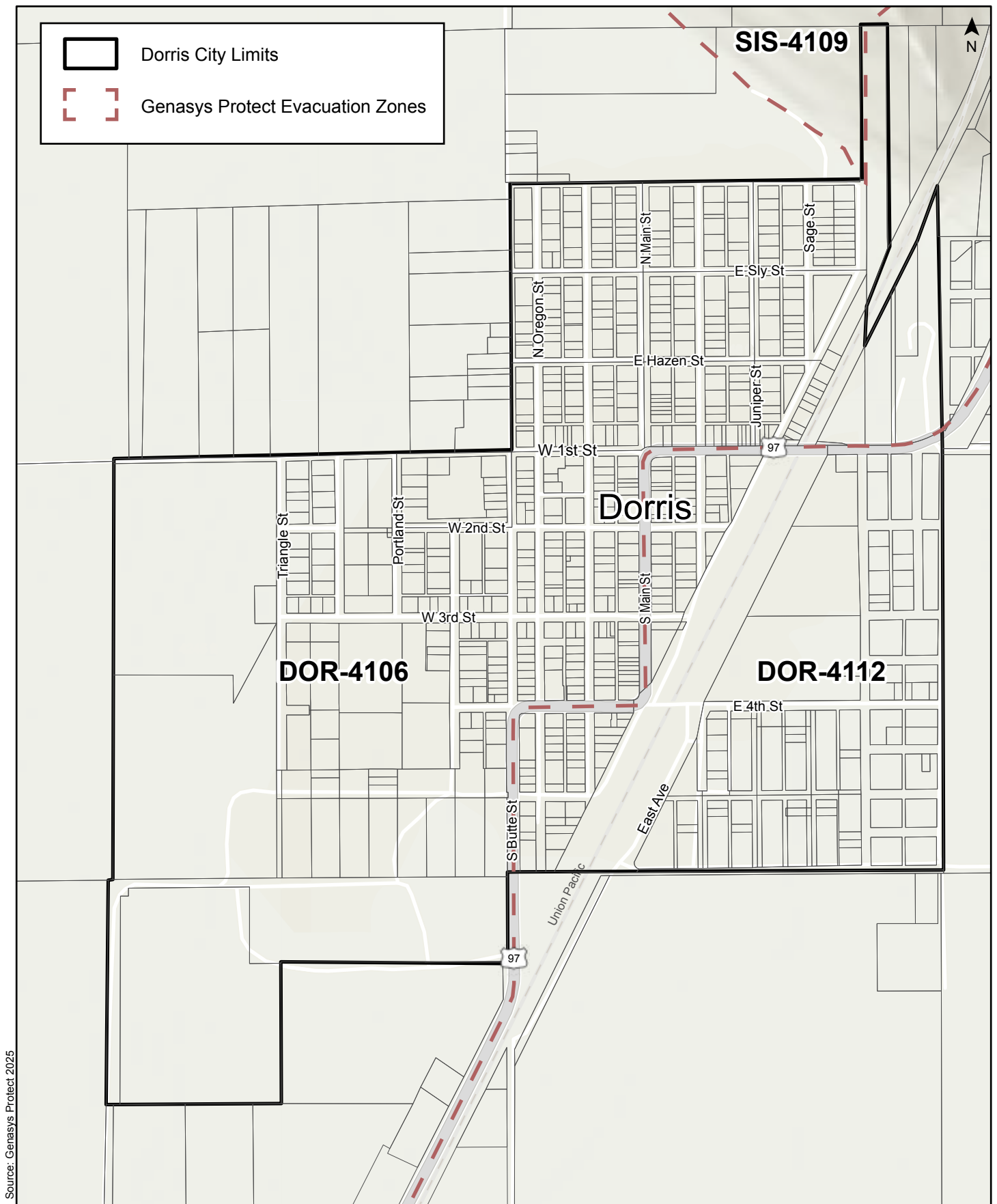
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Source: Genasys Protect 2025

Figure 7-1, Evacuation Zones

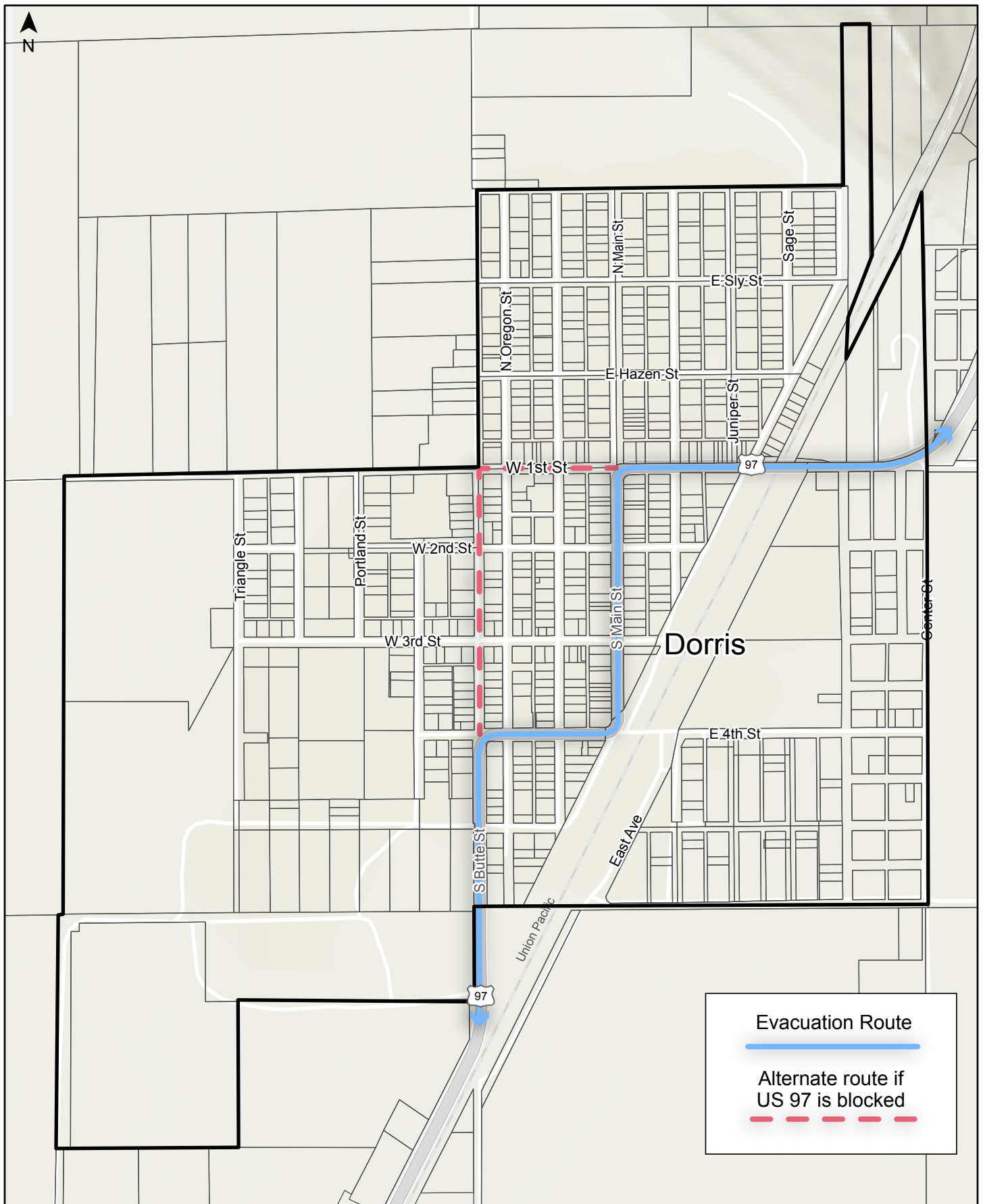


Figure 7-2, Evacuation Routes

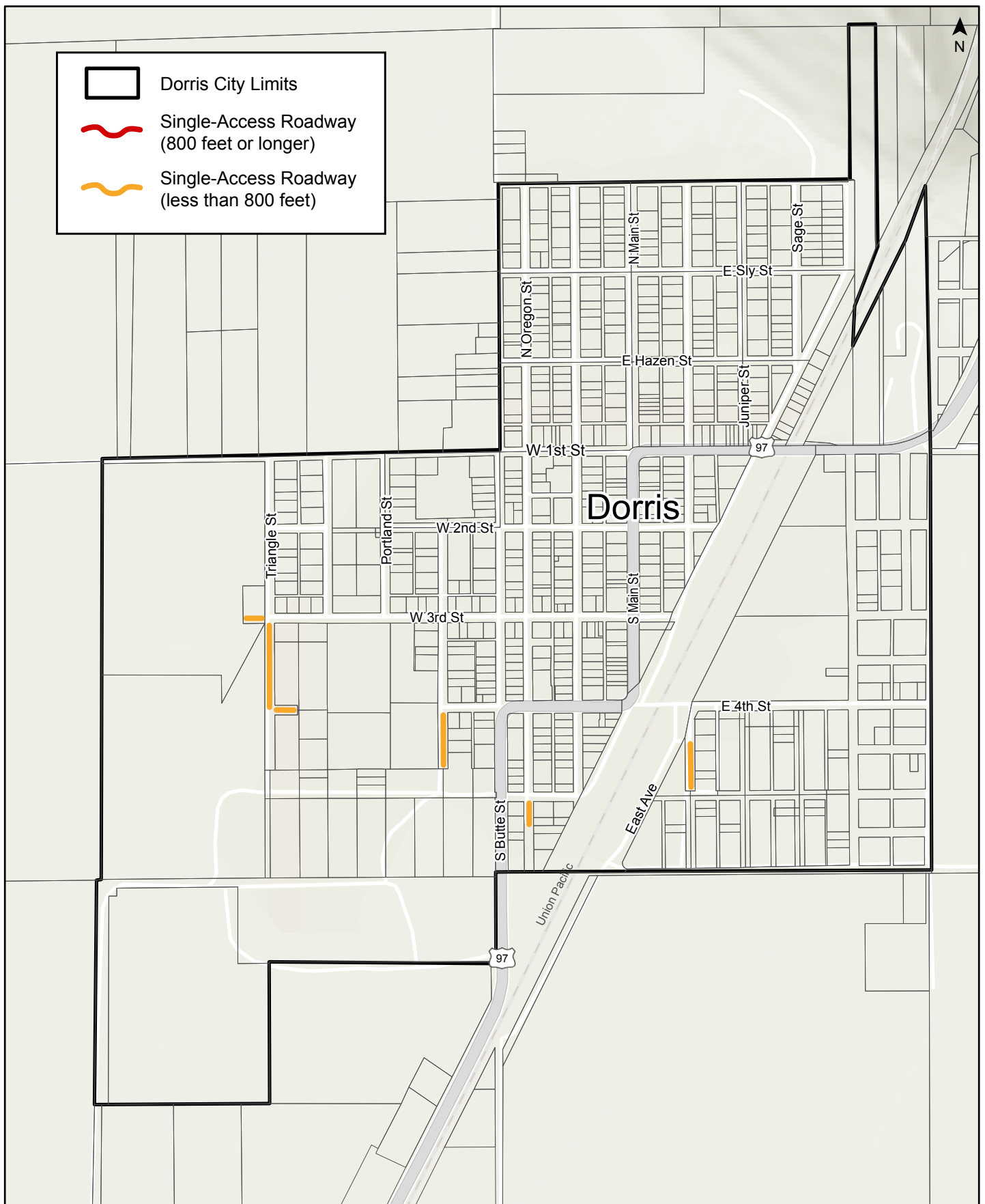
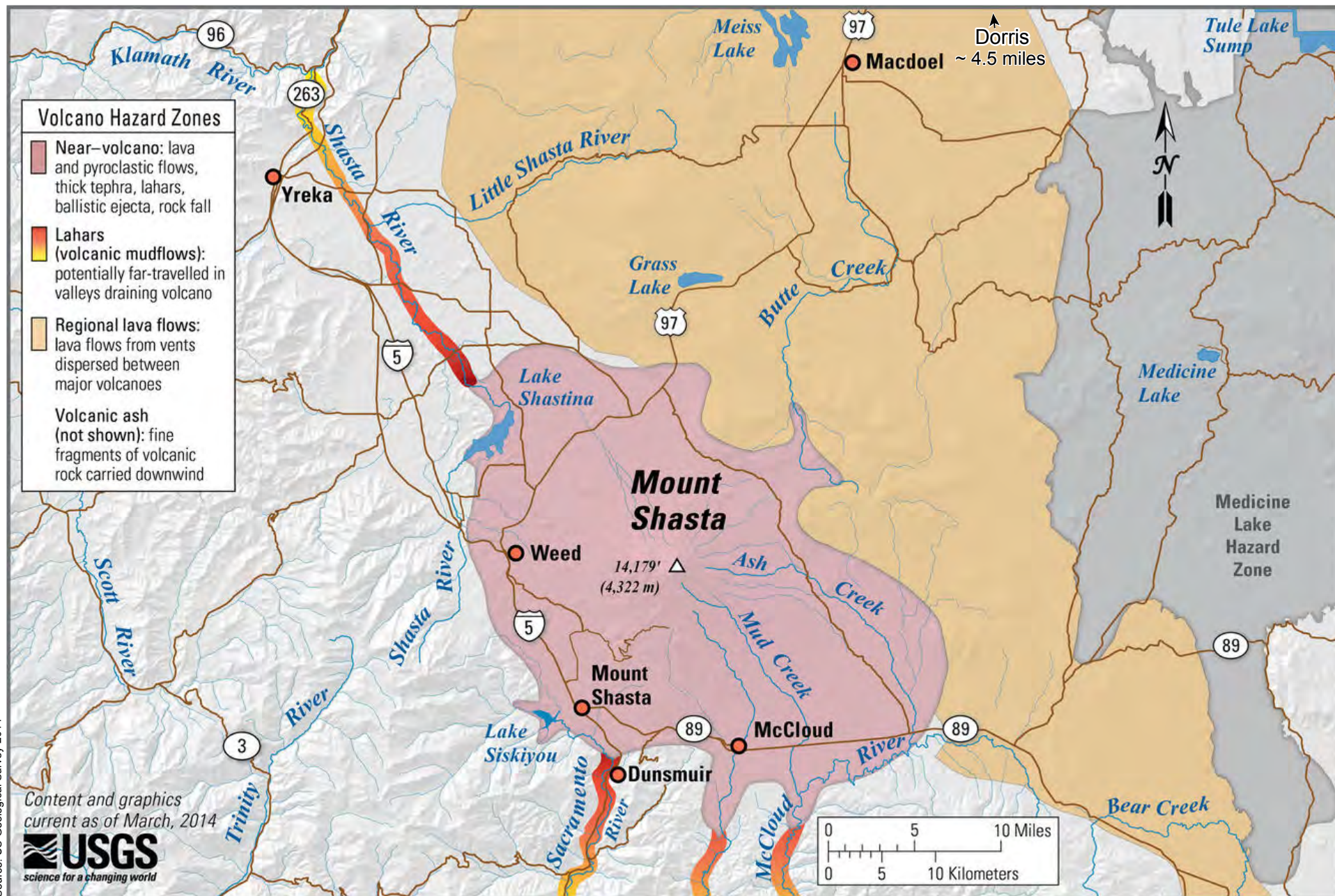


Figure 7-3, Single-Access Roadways



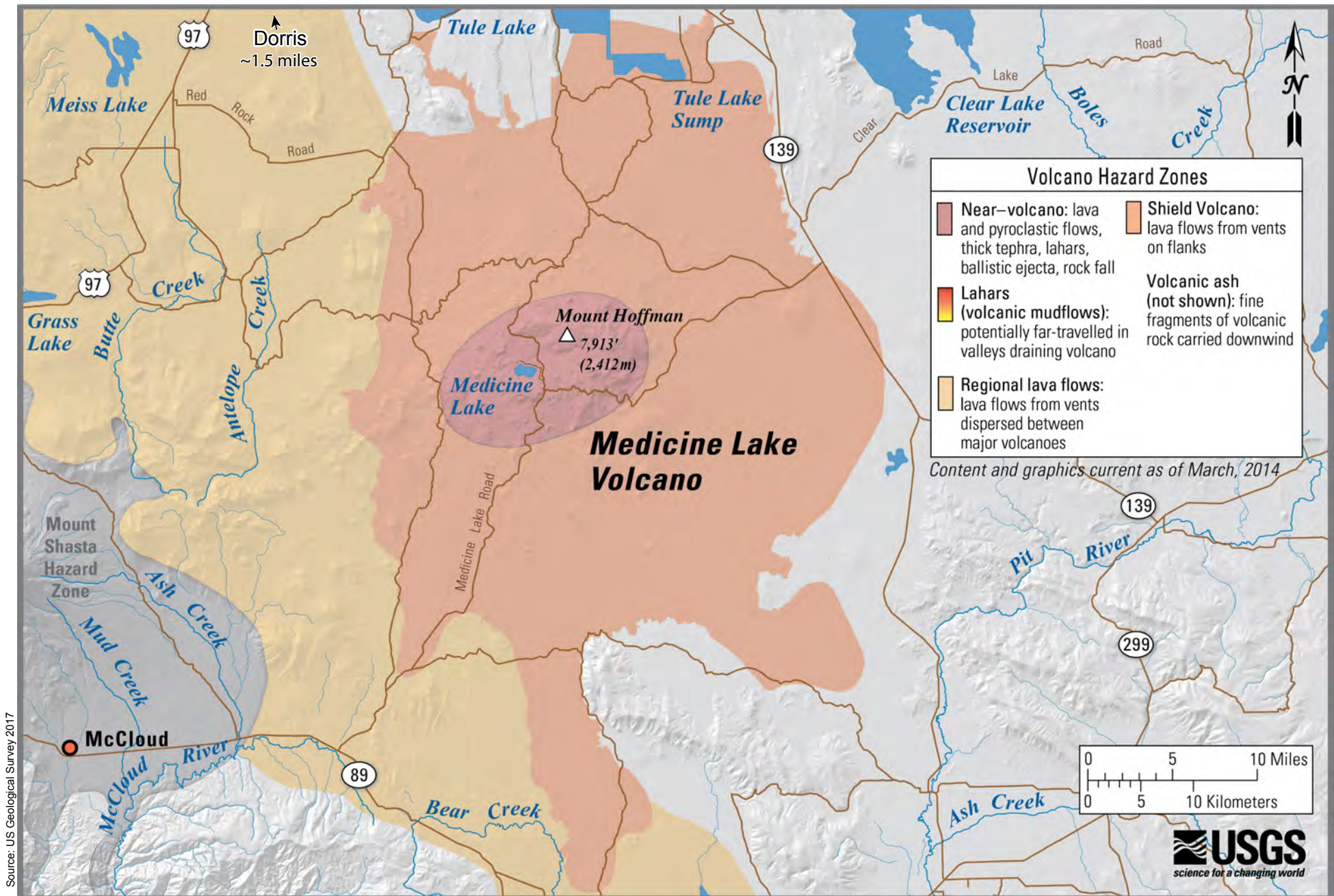


Figure 7-5, Medicine Lake Simplified Volcanic Hazards

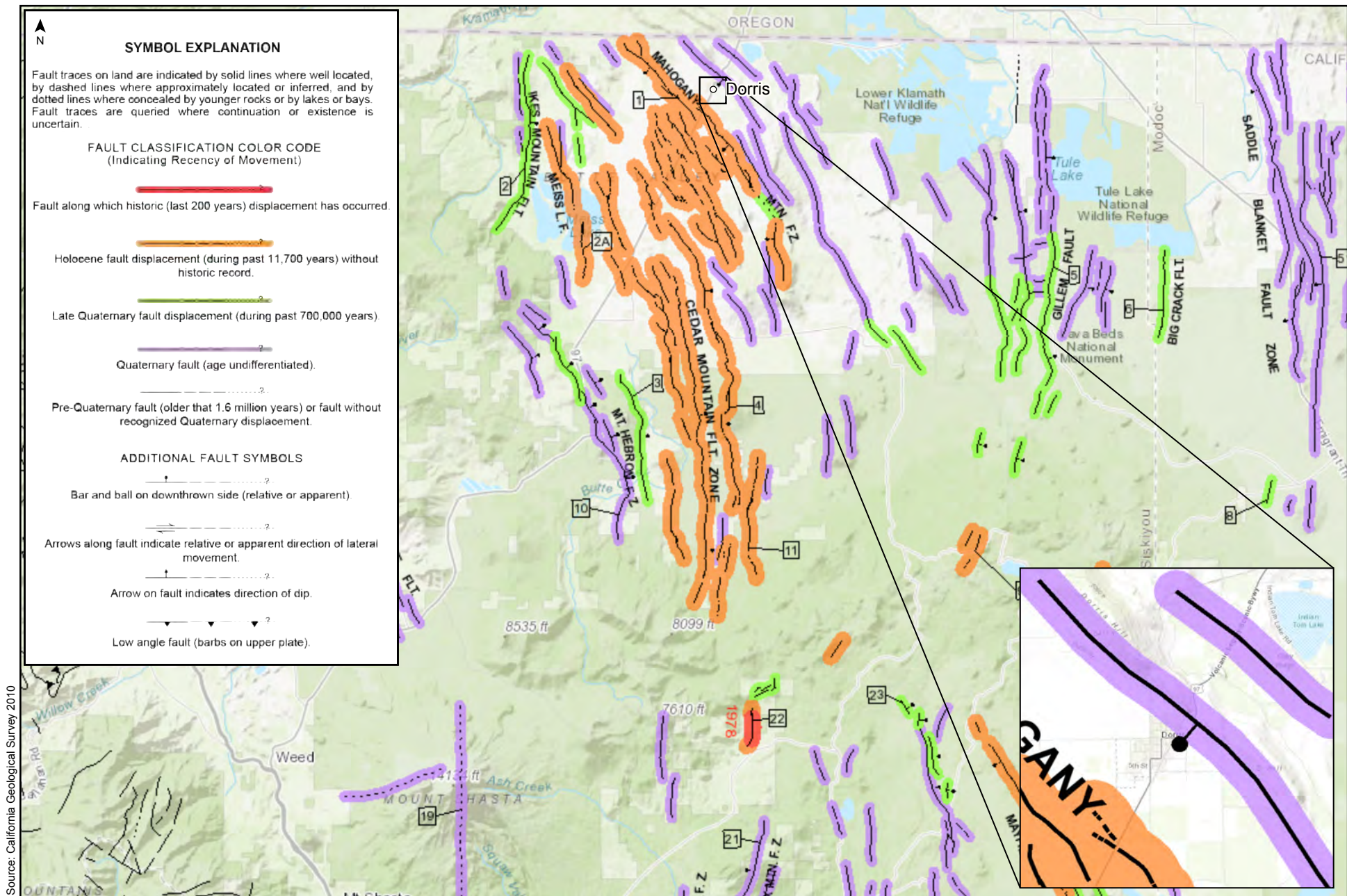


Figure 7-6, Fault Activity Map

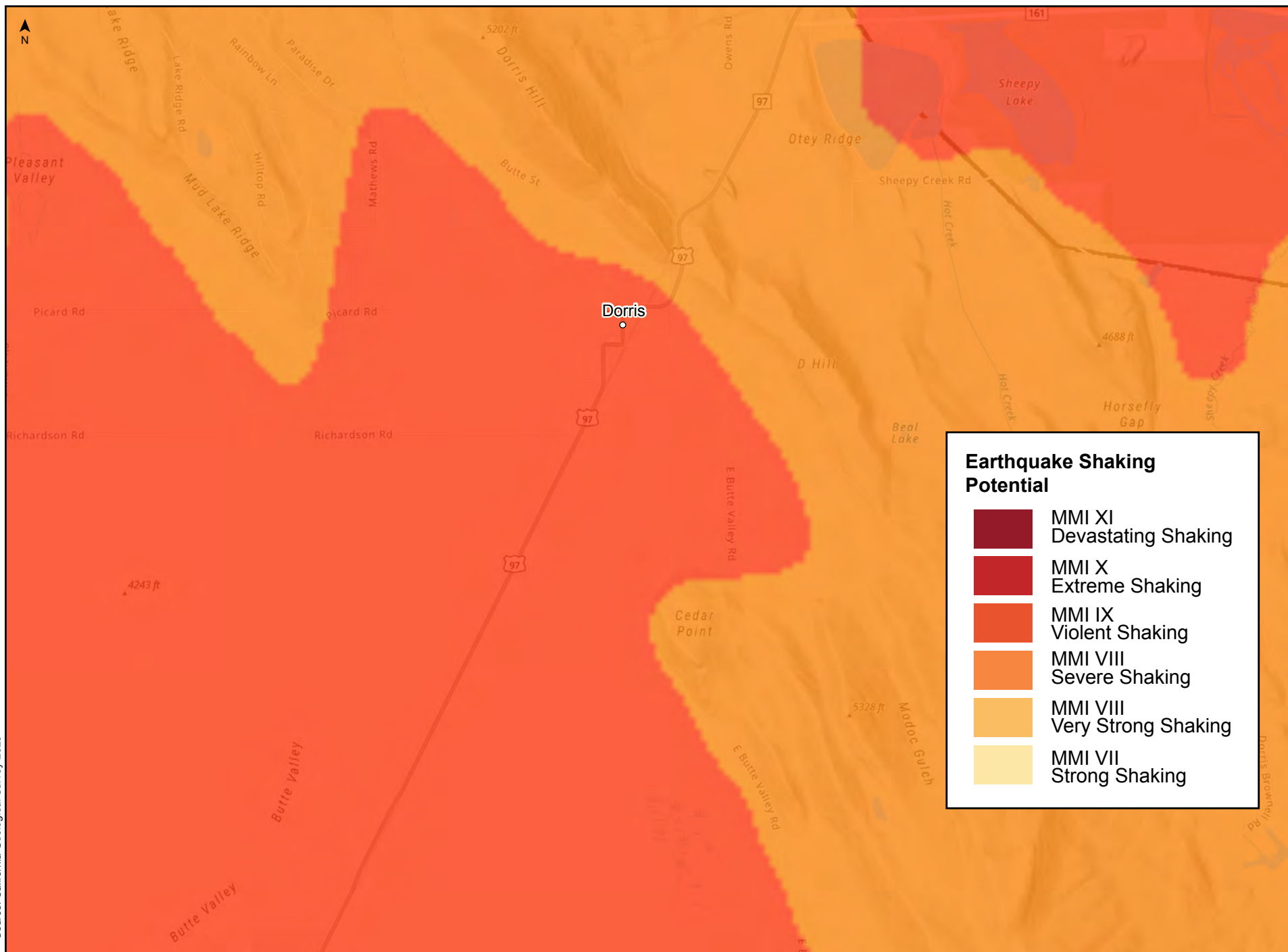
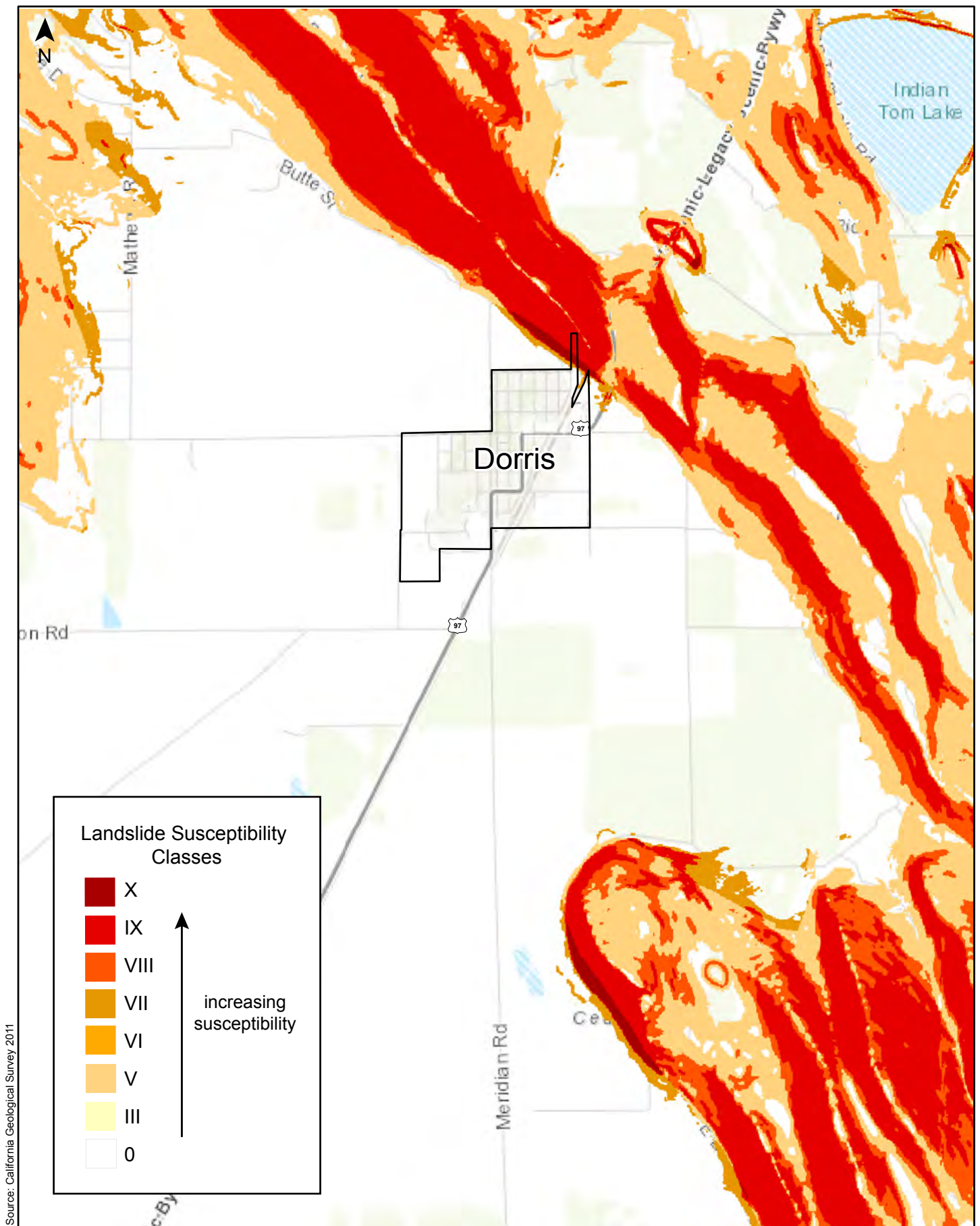


Figure 7-7, Earthquake Shaking Potential



Source: California Geological Survey 2011

Figure 7-8, Deep-Seated Landslide Susceptibility

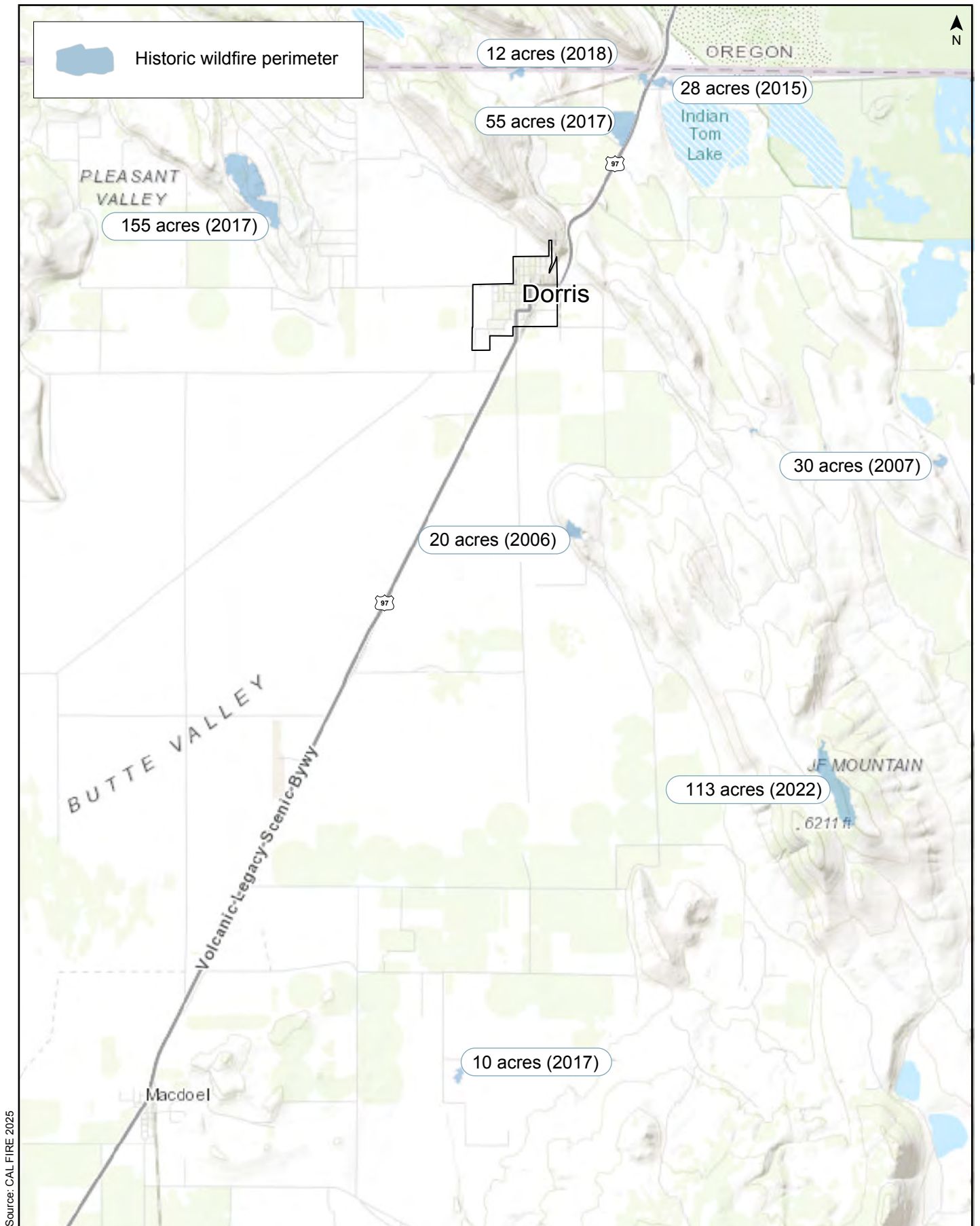


Figure 7-9, Historic Wildfire Perimeters

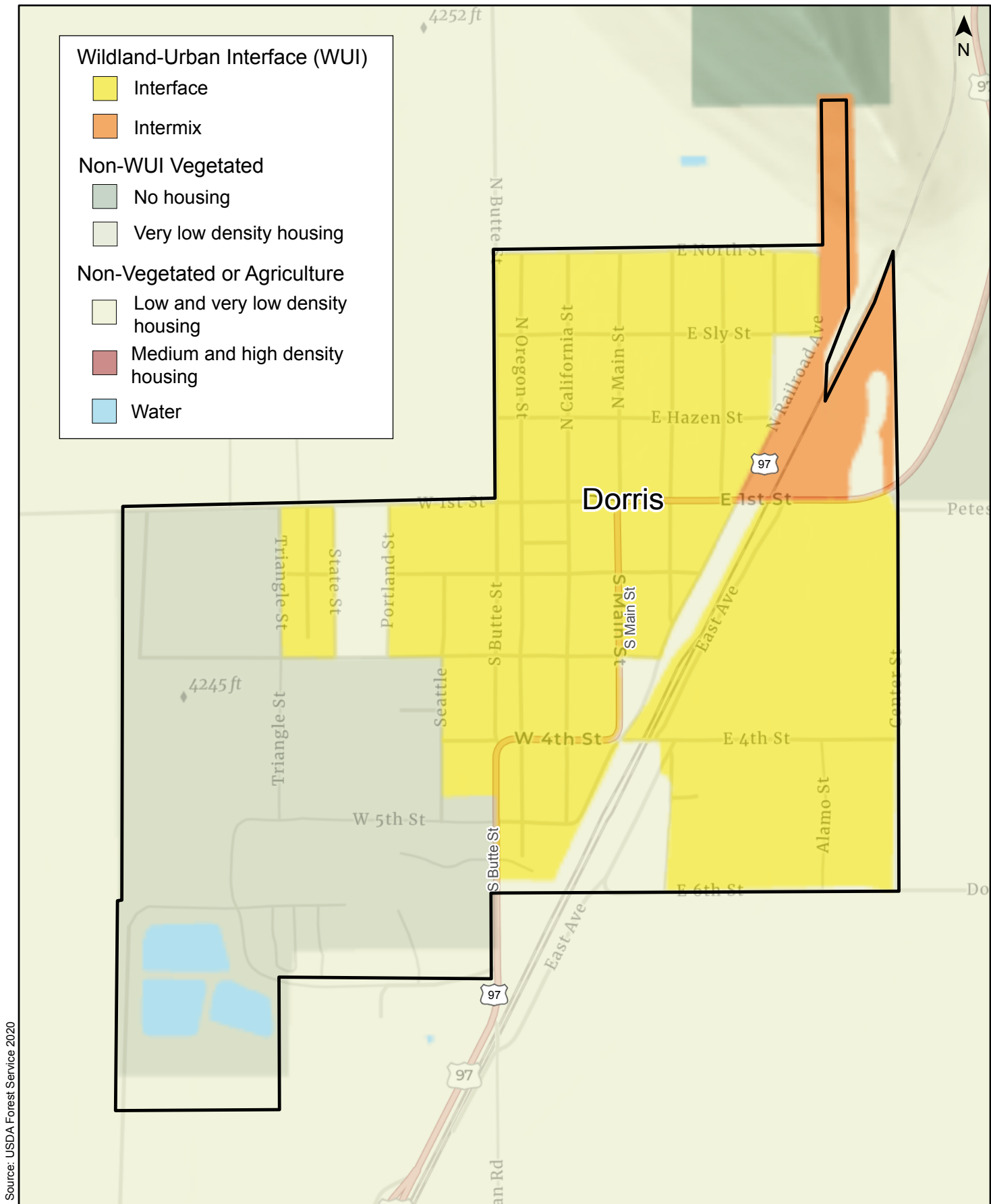


Figure 7-10, Wildland Urban Interface

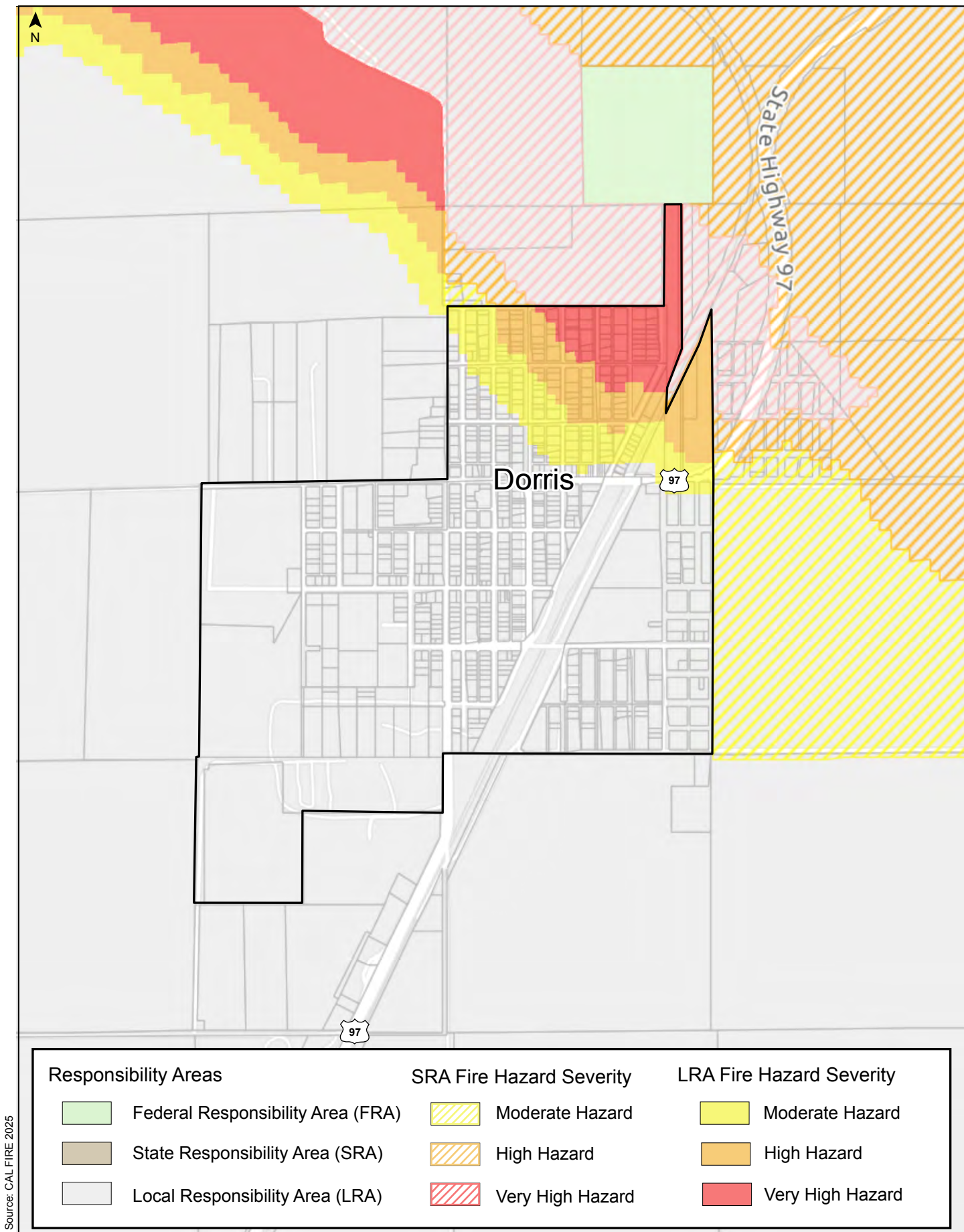


Figure 7-11, Wildfire Hazard Severity Zones

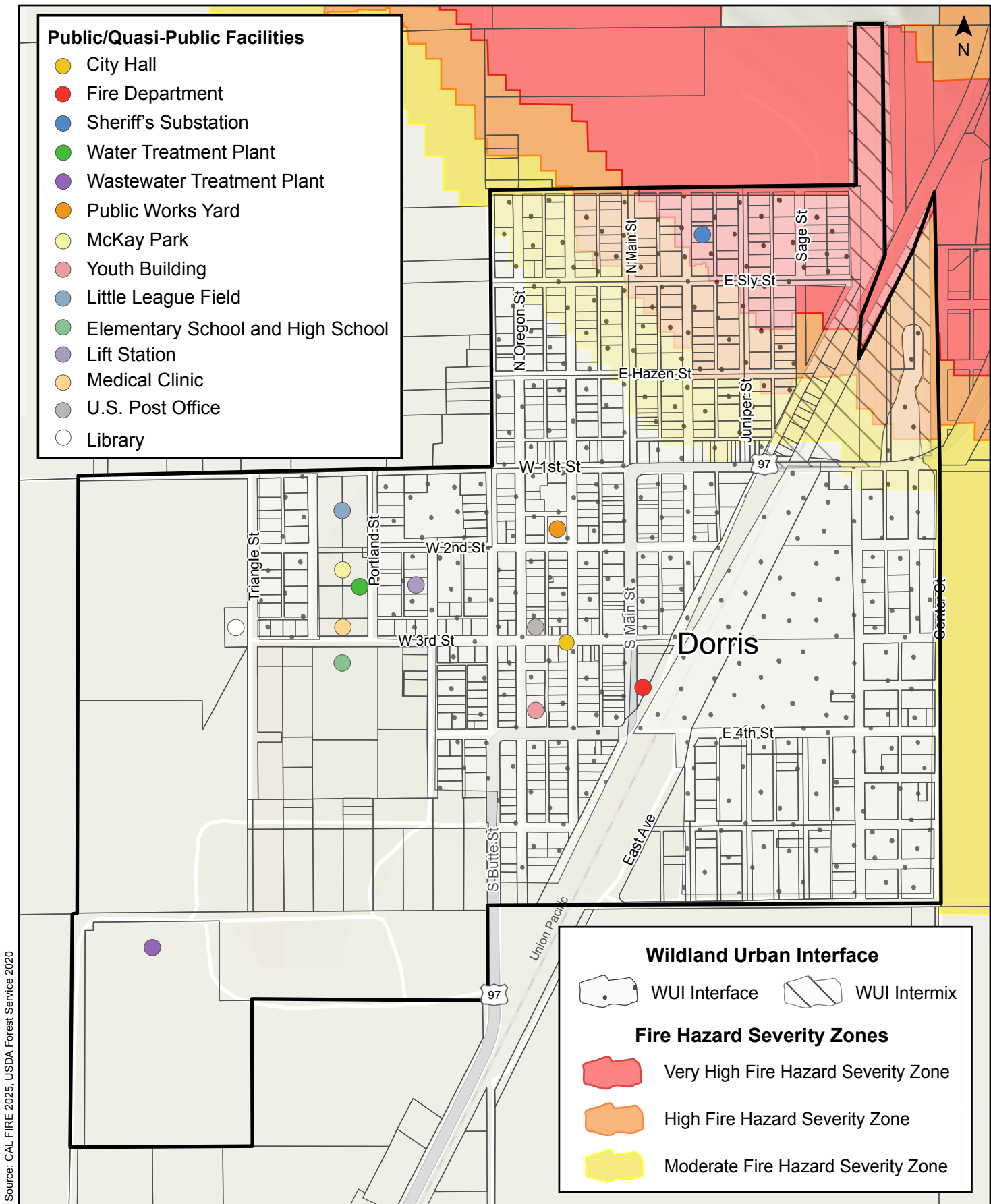


Figure 7-12, Public Facilities and Natural Hazards

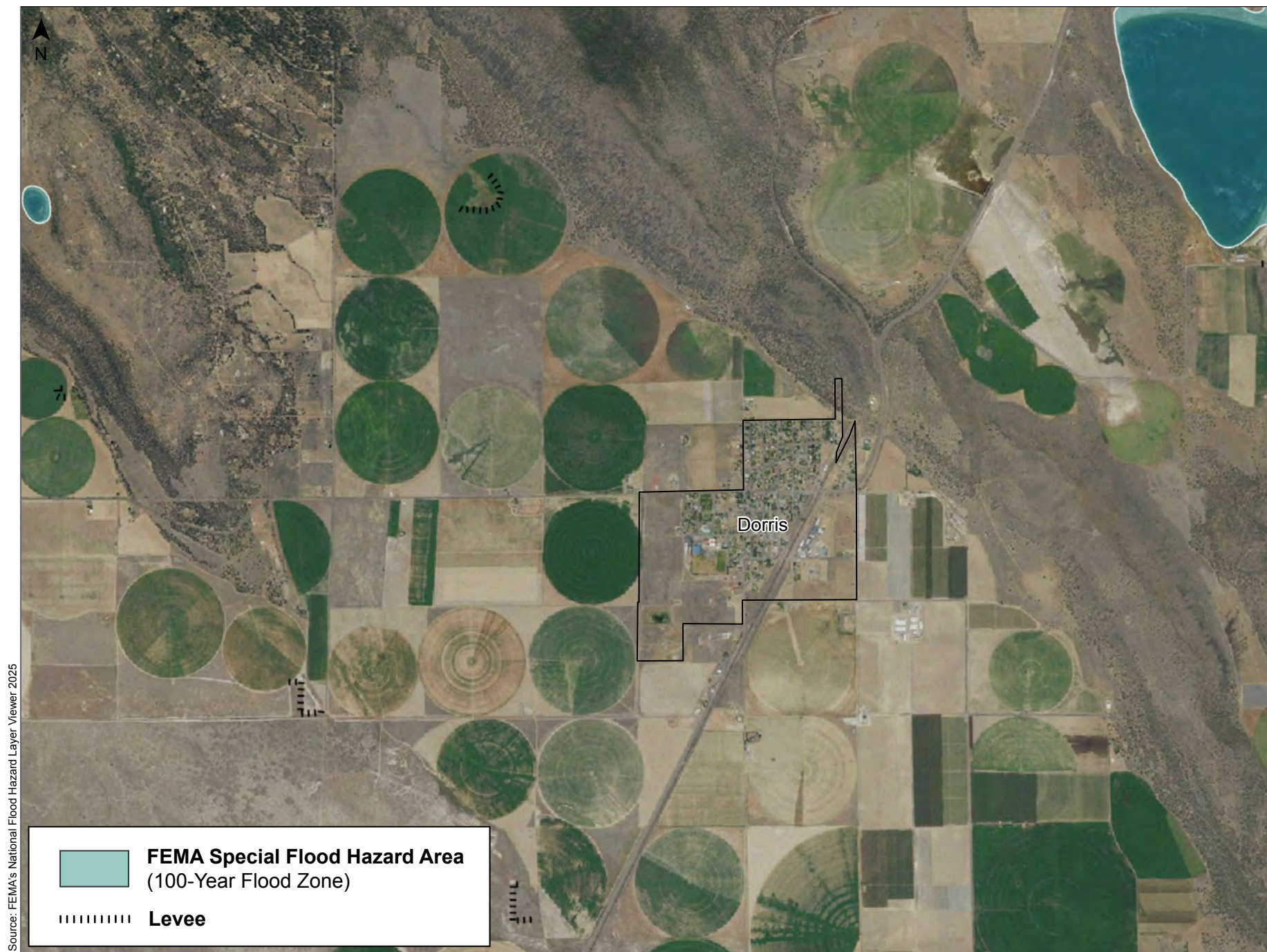


Figure 7-13, FEMA Flood Hazards

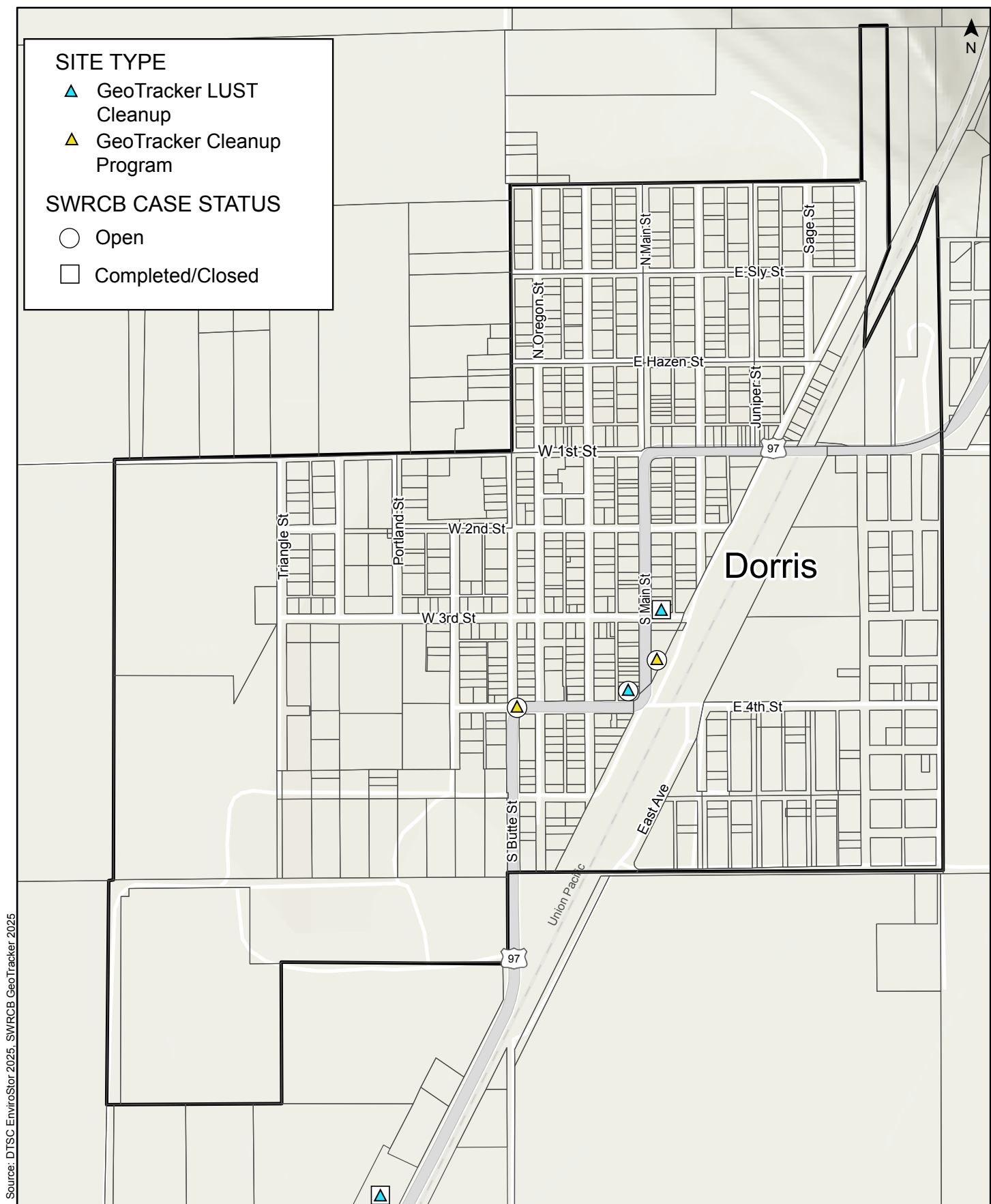


Figure 7-14, Hazardous Materials Cleanup Sites