

10 Truckee/Donner Forecast Zone

10.1 Forecast Zone Description

The Truckee/Donner Forecast Zone (FZ) includes the unincorporated communities in Eastern Nevada County, the Truckee Fire Protection District, and the Town of Truckee. This area is known for year-round recreation and tourism resources. The area blends community development, historic resources, and recreation within the forest landscape.



Tahoe Donner neighborhood in the Truckee/Donner FZ

10.1.1 Location

The Truckee/Donner Forecast Zone (FZ) covers 108,438 acres, making it the smallest FZ. It is bound on the west by the Tahoe National Forest (TNF) Area FZ, on the east by California-Nevada state line, on the north by Sierra County, and to the south by Placer County.

10.1.2 Land Ownership

The largest landowner in the Truckee/Donner FZ is the U.S. Forest Service which owns 48% of the total area. Within the Truckee/Donner FZ are the Tahoe National Forest and the Humbolt-Toiyabe National Forest. The second largest land ownership type is private land. Land ownership in the Truckee/Donner FZ is presented in Table 69.

Table 69. Land Ownership in the Truckee/Donner Forecast Zone

Land Ownership	Total Acreage	Percent
United States Forest Service	52,225	48%
Private Ownership	42,362	39%
Truckee Donner Land Trust	10,278	9%
The Nature Conservancy	1,189	1%
Truckee Tahoe Airport District	890	1%
California Department of Parks and Recreation	648	1%
United States Army Corps of Engineers	566	1%
California State Lands Commission	149	<1%
Truckee-Donner Recreation and Park District	119	<1%
California Department of Fish and Wildlife	12	<1%

Source: CAL FIRE 2024d.

10.2 Fire Hazard

10.2.1 Climate

During the summer months, from June through September, the Truckee/Donner Forecast Zone (FZ) experiences high temperatures ranging from 73°F to 82°F. Average winter temperatures, from November through March, average below 48°F. Rainfall is minimal in the summer months, from June through September, averaging about 0.25 inches. Average monthly precipitation, from October through May, ranges from as little to 0.9 inches to as much as 2.8 inches. The dominant wind direction is typically from the west from March through October, and from October through March, the wind direction is most often from the south. The average hourly wind speed in this FZ averages around 6 mph throughout the year (Weather Spark 2024c).

The climate of the Truckee/Donner FZ is influenced by being located at a higher elevation. These factors, especially regarding summer temperatures and winter precipitation, can influence potential fire behavior by influencing the availability of the snowpack and peak runoff at higher elevations, which affects the length of the plant's green stage, its consequential availability to burn, and thus potential fire behavior (SWCA 2024).

10.2.2 Terrain

The terrain in the Truckee/Donner FZ contains the most continuous areas of relatively flat terrain, with slopes at 0% to 8%, compared to the other FZs in Nevada County. While this flat terrain is also present throughout different areas of the FZ, it is notable that flat terrain has some overlap with where the wetland vegetation communities are located on the left portion of the FZ and where the northernmost herbaceous communities are next to Boca Reservoir and Prosser Creek Reservoir. Gently sloped areas are also prevalent throughout the FZ, ranging from 8% to 26%, and some areas have 26% to 46% slopes. Slopes that are 46% to 70% are concentrated in the western portion of the FZ, above and below the wetland vegetation communities, and in the easternmost part of the FZ from north to south along the Boca Ridge and within the Humbolt-Toiyabe National Forest area. The highest concentration of < 35-degree slopes are those located along the north-to-south areas along the Boca Ridge. Martis Creek Lake and Dry Lake are located east of Truckee, while Donner Lake resides between Donner and Truckee. Prosser Creek Reservoir is approximately 4 miles northeast of Truckee, and Boca Reservoir is 7 miles northeast of Truckee and approximately 3 miles northeast of Prosser Creek Reservoir.

10.2.3 Vegetation and Fuels

The dominant vegetation community in the Truckee/Donner FZ is conifer forest/woodland, followed by shrub communities. Common conifer species include Common species include ponderosa pine (*Pinus ponderosa*), white fir (*Abies concolor*), sugar pine (*Pinus lambertiana*), Jeffrey pine (*Pinus jeffreyi*), lodgepole pine (*Pinus contorta*), incense cedar (*Calocedrus decurrens*), and red fir (*Abies magnifica*). Associated hardwood species include willow (*Salix spp.*), quaking aspen (*Populus tremuloides*), and black cottonwood (*Populus trichocarpa*). Shrub communities are concentrated in the area above Donner Lake, Interstate 80, east of the Truckee area in the area north of Interstate 80 and around Prosser Creek Reservoir, and in the eastern portion of the FZ east of Boca Reservoir and along Boca Ridge. Herbaceous,

water, barren/other, and urban land covers are relatively similar in acreage, but their presence combined is less than half of the area covered by shrub communities. Wetlands and meadows are accounted for in the herbaceous community type. Table 70 displays all vegetation communities and their acreages, while Figure 5, Vegetation Communities, provides a visual display of these communities within the Truckee/Donner FZ and comparatively to the rest of Nevada County.

Table 70. Truckee/Donner Forecast Zone Vegetation Communities

Vegetation Community	Total Acreage	Percent
Conifer Forest/Woodland	67,063	62%
Shrub	25,872	24%
Herbaceous	4,969	5%
Water	3,523	3%
Barren/Other	3,361	3%
Urban	3,112	3%
Mixed Conifer/Hardwood	299	<1%
Hardwood Forest/Woodland	226	<1%
Agricultural	12	<1%

Source: USFS 2019a, 2019b.

10.2.4 Fire and Ignition History

Most wildfire acreage in the Truckee/Donner FZ appears to be concentrated toward the eastern edge of the FZ boundary (east of the Boca Hill and Boca Reservoir area) and in the middle of the FZ where Highway 89 crosses the north FZ boundary moving southwest. Similarly, most wildfire acreage appears to have burned before 1980, which is shown in Figure 29, Fire History – Truckee/Donner. The largest fires recorded in this area are the 1960 Donner Ridge Fire, which burned 19,165 acres in the eastern portion of the FZ, and two unnamed fires from 1959, which burned 8,806 acres combined in the middle portion of the FZ. The 2001 Martis Fire burned a total of 14,127 acres in the southeast corner of the FZ. From 2011 to 2023, less than 100 acres of wildfire area is recorded in this FZ. Similar to the TNF Area FZ, the Truckee/Donner FZ has not experienced much wildfire in the 2011 to 2023 range. Those numbers for Truckee/Donner FZ fire history per decade are reflected in Table 71, with recorded history dating back to 1908. Not accounted for in Table 71 are small fires not documented by CAL FIRE. For example, 44 small fires burned between 2021 and 2023, as identified in the Truckee Fire Protection District CWPP (SWCA 2024).

Table 71. Truckee/Donner FZ Fire History by Period

Years	Total Acreage	Number of Fires
<1980	46,693	36
1980–1990	295	1
1991–2000	1,389	4
2001–2010	6,009	7
2011–2020	82	1
2021–2023	12	1

Table 71. Truckee/Donner FZ Fire History by Period

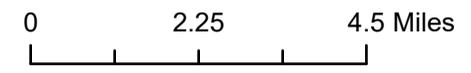
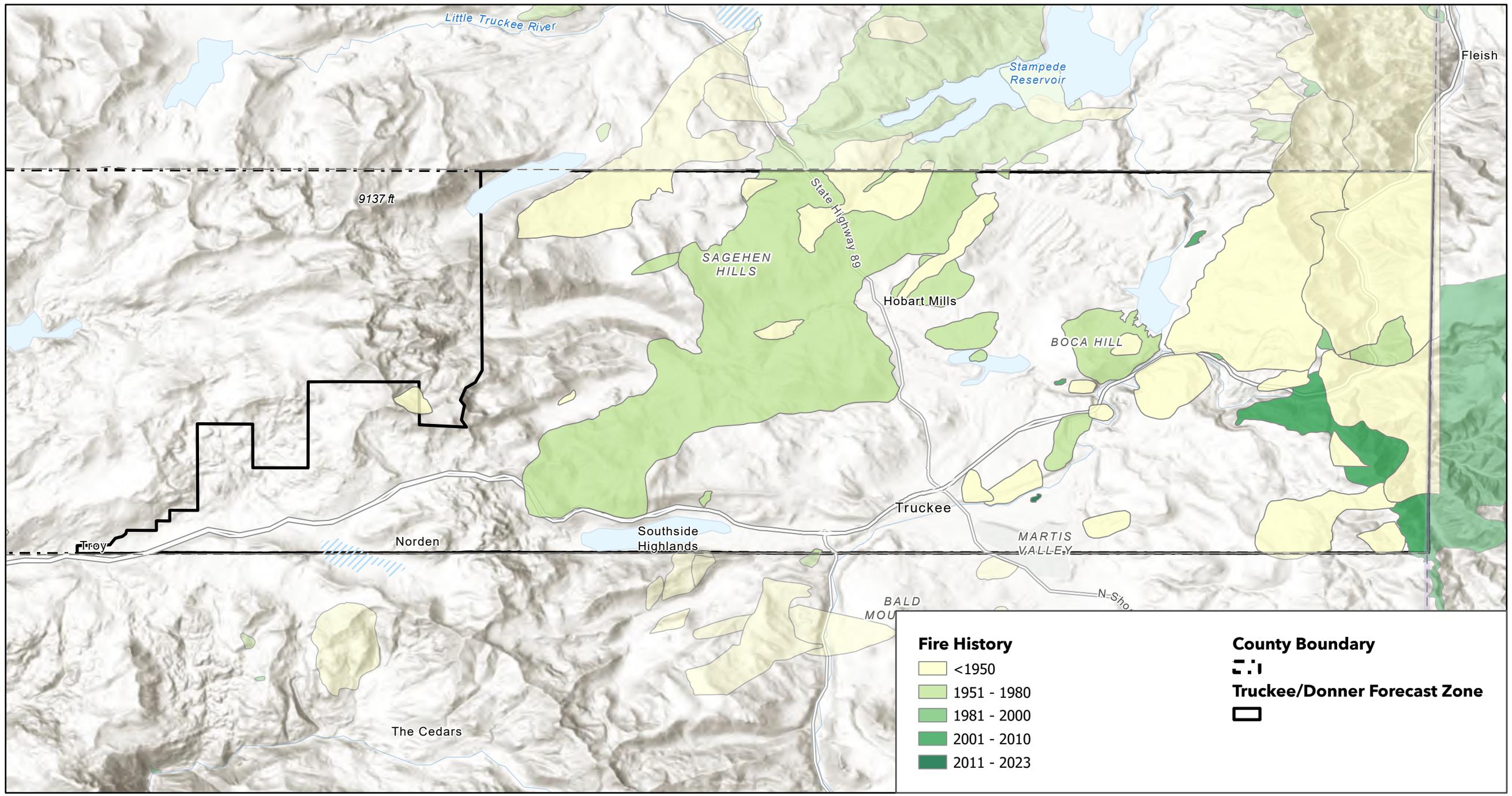
Years	Total Acreage	Number of Fires
Total:	54,480	50

Source: CAL FIRE 2024c.

Ignition History

Similar to previously discussed FZs, the highest concentration of ignitions tends to cluster around recreational areas. For the Truckee/Donner FZ, those areas are primarily around the lakes, reservoirs, and campgrounds, though it should be noted that Donner Lake does not have a high concentration of ignitions around it. Ignitions are also concentrated around Truckee and in the northeastern corner of the FZ, the latter perhaps being due to the steep elevation around Interstate 80 in the Humbolt-Toiyabe National Forest area (USGS 2022). Of note in this FZ are ignitions along Interstate 80 south of the Tahoe Donner community. The south-facing slope upward from Interstate 80 to the community poses a potential risk to the community should a fire start escape initial attack efforts. In comparison to other FZs, the Truckee/Donner FZ appears to have the least number of ignitions (Figure 30, Ignition History – Truckee/Donner FZ). This figure shows high ignition density east of Highway 89, whereas west of Highway 89 contains fewer ignitions. Some ignitions are around the WUI in this FZ. The WUI area is presented in Figure 31 (Wildland-Urban Interface – Truckee/Donner FZ) and the Defensible Space Area is presented in Figure 32 (Defensible Space – Truckee/Donner FZ).

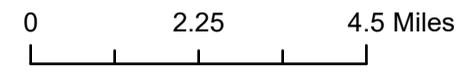
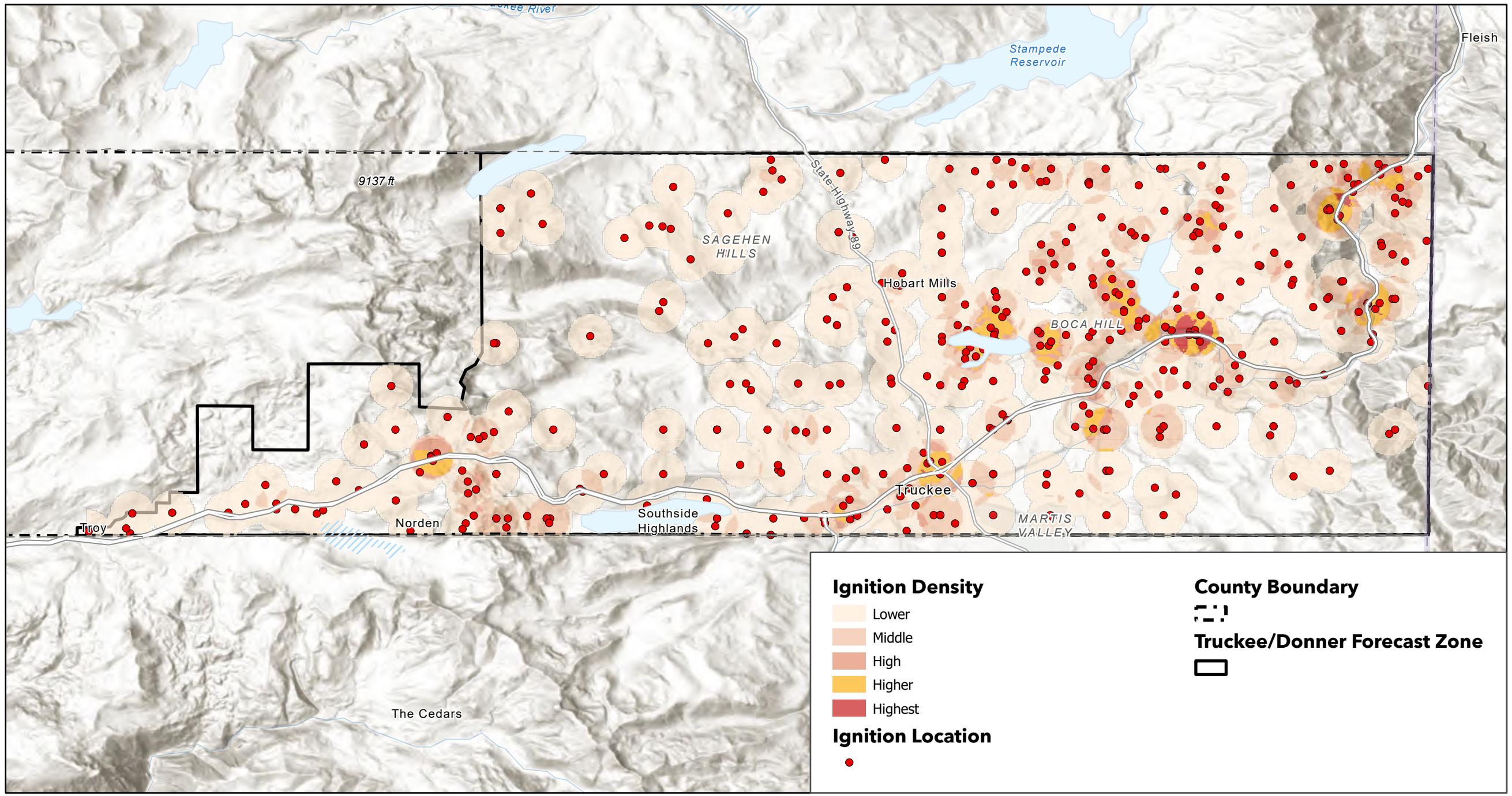
Figure 29 - Truckee/Donner Forecast Zone - Fire History



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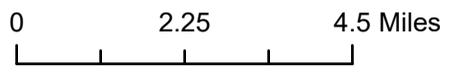
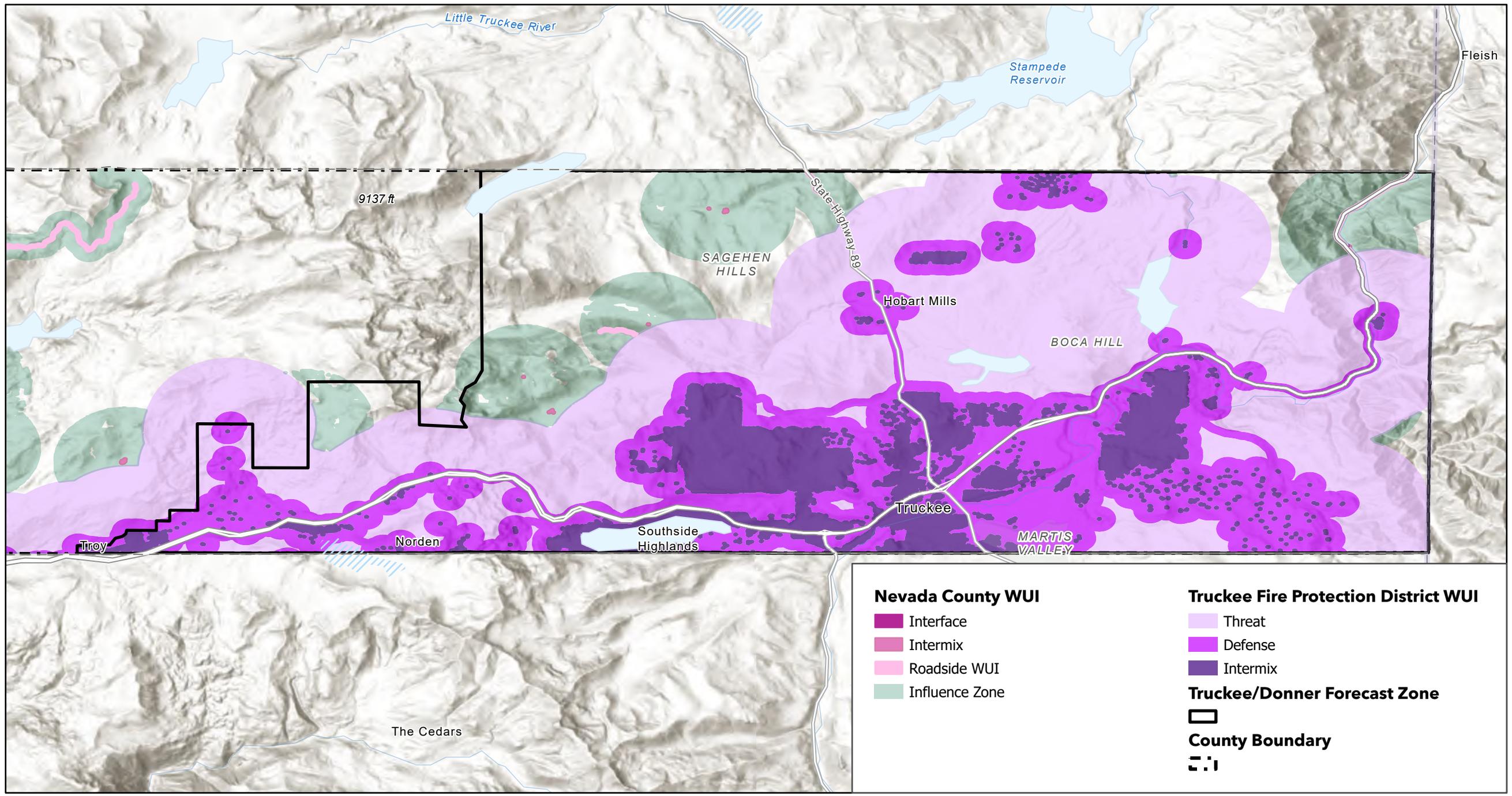
Figure 30 - Truckee/Donner Forecast Zone - Ignition History



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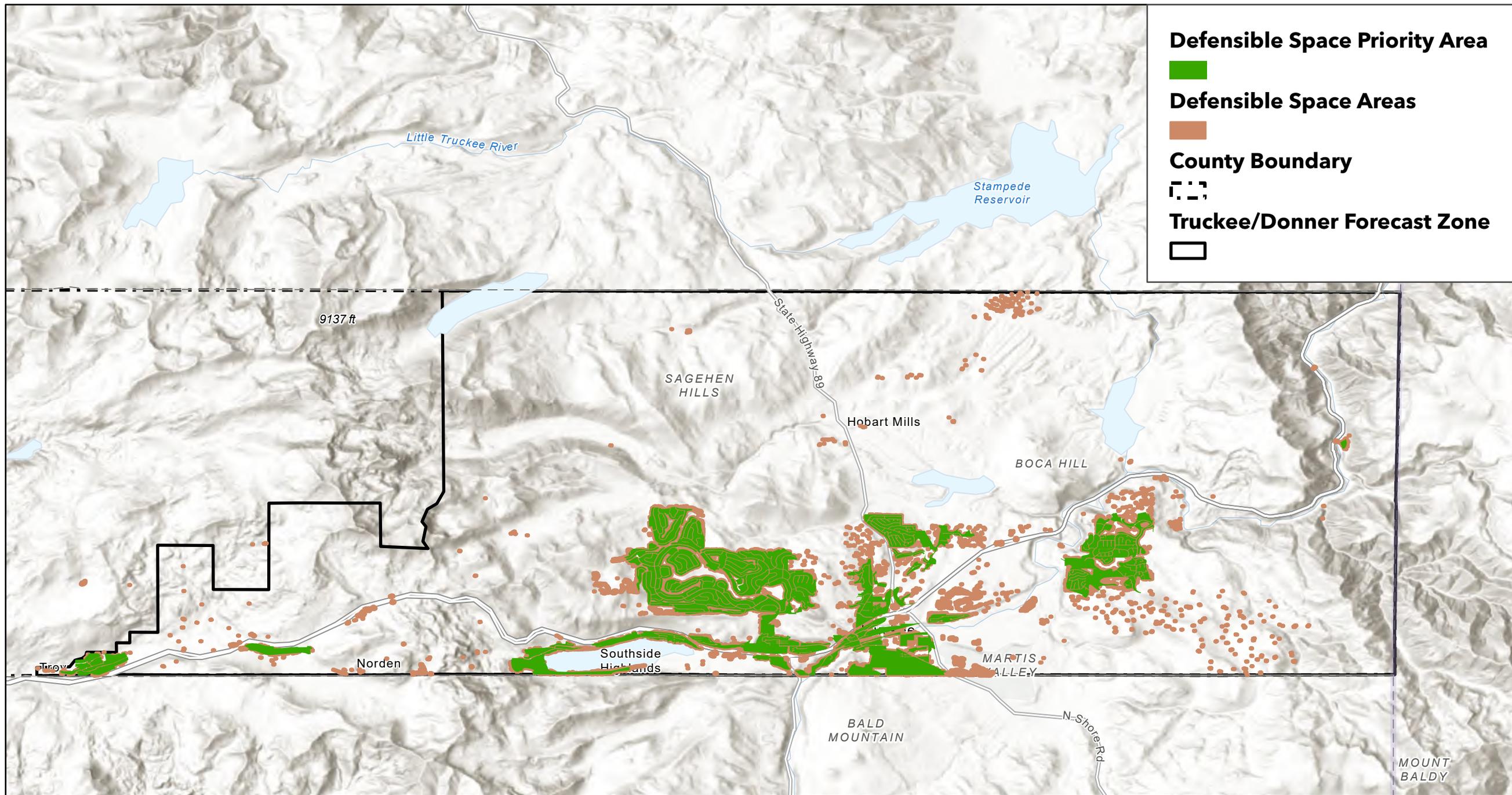
Figure 31 - Truckee/Donner Forecast Zone - Wildland-Urban Interface



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Figure 32 - Truckee/Donner Forecast Zone - Defensible Space Areas

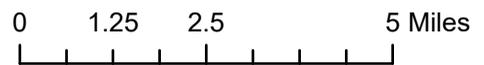


Defensible Space Priority Area

Defensible Space Areas

County Boundary

Truckee/Donner Forecast Zone



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10.3 High Value Resources and Assets at Risk

10.3.1 Community Lifelines

Community Lifelines are critical assets to a community and are the fundamental services of a community that enable all other aspects of society. Community Lifelines include:

- **Communities** include populated areas (e.g., Grass Valley, Truckee, North San Juan, Lake of the Pines, Washington) and assets within them (e.g., fire stations, schools, post offices, gas stations, and grocery stores).
- **Vulnerable Populations** include nursing homes, mobile home parks, homeless shelters, and low-income or disadvantaged communities.
- **Critical Water Infrastructure** includes canals, dams, public and private water storage, water or wastewater treatment sites, and areas likely on well or septic systems.
- **Critical Transportation Infrastructure** includes airports, bridges, highways, railroads, major County roads, and yearlong USFS roads.
- **Critical Power and Communication Infrastructure** includes communications sites, power plants, and major powerlines.

The HVRA list for Nevada County and an explanation of each HVRA is documented in Appendix E of the WRA (Appendix B, Wildfire Risk Assessment).

10.3.1.1 Communities

Truckee/Donner Forecast Zone (FZ) includes unincorporated communities and the incorporated Town of Truckee. In recent years, the community has grown with people moving to the FZ after 2020. This area also has higher proportions of second homeowners and short-term rentals compared to other areas of the County. Communities in the Truckee/Donner FZ are concentrated primarily along the Interstate 80 corridor. The remainder of the FZ consists of scattered, low-density development characterized by isolated buildings and significant distances from neighboring buildings. In and near Kingvale, Donner Lake, Truckee, Tahoe Donner, Glenshire-Devonshire, Floriston, and the Prosser Creek Reservoir area the building density (Jaffee et al. 2024) is high (approximately 500-1,000 buildings/km²). The building density is moderate (approximately 100-500 buildings/km²) in and near Soda Springs, Russel Valley, and the Prosser Creek Reservoir area. Finally, the building density is low (approximately 5-100 buildings/km²) in and near Towle Mountain, Juniper Hills and Martis Peak.



Residential areas in the Truckee/Donner FZ

Structure age in this FZ is predominantly older, with approximately 88% of construction occurring prior to 2007 (after which current California Building Code ignition-resistant construction requirements went into effect) (County of Nevada 2024c). Buildings are typically wood frame construction with wood siding. Outbuildings (barns, stables, utility buildings) are located on parcels throughout the FZ, especially in low-density areas where parcel sizes are greater.



Residential areas in the Truckee/Donner FZ

Communities defined as at risk from wildfire by the Office of the State Fire Marshal and/or CAL FIRE Nevada-Yuba-Placer Unit within the Truckee/Donner FZ are presented in Table 72.

Table 72. Office of the State Fire Marshal and CAL FIRE Communities at Risk in the Truckee/Donner Forecast Zone

Community Name	Incorporated Community
Armstrong Tract	No
Donner Memorial State Park	No
Floriston	No
Glenshire-Devonshire	No
Hirschdale	No
Hobart Mills	No
Kingvale	No
Norden	No
Ponderosa Palisades/Sierra Meadows	No
Prosser Lakeview Estates	No
Soda Springs	No
Summit Canyon (Old Highway 40)	No
Tahoe Donner	No
Town of Truckee	Yes
Truckee Tahoe Airport District	No

Source: OSFM 2024, CAL FIRE 2024e.

The FZ includes essential community services such as post offices, gas stations, grocery stores, schools, and fire stations. There are five post offices in the FZ two in Truckee, two in Norden, and one in Soda Springs. There are 13 gas stations and five grocery stores. Schools are an important community resource and service. Within the FZ are seven schools presented in Table 73.

Table 73. Truckee/Donner Forecast Zone Schools

Name	Address
Alder Creek Middle School	10931 Alder Drive
Truckee Elementary School	11911 Donner Pass Road
Tahoe Truckee High School	11725 Donner Pass Road
Glenshire Elementary School	52775 Donner Pass Road
Donner Trail Elementary School	52775 Donner Pass Road
Sierra Continuation High School	11661 Donner Pass Road
Sierra Community College	11001 College Trail

There are 10 fire stations in the Truckee/Donner FZ, and these are presented in Table 74.

Table 74. Truckee/Donner Forecast Zone Fire Stations

Name	Address
CAL FIRE Station 50 - Truckee	10277 Truckee Airport Road
TFPD Station 96 – Airport	10277 Truckee Airport Road
TFPD Station 93 – Donner Lake	15572 Donner Pass Road
TFPD Station 91 - Downtown	10049 Donner Pass Road
TFPD Station 92 – Gateway	11473 Donner Pass Road
TFPD Station 95 – Glenshire	10900 Manchester Drive
TFPD Station 97 – Soda Springs	53823 Sherritt Lane
TFPD Station 94 – Tahoe Donner	12986 Northwoods Blvd
TFPD Station 98 – Serene Lakes	7300 Short Road
USFS Truckee	10811 Stockrest Springs Road

Source: Nevada County 2024a

Note: TFPD = Truckee Fire Protection District and USFS = United States Forest Service.

10.3.1.2 Vulnerable Populations

Vulnerable populations are important to consider in wildfire planning as they are more likely to have less access to wildfire risk reduction resources and/or a harder time recovering from wildfires. The Truckee/Donner FZ includes mobile home communities along Donner Pass Road and Highway 89. These communities face challenges with wildfire due to the ignitable nature of their structures, limited home hardening resources, limited ability to complete defensible space, and evacuation challenges. Finally, the FZ includes communities that have been identified as low-income and/or disadvantaged by the State or Federal government.

10.3.1.3 Critical Water Infrastructure

Critical water infrastructure includes canals, dams, public and private water storage, water or wastewater treatment sites, and areas likely on well or septic systems all of which exist in the Truckee/Donner FZ. Canals exist in the FZ and provide communities, businesses, and landowners with water. There are 6 dams in the FZ located at Tahoe Donner, Euer Valley, Lake Angela, Donner Lake, Prosser Creek, Martis Creek, and Boca Reservoir. The Truckee/Donner FZ includes critical water storage for the FZ, the County, and the State. There are also over 103 public or private water storage resources including Prosser Lake and Boca Reservoir. Water treatment is an important part of the water infrastructure system there are two facilities within the FZ one in Soda Springs and one in Truckee. Finally, with TNF Area FZ there are communities that are more likely to only be on a well or septic system and have no access or potential access to public water systems.



Donner Lake

10.3.1.4 Critical Transportation Infrastructure

Transportation is a key component of communities. Transportation is important for ignition prevention, evacuations, and community recovery. In Nevada County, this includes airports, bridges, highways, railroads, major County roads, and yearlong USFS roads. In TNF Area FZ there are important critical transportation infrastructures both for the FZ but also for the County as a whole. The Truckee Tahoe Airport is the only airport in eastern Nevada County and includes firefighting resources for the region. There are 62 bridges in the FZ some of which provide critical crossings over rivers for vehicles such as the Truckee River. There are also communities such as Kingvale which depend on bridges to access their community. Within the FZ is Interstate 80 which is very important for the transportation of goods and resources and ingress/egress for the communities. This is a major transportation route not just for the FZ but also for the nation. Impacts to Interstate 80 such as closures have resulted in the Town running out of essential supplies such as gas and nationwide impacts to the supply chain. Highway 89 also bisects the FZ and connects it to Sierra County and the Tahoe Basin. There are major local roadways in the FZ such as Donner Pass Road, Old 40, Northwoods Boulevard, Prosser Dam Road, Old Reno Road, Boca Road, and Glenshire Drive. Local roads are often primary ingress/egress routes for communities connecting them to essential services and to larger transportation infrastructure such as highways. Additionally, there are year-round USFS roads throughout the FZ. Within Truckee/Donner FZ is a portion of the Union Pacific Railroad which provides passenger rail travel and transportation of goods and resources across the nation. Finally, within the FZ are Community Evacuation Projects that were identified as priorities for evacuation improvement by communities in the 2024 Evacuation Study Appendix A.

10.3.1.5 Critical Power and Communication Infrastructure

Power and communication infrastructure play important roles in wildfires. Power infrastructure can be an ignition risk but also a critical component of community recovery. Communication infrastructure is crucial for wildfire response allowing first responders to communicate in wildfire events, emergency alerts to be disseminated, and more. Powerlines exist all across the FZ providing electricity to residents and businesses as well as major high-voltage powerlines transportation corridors. Truckee gets power from Pacific Gas & Electric, Tahoe Donner Public Utility District, and Liberty Utilities providers. Transmission line power in Truckee is provided by Pacific Gas & Electric and NV Energy. There are no active power plants in the FZ. Finally, there are over 223 communication sites within the FZ. These sites include radio towers (public and private), emergency communication sites, cellular communication towers, and microwave transmission sites.



Transmission line corridor in the Truckee/Donner FZ

10.3.2 Community Health

Community health focuses on factors that impact the overall health of a community and potentially could result in secondary impacts from a wildfire that impede community recovery. Community Health includes the following:

- **Wildfire Smoke Emission Potential** are areas identified by the U.S. Forest Service as having a high potential for emitting harmful levels of PM 2.5 if burned.
- **Soil Vulnerability** refers to soils in the County that are more likely to be subject to post-fire mass wasting events such as hydraulic mine scars.
- **Listed Hazardous Waste** are sites that are currently listed hazardous waste sites.
- **Hospitals and Sheltering Facilities** which include local hospitals, schools, community centers, veteran halls etc.
- **Solid Waste Management Facilities**

The HVRA list for Nevada County and an explanation of each HVRA is documented in Appendix E of the WRA (Appendix B, Wildfire Risk Assessment).

10.3.2.1 Wildfire Smoke Emission Potential

Wildfire Smoke Emission Potential refers to areas that were identified the U.S. Forest Service as having a high potential for emitting harmful levels of PM 2.5 if burned in a wildfire. PM 2.5 is one of the air pollutants in wildfire smoke that can be harmful to communities. If these areas burn they not only have the potential to negatively impact the Truckee/Donner FZ but also adjacent communities and areas outside the County. Within the FZ there are 77,049 acres classified as having a high potential for emitting harmful levels of wildfire smoke.

10.3.2.2 Soil Vulnerability

Soil Vulnerability refers to soils in Nevada County that are more likely to be subject to post-fire erosion due to either their natural composition or human activities (i.e., hydraulic mining). Mass wasting events after a wildfire can be devastating. They can affect the community that burned or the community that is located downslope of the burn scar. Fire scars are regularly monitored for these types of events because of the potential impacts on communities. In Truckee/Donner FZ there are no historic hydraulic mines but there are 44,893 acres within the FZ naturally more vulnerable to landslide events.

10.3.2.3 Listed Hazardous Waste Sites

Hazardous waste sites can present challenges to community health if burned. They can emit toxic fumes and impede recovery efforts by requiring more stringent clean-up processes due to site contamination. Currently, there are 8 known hazardous waste clean-up sites in the Truckee/Donner FZ.

10.3.2.4 Hospital and Sheltering Facilities

Hospital and sheltering facilities are included in Community Lifelines as components of communities. However, they also serve to support Community Health. They support secondary impacts from fire such as smoke impacts, sheltering sites, recovery centers, resource support, and more. These sites are often already within the community service as other functions such as schools, libraries, community centers, or churches. Within the Truckee/Donner FZ is the second hospital in Nevada County Tahoe Forest Hospital. As previously mentioned, there are seven schools in the Truckee/Donner FZ. Other resources within the FZ that have been used to support emergency preparedness are the Truckee Veterans Hall, Truckee Rodeo Grounds, and the Truckee Donner Recreation Center.

10.3.2.5 Solid Waste Management Facilities

As with the other HVRA in Community Health Solid Waste Management facilities are important to consider from a prevention and recovery perspective. Like hazardous waste sites, these facilities can present complications if burned related to contamination. There are four formerly active solid waste sites in the Truckee/Donner FZ.

10.3.3 Natural Resources

In Nevada County, natural resources are both high-value resources that can be impacted by a wildfire and a wildfire hazard. The majority of vegetation has adapted in one way or another to exist in a fire-prone environment. However, historical management decisions and fire suppression have resulted in many of the natural resources in Nevada County being overloaded with fuel and presenting a fire hazard. Nevada County is also home to an abundance of natural resources that offer recreational amenities, significant species habitat, and support for watersheds. Further, the community has a very strong identity tied to many of these natural resources, such as the South Yuba River. The Natural Resources Primary-HVRA includes the following:

- **Outdoor Recreation Resources** which include recreation areas such as public parks, trails, campsites, seasonal roads, ski resorts, and the Tahoe National Forest.

- **Watersheds**
- **Significant Species**
- **Oak Woodlands**
- **Areas of High Climate Change Resilience** are areas identified by the State as being more likely to survive the impacts of climate change (Thorne et al. 2016).

The HVRA list for Nevada County and an explanation of each HVRA is documented in Appendix E of the WRA (Appendix B, Wildfire Risk Assessment).

10.3.3.1 Outdoor Recreation Resources

Outdoor Recreation Resources are important to Nevada County from multiple perspectives especially considering their often-hazardous fuel conditions and community value. They include things like public parks, trails, and campsites. There are communities within Truckee/Donner FZ that are considered high-amenity high resources and were created specifically to access recreation resources in the region. There are several outdoor recreation resources like ski resorts, campgrounds, and trails in TNF Area FZ. There are six ski resorts in the FZ and while they are a winter recreation resource they also have a nexus with wildfire and vegetation management. Campgrounds in the FZ are mostly within the Tahoe National Forest as well as in Donner Memorial Park and some private campgrounds. Trails are all across the FZ such as trails in Tahoe Donner, Donner State Memorial Park, Overland Emigrant Trail, Legacy Trail, Pacific Crest Trail, Perimeter Trial, and numerous trails within the Tahoe National Forest. There are 10 parks in the FZ including Truckee Donner Recreation and Park District parks, Donner State Memorial Park, Martis Creek Lake National Recreation Area, and parks within communities. There are 184 seasonal U.S. Forest Service Roads in the FZ. Finally, Truckee/Donner FZ includes both the Tahoe National Forest and the Humboldt-Toiyabe National Forest.

10.3.3.2 Watersheds

Watersheds include public water bodies, wetlands, Clean Water Act 303(d) listed water bodies, and rivers/streams/creeks. These resources are critical in supporting our environment and the community. There are 94 public water bodies in the Truckee/Donner FZ. There are 2,473 acres of wetlands that are scattered throughout the FZ. One water body, Donner Lake, in the FZ is on the Clean Water Act 303(d) list, meaning it is impaired for one or more constituents. Finally, there are 786 miles of rivers, streams, and creeks in the Truckee/Donner FZ.

10.3.3.3 Significant Species

At the time of this CWPP, there are 17,787 acres of known critical habitats identified in the Truckee/Donner FZ. However, critical habitat and the presence of significant species regularly change. Further, critical habitat data is only publicly available for animal species and does not include botanical species. This means that biological and botanical surveys are very likely to still be required for risk reduction activities.

10.3.3.4 Oak Woodlands

There are no Oak Woodlands in Truckee/Donner FZ.

10.3.3.5 Areas of High Climate Change Resilience

There are 67,361 acres of Areas of High Climate Change Resilience (Thorne et al. 2016) in the Truckee/Donner FZ. These are acres identified by the State as having a higher likelihood of being resilient to climate change impacts.

10.3.4 Economic Resources

An important component of wildfire resilience is economic resources. Communities not only need to be able to physically survive a wildfire, but they also need to be able to have their economic infrastructure in place so that the community can recover after a wildfire. In California, wildfire has significantly impacted economic resources, impairing the community's ability to recover. This is seen in Paradise, after the Camp Fire, and in rural communities, such as Greenville, after the Dixie Fire. Therefore, it is important to include Economic Resources as a Primary-HVRA in the WRA. In Nevada County, many economic resources also double as natural resources, as the economy is tourist-driven and focused on outdoor recreation. The Economic Resources Primary-HVRA includes the following Sub-HVRAs:

- **Recreation**
- **Historic and Cultural Districts**
- **Government Buildings**

It is important to note that the main driver of the economy in Nevada County is tourism, especially recreation-based tourism directly tied to the natural environment. This means that the County's main economic resource is the environment itself. Therefore, it is not possible to separate Economic Resources in a meaningful way, as they are components of all the HVRAs. Further, as a result, Economic Resources HVRA is very vulnerable to wildfire given that any impact on the other identified HVRAs also has the potential to impact the Economic Resources in Nevada County. For these reasons, the results from the Economic Resources risk assessments are not further analyzed in the WRA beyond the County-scale discussion of the risk assessments, and the information below is provided for community context.

The HVRA list for Nevada County and an explanation of each HVRA is documented in Appendix E of the WRA (Appendix B, Wildfire Risk Assessment).

10.3.4.1 Recreation

Recreation resources include the previously described Outdoor Recreation Resources in Section 10.3.3.1. These resources are not only components of the environment/Natural Resources in Nevada County but function as a crucial element in Nevada County's economy.

10.3.4.2 Historic and Cultural Districts

Downtown Truckee is a popular tourist destination and is a Cultural District.

10.3.4.3 Government Buildings

While government facilities were included in Community Lifelines they were specified in Economic Resource since the largest employer in the County is government (local, state, and federal). In Truckee/Donner FZ there are 82 government buildings within the Truckee/Donner FZ.

10.4 Risk Assessment Results Summary

In the Truckee/Donner Forecast Zone (FZ) 16% of pixels are classified as Non-Burnable¹⁷ and between 1% and 2% classified as Burnable but not Burned¹⁸. No Impact¹⁹ percentage ranges from 5% to 51%.

In the Truckee/Donner Forecast Zone (FZ), communities tend to occur in clusters throughout the FZ. These clusters tend to be west of Donner Summit, within the Truckee Area proper, up the Highway 89 corridor, and along Highway 80 to the state line. Generally, the results from the Community Lifelines risk assessment in both scenarios have a concentration of High Priority and Very High Priority Risk around these community clusters, especially in the WUI boundary and over 60% of the burnable pixels in the Community Lifelines risk assessment are classified as High or Very High Priority Risk.

As with the other FZs, the results from the Community Health risk assessments tend to follow the same pattern as the result from the Community Lifelines. Over 60% of the burnable pixels in the Community Health risk assessment are also considered to be High or Very High Priority and occur around communities and community resources.

Like the Tahoe National Forest (TNF) Area FZ, the Truckee/Donner FZ has a high concentration of natural resources. A notable difference is that in the Truckee/Donner FZ, there is more community development dispersed within those natural resources. The results from the Natural Resources risk assessment also tend to occur within the same locations as the Community Lifelines and the Community Health results. The results in the Truckee/Donner FZ illustrate how within a rural environment, the HVRAs are incredibly intertwined and dependent on each other. There are no pixels in the Natural Resources risk assessment to have a priority benefit from wildfire but over 50% of the burnable pixels are either a High or Very High Priority Risk.

10.5 Project Priority Areas

As described in Section 4 the main goal of the Wildfire Risk Assessment (WRA) is to identify the Project Priority Areas. The Project Priority Areas are the final result of the WRA as they identify and prioritize areas on the landscape for multi-beneficial wildfire risk reduction activities. These areas represent the overlap between wildfire risk and assets and resources the community values in protecting from wildfire. The Project Priority Areas are organized into High and Highest Priority. High Priority is where there is

¹⁷ Non-burnable indicates an area mapped with a non-combustible fuel/vegetation type classification (e.g., rock, water, pavement).

¹⁸ Burnable but Not Burned indicates an area that did not burn in the fire behavior modeling component but is mapped as a combustible fuel/vegetation type (e.g., grass, brush) and has the capacity to burn. This classification does not mean such areas cannot burn, but rather modeled fires did not reach these areas.

¹⁹ No Impact classifications indicate areas that are not classified as an HVRA but did burn in the wildfire behavior modeling component.

overlap between Community Lifelines and Community Health at high risk from wildfire and Highest is where there is overlap between Community Lifelines, Community Health, and Natural Resources at high risk from wildfire. This prioritization was determined based on the results from the WRA, stakeholder outreach, and community outreach.

In the Truckee/Donner Forecast Zone (FZ), 68,459 acres are designated as Project Priority Areas, accounting for 63% of the FZ's total area. These 68,459 acres are classified as High Priority. Of these, 56,347 acres are also classified as Highest Priority. Project Priority areas in the Truckee/Donner FZ are presented in Table 75 and shown graphically in Figure 33. The risk reduction approaches identified in Section 10.8 would be prioritized in these areas.

Table 75. Truckee/Donner Forecast Zone Priority Project Areas

Name	Acres
Highest Priority (Community Lifelines, Community Health, and Natural Resources)	56,347*
High Priority (Community Lifelines and Community Health)	68,459

Note:

* Areas designated as highest priority are also considered high priority areas.

10.6 Community Engagement Results

10.6.1 Community Wildfire Protection Plan Survey

As described in Section 5.1.1. the Community Wildfire Protection Plan (CWPP) process was initiated by a CWPP Public Survey. The survey was used to understand community priorities, wildfire risk reduction priorities, wildfire risk perception, and evacuation behavior. For the Truckee /Donner Forecast Zone (FZ) there were 324 survey respondents.

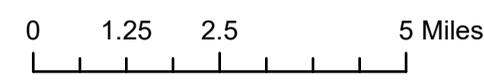
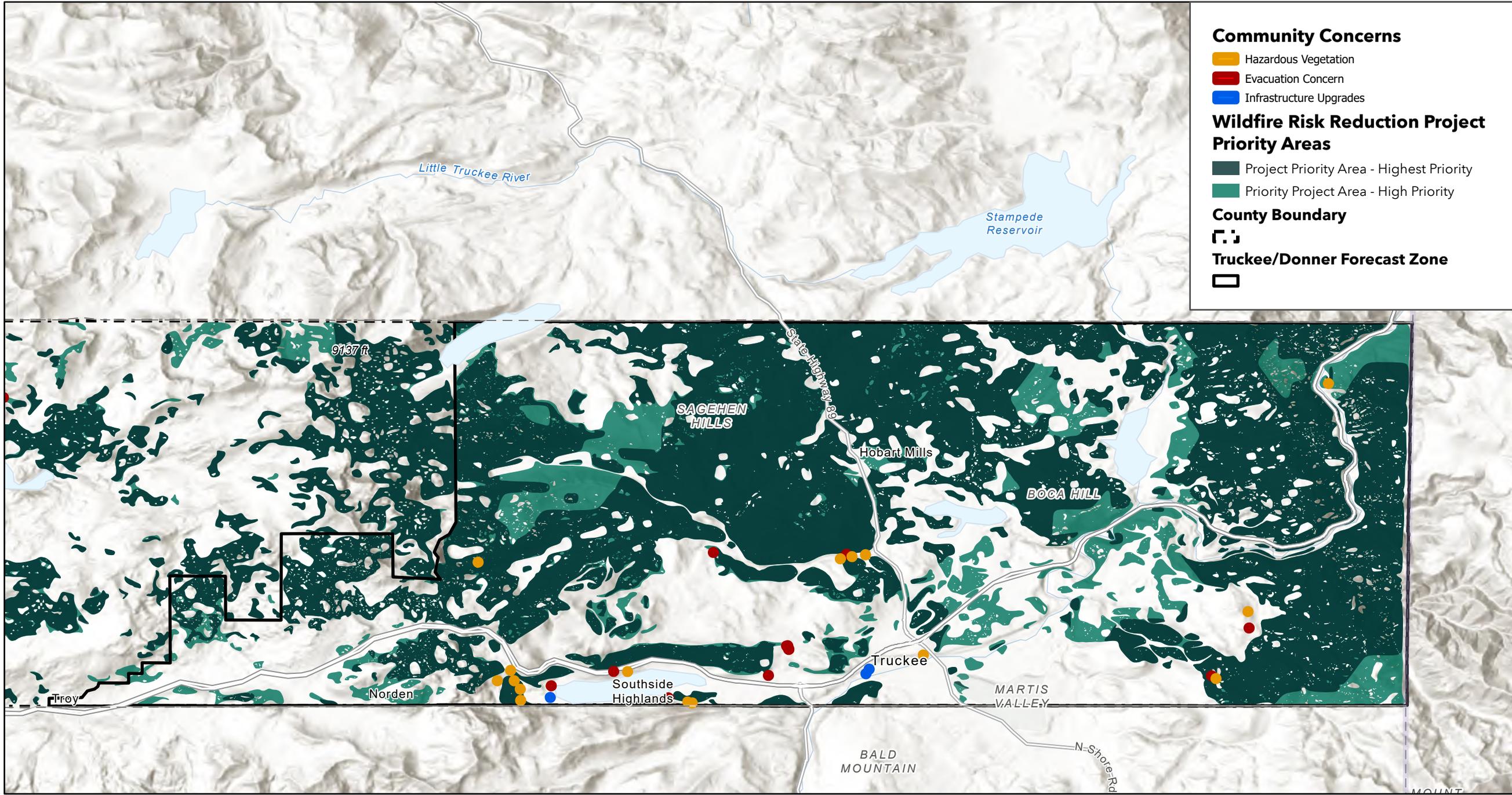
Survey respondents viewed the County’s Risk from wildfire as High or Very High and felt that the most important risk reduction actions for the County to address were (1) Defensible Space Assistance, (2) Evacuation Route Improvement, and (3) Home Hardening Incentives/Rebates. In the FZ the highest priority to protect from wildfire was Community Lifelines, followed by Community Health, Natural Resources, and Economic Resources.

When asked about their personal wildfire risk the majority of respondents felt that their risk was moderate. Respondents felt that the main challenges in reducing their wildfire risk were (1) cost of home hardening, (2) fuel on neighboring properties, and (3) dead tree removal.

In terms of evacuation, the majority of respondents had never been evacuated in Nevada County before and felt that they would leave as early as possible if they needed to evacuate in the future. The three primary evacuation concerns for respondents in the Higgins/Penn Valley FZ were (1) getting trapped on the road, (2) losing their home or property, and (3) traffic accidents.

A full report on the survey results for Truckee/Donner Area FZ is available in Appendix C.

Figure 33 - Truckee/Donner Forecast Zone - Community Concerns



Every reasonable effort has been made to assure the accuracy of the maps and data provided; nevertheless, some information may not be accurate. The County of Nevada assumes no responsibility arising from use of this information. THE MAPS AND ASSOCIATED DATA ARE PROVIDED WITHOUT WARRANTY OF ANY KIND, either expressed or implied, including but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Before making decisions using the information provided on this map, contact the Nevada County Public Counter staff to confirm the validity of the data provided.

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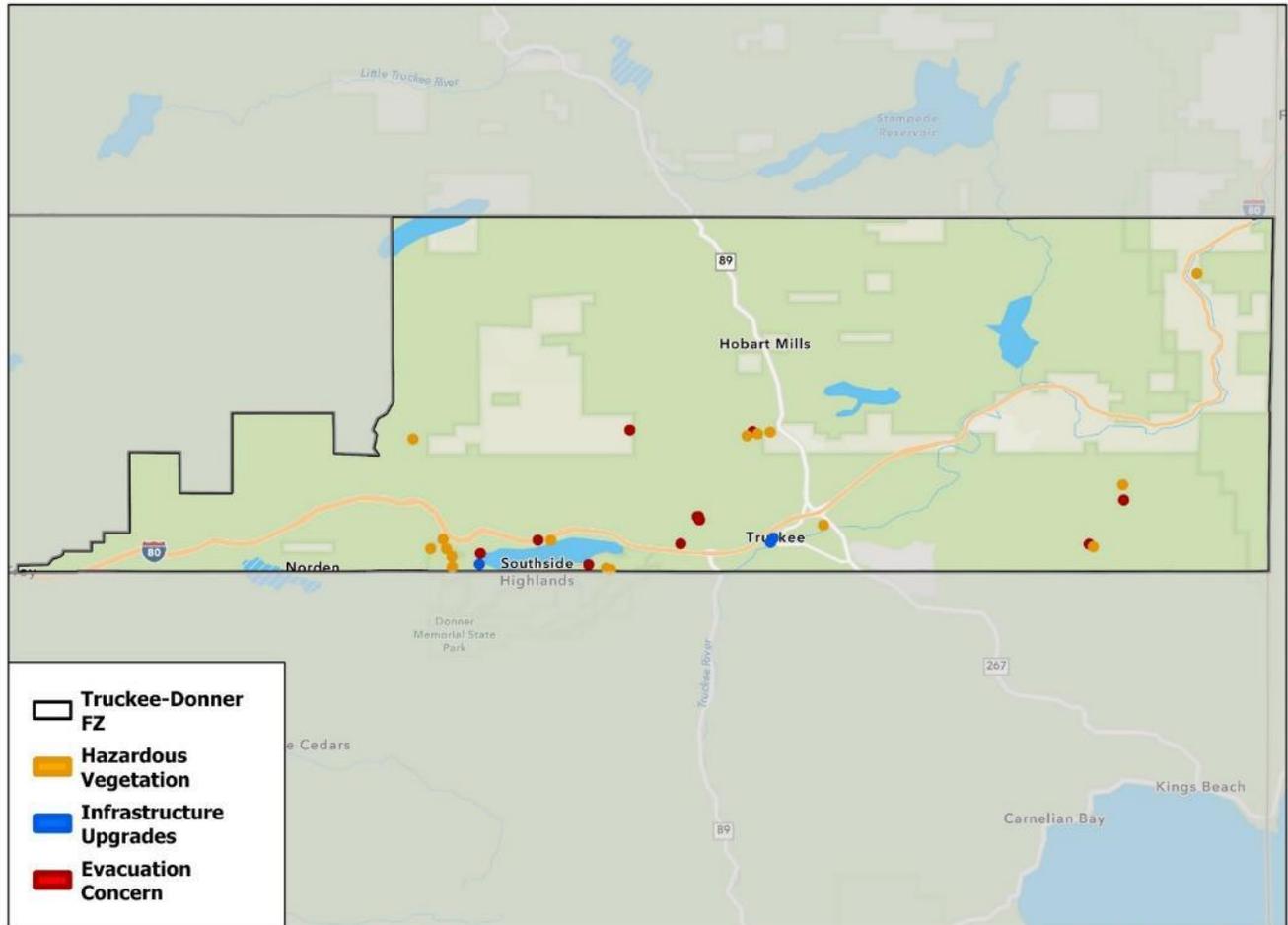
10.6.2 Community Workshop Results

The workshops for the Truckee/Donner FZ took place on January 29th and February 8th, 2024, and included 17 total attendees. The workshops included a brief overview of the project followed by self-guided and active engagement activities aimed at facilitating discussion and gaining input from community members. A summary of the activities and community input received is provided in the following sections.

10.6.2.1 Self-Guided Activities

The self-guided activities included a map activity where community members could identify areas of concern using pins on a map, including limited evacuation routes, hazardous vegetation, and areas where structural hardening is needed. Areas pinned by community members are shown in Exhibit 26. Many of the pins were placed in areas that participants lived in or were familiar with, which gave great insight into those areas. This includes some scattered pins throughout the forecast zone with some concentration around Southside Highlands. However, there are gaps for areas where community representation was missing at the workshops.

Exhibit 26. Community-identified areas of concern for the Truckee/Donner Forecast Zone



DUDEK

**Truckee-Donner FZ
Community Concerns**

The self-guided activities also included a bead activity which allowed residents to prioritize wildfire risk reduction methods for the community and to identify which vegetation management techniques they wanted to see in the community. Exhibit 27 presents community preferences for wildfire risk reduction activities.

Exhibit 27. Preferred wildfire risk reduction methods for the Truckee/Donner Forecast Zone

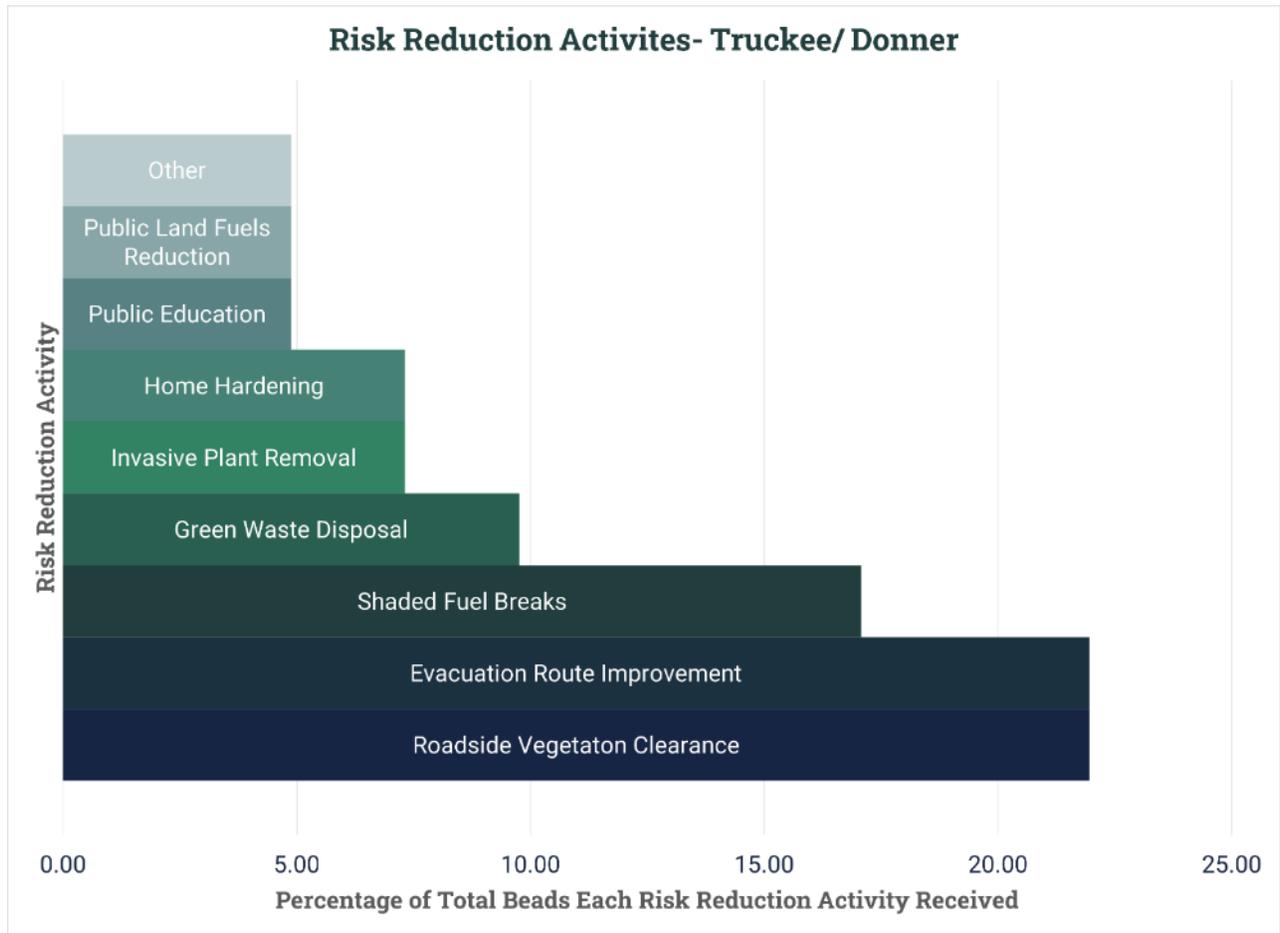
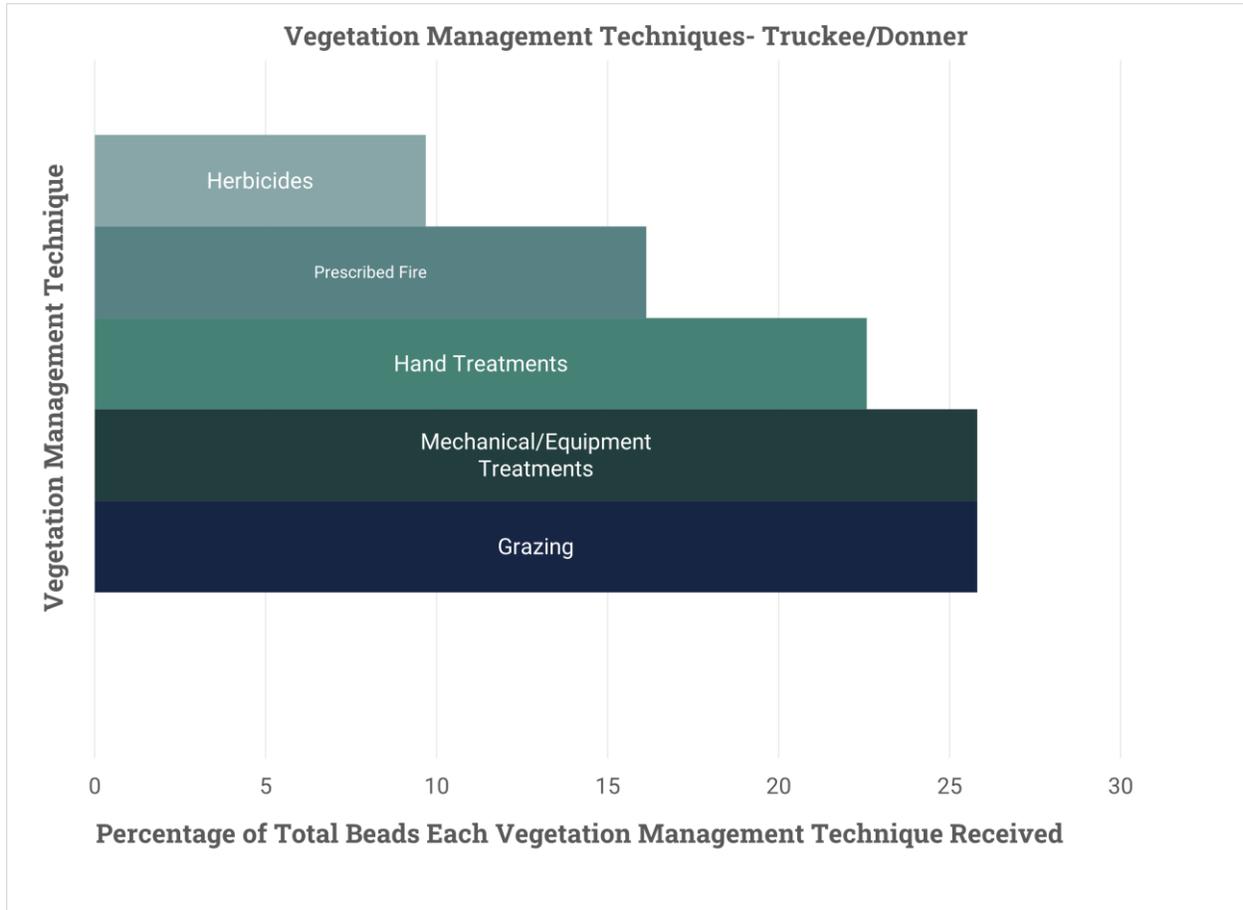


Exhibit 28 presents community preferences for vegetation management techniques.

Exhibit 28. Preferred vegetation management techniques for the Truckee/Donner Forecast Zone

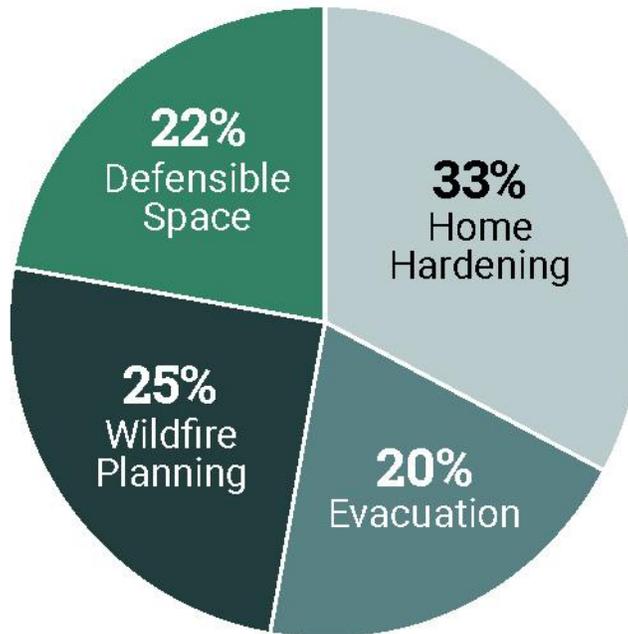


10.6.2.2 Community Discussions

To analyze the community group discussions, two methods were taken. The data was first categorized by challenges and opportunities. As further described in Section 5.1.2, this data was then categorized by the four discussion topics to help show the distribution of issue for each FZ. Exhibit 29 shows the distribution of challenges by topic for Truckee/Donner FZ. This shows how the majority of the written comments refer to Home Hardening, with fewer comments regarding Defensible Space, Wildfire Planning, and Evacuation.

Exhibit 29. Community-identified challenges for the Truckee/Donner Forecast Zone

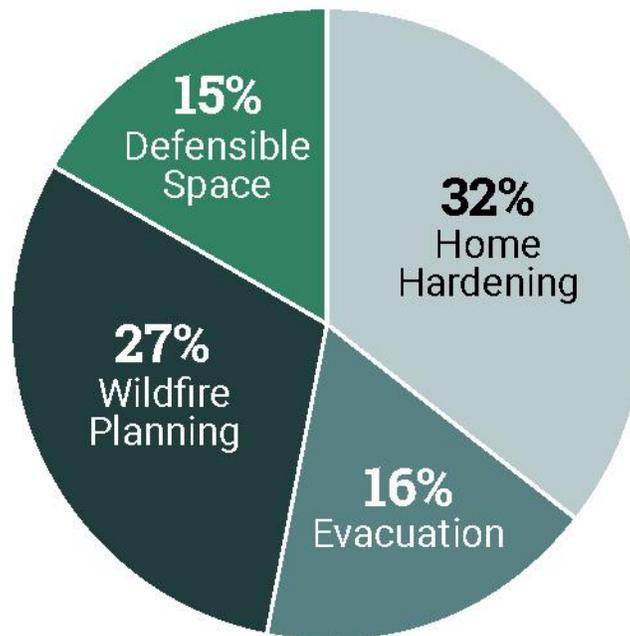
Truckee / Donner Distribution of Challenges by Topic



Additionally, as shown in Exhibit 30, when looking at opportunities, community members in the Truckee/Donner FZ were focused primarily on Wildfire Planning and Home Hardening. The proportions of challenges did not always translate to the proportion of opportunities. For example, although Wildfire Planning represented 25% of the comments regarding challenges, it represented 37% of the comments regarding opportunities.

Exhibit 30. Community-identified opportunities for the Truckee/Donner Forecast Zone

Truckee / Donner Distribution of Opportunities by Topic



The data was also categorized by issue topic. Exhibit 31 shows the distribution of overall challenges by issue category.

Exhibit 31. Community-identified challenges by issue category for the Truckee/Donner Forecast Zone

Truckee / Donner Challenges

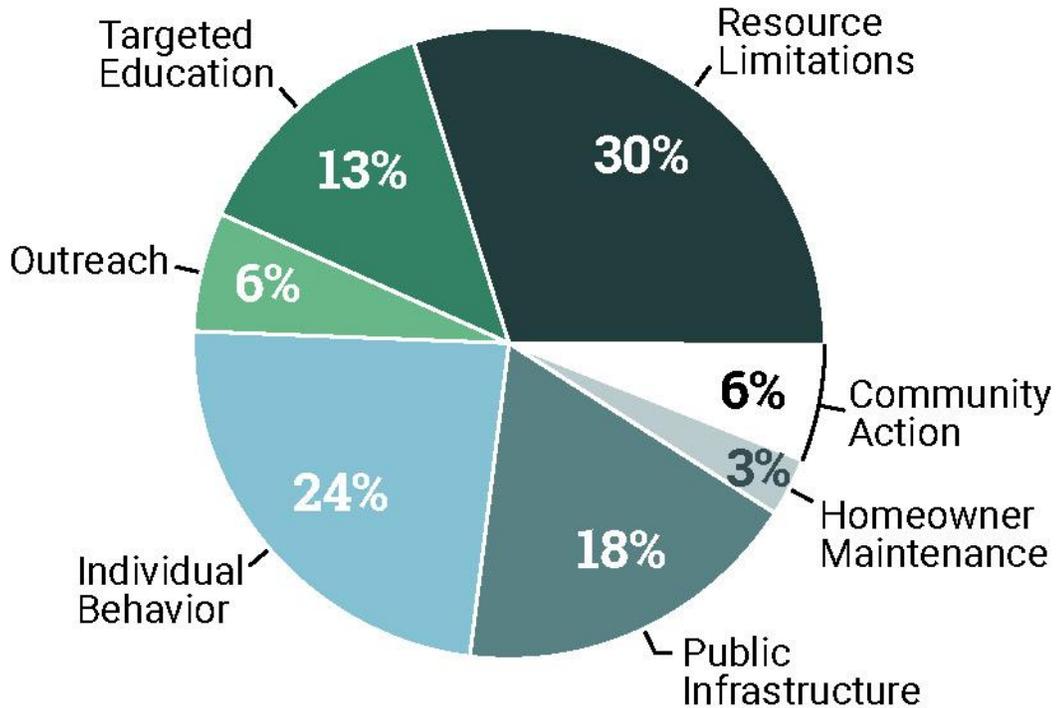
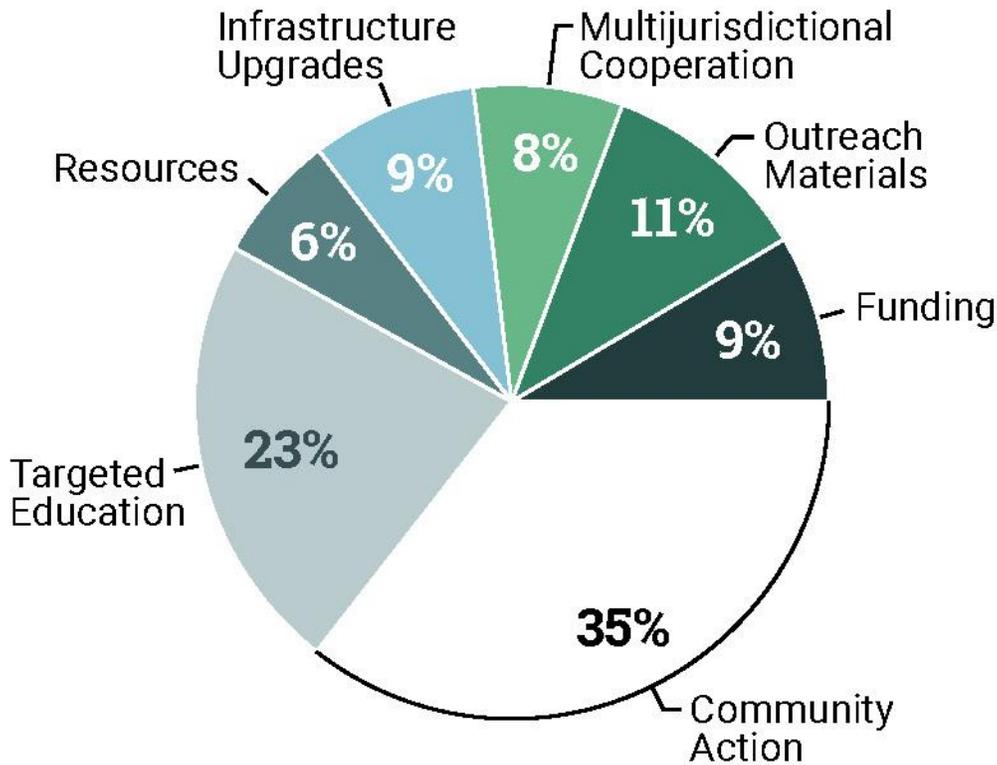


Exhibit 31 emphasizes how community members in the Truckee/Donner FZ are very concerned about resource limitations that prevent people and communities from preparing for wildfire. This includes the costs associated with hardening their homes or implementing defensible space, not having the time or physical ability to implement improvements, or not having enough contractors to do the work. Other main concerns include individual behavior regarding evacuation.

As shown in Exhibit 32, community members in the Truckee/Donner FZ primarily focused their discussions on opportunities for community action.

Exhibit 32. Community-identified opportunities by issue category for the Truckee/Donner Forecast Zone

Truckee / Donner Opportunities



For Community Action, community members in the Truckee/Donner FZ wanted to practice certain events including evacuation drills, more inspections of properties, better sharing of information community wide including a phone tree during evacuations, and community work days to encourage residents to work on their properties or learn more about what they can do. Community members in this FZ also wanted more targeted education regarding learning about wind and how wind direction influences fire behavior, how to involve older residents, providing materials in other languages, and a list of how community members should prioritize what actions to take first regarding implementing home hardening and defensible space. **For full results of each discussion topic and the full community workshop analysis, please see Appendix D.**

10.7 Issues Specific to the Truckee/Donner Forecast Zone

The following list summarizes the major issues present within the Truckee/Donner FZ. These issues were obtained from community member input, collaboration with interested parties, field visits, and a review of wildfire-related spatial data.

Wildfire Hazard

- Areas of High and Very High wildfire hazard are present throughout this FZ; however, areas designated as high and very high hazard are more widespread within the northern and eastern halves of the FZ. Specific areas of widespread high and very high hazard include the region surrounding Hobart Mills, the region north of Tahoe Donner, the Interstate 80 corridor near the eastern boundary of the FZ, and the region south of Interstate 80 in the southeast corner of the FZ.
- Wildfires are more common in the eastern half of the FZ according to the public record. The Interstate 80 corridor near the eastern boundary of the FZ has experienced wildfires more frequently, with wildfires having burned in this area five times. The area to the north of Interstate 80 near the Truckee Rest Area has experienced wildfire three times.

Wildfire Ignitions

- A review of vegetation fire ignition history shows that ignitions are more common along Interstate 80 near Floriston, Boca, and areas surrounding Prosser Creek and Boca Reservoir.

Evacuation Challenges

- The FZ also experiences large fluctuations in populations with significant increases in population due to special events and holidays which causes potential issues related to traffic, evacuation, and emergency response.
- The FZ includes high-use recreation areas, such as Donner Lake, which cause potential issues related to road traffic, evacuation, and emergency response.

Community Participation and Education

- This FZ includes many temporary residents (e.g., second homeowners, tourists, day-trippers), presenting challenges for wildfire outreach community member participation in wildfire risk mitigation activities.
- The FZ has seen a recent influx of new residents, potentially resulting in limited wildfire education for those unexperienced with wildfire preparedness.
- Existing efforts to engage the community with wildfire education and outreach have proven challenging.

10.8 Action Plan

10.8.1 Risk Reduction Approaches

Wildfire often impacts a wide range of assets. Risks to identified assets can be mitigated through the implementation of a variety of risk reduction approaches. The following sections identify wildfire risk reduction approaches that may be considered within Project Priority Areas

10.8.1.1 Reducing Structural Ignitability

Terrain, vegetation, and climatic conditions in the Plan Area combine to create a unique situation capable of supporting large-scale, high-intensity, and sometimes damaging wildfires. There are two main components to reducing structural ignitability: structural hardening and defensible space. The following sections identify actions that can be implemented by homeowners on private properties to reduce the potential for structure ignitions caused by wildfires.

10.8.1.1.1 Structural Hardening

The main way in which structures ignite is via direct fire exposure (flame impingement, convection, radiation) or via ember exposure (Maranghides et al. 2022). To reduce structural ignitability, efforts need to address direct fire and ember exposure (Maranghides et al. 2022). Addressing structural ignition potential is an effective mitigation strategy for preventing wildfires and increasing WUI ignition resistance (Zhou 2013). Research has found that structural characteristics, especially roofing, play a significant role in reducing structural vulnerability to fire and the likelihood of burning (Bracmort and Gorte 2012; Kolden and Henson 2019; Manzello et al. 2011; Syphard et al. 2017; Zhou 2013). Further, reducing a structure's likelihood of ignitions reduces the risk for individual homeowners and the risk associated with fire spreading to other homes and wildland areas (Mockrin et al. 2020).

Although fire-resistant construction standards are mandatory for new buildings in the Plan Area, hardening of existing structures is voluntary. Hardening of the homes and other structures to enhance survivability during a wildfire would include retrofitting the most vulnerable home features, including roofs, vents, eaves and soffits, windows, walls, decks, rain gutters, patio covers, chimneys, garages, and fences. Adopting mandatory home hardening provisions through building and fire codes is problematic because existing, nonconforming structures were typically approved and built to the codes in effect at the time of construction. A burning structure contributes to wildfire spread via radiant heat generation (to nearby structures) and ember generation (to downwind structures). Retrofits to existing structures can reduce fire risk, and some cost-sharing and grant programs are available to offset costs. Resources for hardening structures can be found on the following websites:

- [Wildfire Home Retrofit Guide](#)
- [Protect Your Property from Wildfire](#)
- [Prepare for Wildfire](#)
- [Low-Cost Retrofit List](#)
- [Preparing Your Home](#)

Recommendations for Truckee/Donner FZ are in Table 76.

Table 76. Truckee/Donner Forecast Zone Recommendations for Reducing Structural Ignitability

Action/Recommendation	Issue	Scale
Encourage structural retrofits through inspections, community education, and grant funding opportunities.	Structure Exposure	Community
	Community Participation and Education	
	Financial Barriers	
Target contiguous community areas to provide maximum benefit towards reducing structure-to-structure ignitions.	Structure Exposure	Community
	Financial Barriers	
Evaluate opportunities for engaging residents and landowners in structural retrofit programs.	Structure Exposure	Community
	Community Participation and Education	
	Financial Barriers	
Work to encourage home hardening self-assessments through community education.	Structure Exposure	Community
	Community Participation and Education	Individual
Prioritize the most cost-effective structural hardening actions in community education and outreach materials and campaigns. Prioritize this outreach in financially challenged communities.	Structure Exposure	Community
	Community Participation and Education	
	Financial Barriers	
Encourage structure inspections in tandem with existing defensible space inspection programs.	Structure Exposure	Community
Explore opportunities for residents who live in historic homes or areas governed by historic ordinances to complete home hardening activities that reduce structural ignitability and maintain historical characteristics.	Structure Exposure	Community
		Individual
Educate residents on structure hardening options for mobile homes and prefabricated homes, especially in mobile home communities.	Structure Exposure	Community
		Individual
Educate residents on how attached wooden decks impact structural ignitability. Encourage residents to not store combustible materials underneath wooden decks.	Community Participation and Education	Community
	Structure Exposure	Individual

10.8.1.1.2 Defensible Space

Reducing structure exposure to wildfire is also achieved via vegetation management/fuel reduction in defensible space areas. The following five zones are identified for defensible space areas. Recommendations for management actions that can be taken by homeowners in each of these zones can be found on Nevada County’s website at <https://nevadacountyca.gov/3004/Defensible-Space>. Recommendations for Truckee/Donner FZ are Presented in Table 77.

Table 77. Truckee/Donner Forecast Zone Defensible Space Recommendations

Action/Recommendation	Issue	Scale
Encourage local government, fire agencies, and NGOs to identify staffing needs in order to facilitate a high level of defensible space inspections annually.	Structure Exposure Wildfire Hazard	Community
Focus efforts to increase defensible space inspection rates, education, and compliance levels in communities with higher wildfire risk exposure. Focus these efforts on disadvantaged communities with high wildfire risk exposure.	Structure Exposure Wildfire Hazard	Community
Increase defensible space education and resource deployment in vulnerable populations with high wildfire risk exposure.	Structure Exposure Wildfire Hazard Community Participation and Education	Community
In areas outside of Nevada County jurisdiction where creating 100 feet of defensible space is not possible for a single property due to property size, develop a process for property owners to partake in collaborative vegetation management. Provide residents with information on alternative methods and materials that can be implemented to increase fire safety when 100 feet of defensible space is not feasible (e.g., fire wall, enhanced structural hardening measures). Most applicable in medium to higher-density communities where parcel sizes are smaller.	Structure Exposure Wildfire Hazard Community Participation and Education	Community Individual
Promote community-scale defensible space projects within the County Defensible Space Home Hardening Zone.	Structure Exposure Wildfire Hazard	Community
Develop a training course for landscape contractors on defensible space standards, common issues, and best practices. Maintain a list of contractors who have completed the training course.	Structure Exposure Community Participation and Education	Community

Table 77. Truckee/Donner Forecast Zone Defensible Space Recommendations

Action/Recommendation	Issue	Scale
Emphasize the importance of creating an Ember Resistant Zone (Zone 0) around all structures.	Structure Exposure	Community
	Wildfire Hazard	Individual
	Wildfire Ignitions	
	Community Participation and Education	
Emphasize the importance of storing firewood away from structures during fire season.	Structure Exposure	Community
	Community Participation and Education	Individual
Develop Community-based volunteer programs where community members can assist one another with defensible space creation.	Structure Exposure	Community
	Community Participation and Education	Individual
Emphasize the relationship between winter storm debris and defensible space. Promote defensible space as a year-round activity.	Structure Exposure	Community
	Wildfire Hazard	Individual
	Community Participation and Education	
Educate residents about the issue of large trees growing in close proximity to homes and the challenge of removing large trees. Encourage residents whenever possible to remove saplings/seedlings growing in the defensible space zone.	Structure Exposure	Community
	Wildfire Hazard	Individual
	Community Participation and Education	
Educate residents about the importance of removing pine needles from roofs, gutters, decks, and within Zone 0.	Structure Exposure	Community
	Wildfire Hazard	Individual
	Community Participation and Education	

10.8.1.2 Vegetation Management/Fuel Reduction

Vegetation management/fuel reduction actions outside of defensible space/fuel modification areas (see Section G-IV 7.3 of County Hazardous Vegetation Abatement Ordinance) may be conducted by fire and land management agencies, organizations, or private landowners for the purposes of wildfire risk reduction, especially at the landscape scale. Vegetation Management/Fuel Reduction for Truckee/Donner FZ are in Table 78.

Table 78. Truckee/Donner Forecast Zones Vegetation Management/Fuel Reduction Recommendations

Action/Recommendation	Issue	Scale
Promote partnership between federal agencies, state agencies, and private landowners to collaborate in cross-ownership vegetation management/fuel reduction projects.	Wildfire Hazard	Community
	Jurisdiction and Land Ownership	Individual
Provide community education focused on the post-fire benefits of active vegetation management/fuel reduction on watershed function, slope stability, and forest health/vegetation community resilience.	Community Participation and Education	Community
Conduct roadside vegetation management/fuel reduction along major evacuation routes and where roadside ignitions are common.	Wildfire Ignitions	Community
	Evacuation and Access Challenges	Individual
Create or maintain fuel breaks/hazardous fuel reduction areas along strategic ridgelines.	Wildfire Hazard	Landscape
Identify and address obstacles to implementing prescribed fire on public and private land.	Wildfire Hazard	Community
Conduct vegetation management/fuel reduction around critical infrastructure and critical resources.	Wildfire Hazard	Community
	Wildfire Ignitions	
Conduct vegetation management/fuel reduction projects around high-use recreation facilities to decrease the potential for ignitions.	Wildfire Ignitions	Community
	Evacuation and Access Challenges	
	Wildfire Hazard	
Encourage the development of wildfire risk reduction projects that also promote climate resilience.	Wildfire Hazard	Community
Encourage the development of wildfire risk reduction projects that also address tree mortality.	Wildfire Hazard	Community
Explore opportunities for vegetation removal around reservoirs and critical water infrastructure.	Wildfire Hazard	Community
Explore opportunities for using timber harvest and logging activities to reduce fuel loading in forested areas.	Wildfire Hazard	Community

Vegetation Management/Fuel Reduction Monitoring and Evaluation Strategies

Vegetation management/fuel reduction activities may occur over long periods of time and require substantial investment and resources. In addition, these activities often require adaptive management due to changing conditions and subsequent treatments to ensure their effectiveness and longevity. Therefore, it is necessary to have a strategy to measure, both quantitatively and qualitatively, whether the goals and objectives of vegetation management/fuel reduction activities are being met as expected.

The 2024 Truckee Community Wildfire Protection Plan (CWPP) identified monitoring strategies that may be employed during vegetation management/fuel reduction projects throughout the County. Monitoring strategies aid in reaching management objectives and ensure that treatments address prior goals. Additionally, effective monitoring of vegetation management/fuel reduction projects addresses environmental damages that can be caused by vegetation removal such as soil erosion and invasive species recruitment. Post-treatment monitoring of treated areas also assists in the identification of appropriate treatment intervals based on the regrowth of vegetation following treatments.

Monitoring for each vegetation management/fuel reduction project will be tailored to the specific site and vegetation management/fuel reduction goals. The monitoring activities listed below serve different objectives, require varying amounts of time, and are suitable for different groups. These include:

Minimum- Level 1: Pre-and Post-Project Photographs

This monitoring strategy is considered a minimum standard and assists in comparing pre- and post-treatment vegetation conditions. This strategy captures vegetation conditions soon after treatment and therefore does not address vegetation regrowth over time.

Targeted Group: Homeowners conducting fuel reduction projects on private property.

Moderate - Level 2: Multiple Permanent Photo Points

Permanent photo points allow vegetation conditions to be assessed over time at set locations. This ensures consistency and ensures photo monitoring remains consistent. This monitoring strategy is best utilized over multiple years.

Targeted Group: Enthusiastic homeowners or agencies conducting small-scale projects.

High - Level 3: Basic Vegetation Plots

Vegetation plots are utilized to assess vegetation conditions including species, canopy cover, and vegetation frequency, in addition to environmental conditions including slope, aspect, soil type, and elevation. Using pre-established measurement protocols, vegetation conditions can be assessed pre- and post-treatment. Plot locations can be recorded, allowing continual monitoring over time to assess vegetation regrowth and identify treatment frequency standards.

Targeted Group: Agencies conducting fuel treatments in forestlands.

Intense - Level 4: Basic Vegetation Plots Plus Dead and Downed Fuels Inventory

In addition to the basic vegetation plots described above, conducting an inventory of dead and down fuels at each plot provides additional insights into fuel loading. This would include an assessment of dead and

down fuels that may contribute to increased wildfire severity. Over time, these fuels build up in forested areas and may decrease the level of fuel treatment effectiveness if not maintained over time.

Targeted Group: Agencies tracking detailed changes in vegetation following fuel treatments in forestlands.

10.8.1.3 Community Outreach and Education

Community outreach and education is an important component in community wildfire hazard reduction efforts. Such efforts increase the community’s knowledge and awareness of wildland fire, can assist in prevention and preparedness efforts, and are an important component in planning and implementing vegetation management/fuel reduction projects. Given the size of the County, it is important the outreach messages around wildfire preparedness are consistent amongst communities. Information on existing County programs can be found in Section 6.2.4. Community Outreach and Education recommendations for the Truckee/Donner FZ are presented in Table 79.

Table 79. Truckee/Donner Forecast Zone Community Outreach and Education Recommendations

Action/Recommendation	Issue	Scale
Develop wildfire awareness materials (e.g., handouts, signage, QR codes) for display and/or distribution at high-use recreation areas (campgrounds, trailheads, day-use areas) to increase awareness of wildfire hazards.	Community Participation and Education	Community
Work with camps, recreational facilities, and other guest-oriented businesses to develop evacuation plans and enhance wildfire preparedness.	Jurisdiction and Land Ownership	Community
Conduct outreach specific to address wildfire hazards, emergency communications, and evacuation procedures with vulnerable populations.	Community Participation and Education	Community
Support the development of new Firewise Communities in areas where they are needed and encourage the creation of Community Focus Groups intended to engage community members and identify local priority projects.	Community Participation and Education	Community
Develop outreach and education strategies that promote all-hazard disaster preparedness.	Community Participation and Education	Community
Develop outreach and education to support land management and land management planning for public and private landowners.	Community Participation and Education	Community
Develop outreach and education to engage with stakeholders and communities around climate and wildfire resilience.	Community Participation and Education	Community

Table 79. Truckee/Donner Forecast Zone Community Outreach and Education Recommendations

Action/Recommendation	Issue	Scale
Develop outreach strategies to engage with seasonal residents, absentee landowners, and visitors.	Community Participation and Education	Community

10.8.1.4 Evacuation

The Plan Area presents unique challenges for evacuation, including narrow and windy roads, single access communities, rural communities located far from major evacuation routes, steep and variable terrain, and hazardous vegetation near roadways. In the Plan Area, the Nevada County Sheriff’s Office (NCSO) is responsible for coordinating emergency notifications and evacuations in their jurisdiction within the County’s operational area in addition to the County’s unincorporated areas. This includes alerting and warning the public, coordinating evacuations, enforcing laws and emergency orders, establishing safe traffic routes, ensuring that security is provided at incident facilities, ensuring access control to damaged areas, ordering, and coordinating appropriate mutual aid resources, and assuming responsibility for the coroner function. NCSO communicates the need for evacuation to the public using various communication methods as described further in Section 2.6 and Section 6.2.5.

The actions presented in Table 80 are recommended to address evacuation in the Truckee/Donner FZ.

Table 80. Truckee/Donner Forecast Zone Evacuation Recommendations

Action/Recommendation	Issue	Scale
Leverage and extend the 2024 Evacuation Study by identifying key ingress/egress routes that should be prioritized for improvements to facilitate emergency egress (e.g., widening, road surface improvements, bridge improvements, vegetation management/fuel reduction, signage, and refuge sites). Prioritize roadways that function as the sole evacuation route for communities.	Evacuation and Access Challenges Wildfire Ignitions	Community
Leverage Appendix A of the 2024 Evacuation Study to support the implementation of community-identified evacuation priorities.	Evacuation and Access Challenges	Community
Coordinate with private landowners to implement roadside vegetation removal along private roadways.	Wildfire Ignitions Jurisdiction and Land Ownership	Community Individual
Prioritize efforts to address community evacuation priorities as identified in the Nevada County Evacuation Study.	Evacuation and Access Challenges	Community

Table 80. Truckee/Donner Forecast Zone Evacuation Recommendations

Action/Recommendation	Issue	Scale
Evaluate opportunities for installing and maintaining fireboxes at entry gates to communities and large ranches with road networks. Fire boxes could include hard copy maps, pertinent community/site information, and/or scannable QR codes for access to digital maps and community/site information. Boxes should be secured with a Knox Key.	Evacuation and Access Challenges Jurisdiction and Land Ownership	Community
Where secondary evacuation routes exist, seek opportunities to improve road conditions to conditions suitable for low-clearance vehicles.	Evacuation and Access Challenges	Community
Coordinate with relevant agencies to manage access to areas with large expanses of open space during Red Flag Warnings, or other high fire hazard periods, to minimize ignition potential.	Evacuation and Access Challenges Jurisdiction and Land Ownership Wildfire Ignition	Community
Identify high-use roadways and parking areas where parking restrictions during fire season or Red Flag warnings are needed to improve emergency ingress and evacuation.	Evacuation and Access Challenges	Community
Encourage community-wide evacuation drills to prepare community members for emergency situations.	Evacuation and Access Challenges Community Participation and Education	Community
In communities lacking secondary access, install reflective road signs to direct those to primary egress routes.	Evacuation and Access Challenges Community Participation and Education	Community
Educate residents on the importance of developing individualized evacuation plans.	Evacuation and Access Challenges Community Participation and Education	Individual
Continue to educate residents about Evacuation Zones and nexus with emergency alerts.	Evacuation and Access Challenges Community Participation and Education	Community Individual
Encourage communities to replace wooden street signs with non-burnable materials and that all house addresses are clearly visible and reflective.	Evacuation and Access Challenges	Community Individual

Table 80. Truckee/Donner Forecast Zone Evacuation Recommendations

Action/Recommendation	Issue	Scale
	Community Participation and Education	

10.8.1.5 Emergency Communication Alerts

Emergency Communication Alerts are a critical way to communicate relevant emergency information to residents in the Plan Area. With the Plan Area having a diverse population including in age, race, ethnicity, native language, and access to technology it is crucial that emergency notifications accommodate that. This includes a diversity of media sources, languages, and methods of delivery of these notifications to reach most residents in the Plan area.

The actions presented in Table 81 are recommended to address emergency communication alerts in the Truckee/Donner FZ.

Table 81. Truckee/Donner Forecast Zone Emergency Communication Alerts Recommendations

Action/Recommendation	Issue	Scale
Pursue methods for disseminating evacuation information at high-use recreation areas where cell phone reception is limited.	Evacuation and Access Challenges Community Participation and Education	Community
Identify areas with limited telecommunications facilities and capabilities and explore opportunities for enhancing communications to residents and visitors prior to, during, and following wildfire events.	Evacuation and Access Challenges Community Participation and Education	Community
Improve early warning systems and emergency communications to reach everyone, including non-English speakers, and develop materials or tools to facilitate emergency communications in appropriate languages.	Evacuation and Access Challenges Community Participation and Education	Community
Install remote-operated electronic emergency signs in communication-limited areas to inform community members of emergency alerts including evacuation information and active wildfire information	Evacuation and Access Challenges Community Participation and Education	Community
Pursue strategies to increase community familiarity with Hi-Lo Sirens used during evacuations.	Evacuation and Access Challenges Community Participation and Education	Community

10.8.1.6 Post-Fire Recovery

The Plan Area has been subject to numerous wildfires that have necessitated evacuations, impacted road systems, reduced soil stability, and damaged infrastructure and natural resources. Post-fire runoff, flooding, and debris flows are also possible and can cause further damage and impacts downstream of the burn area. Issues associated with post-fire recovery include repair and re-opening of access roads, repairs to utilities and other infrastructure, instability of slopes, proliferation of invasive species, and the need to rebuild damaged or destroyed structures, amongst others. Post-fire recovery actions are difficult to complete in advance because the location and extent of a burn area are unknown, and the level of burn severity drives much of the required actions. The Cal OES provides resources for post-fire recovery at <https://wildfirerecovery.caloes.ca.gov/>. Additionally, the Natural Resources Conservation Service provides information about post-fire assistance and recovery at

<https://www.nrcs.usda.gov/wps/portal/nrcs/main/ca/newsroom/features/>.

The actions presented in Table 82 are recommended to address post-fire recovery in the Truckee/Donner FZ.

Table 82. Truckee/Donner Forecast Zone Post-Fire Recovery Recommendations

Action/Recommendation	Issue	Scale
Develop post-fire rehabilitation guidelines for property owners and landowners in cooperation with appropriate federal, state, and local agencies that address post-fire effects of flooding and soil erosion. Prioritize reducing the importation of invasive species and restoring native habitats where applicable.	Community Participation and Education	Community
Develop post-fire rehabilitation guidelines for property owners and landowners in cooperation with appropriate federal, state, and local agencies that address post-fire effects on potable water, wastewater, hazardous materials, and the clean-up process.	Community Participation and Education	Community
Continue to aid those affected by wildfire through post-fire recovery guidance including insurance recommendations, how to apply for federal assistance, and guidance for post-fire cleanup, property reassessment, and rebuilding. https://nevadacountyca.gov/1241/Disaster-Recovery	Community Participation and Education Financial Barriers	Individual
Identify opportunities for post-fire social resilience, including, but not limited to, support for housing and employment access, health resource access, and access to mental and emotional support services.	Community Participation and Education Financial Barriers	Community Individual

Table 82. Truckee/Donner Forecast Zone Post-Fire Recovery Recommendations

Action/Recommendation	Issue	Scale
Support the community by providing post-fire educational resources related to physical recovery, monetary support, and social services.	Community Participation and Education	Community
Encourage residents and property owners to participate in wildfire insurance reduction programs.	Community Participation and Education	Community Individual

10.8.1.7 Additional Approaches

In addition to those discussed in the previous sections, other wildfire risk reduction approaches can be effective on a case-by-case basis depending on assets at risk and resource availability. The following identifies additional wildfire risk mitigation approaches that may be considered within Project Priority Areas:

- **Fire Road Maintenance:** Activities, including minor grading or natural material resurfacing, to ensure that existing roads are drivable by fire agency apparatus.
- **Ignition and Spread Prevention:** Modifications to areas prone to wildfire ignitions (e.g., roadsides) including flashy fuel treatment, restoration, installation of ignition-resistant materials, and use modifications/restrictions.
- **Utility Hardening/Undergrounding:** Undergrounding of power lines/utilities, or retrofitting overhead power line networks to minimize arcing, conductor contact, etc.
- **Inspection/Monitoring:** Staff time allocated to conducting defensible space or structural hardening inspections or monitoring open space areas for trespass or fire activity.
- **Chipper Programs:** Services where a chipper is provided for residential areas to incentivize defensible space and fuel modification area maintenance work on residential properties.
- **Equipment Acquisition:** Purchase of tools, vehicles, or other equipment used in vegetation management/fuel reduction, restoration, firefighting, data collection, mapping, and public education related to wildfire hazard reduction.
- **Infrastructure:** Purchase, installation, permitting, and maintenance of equipment intended to alert the community about wildfires (e.g., fire detection cameras), or provide data to fire managers (e.g., remote automated weather stations).
- **Staffing:** Funds for permanent or seasonal/temporary personnel focused on firefighting or fire prevention activities.
- **Patrols:** Funding for permanent or seasonal/temporary personnel to patrol large open space areas during periods of high fire hazard to detect and report fire starts.

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