Annex S Placer Hills Fire Protection District

S.1 Introduction

This Annex details the hazard mitigation planning elements specific to Placer Hills Fire Protection District (PHFPD or District), a previously participating jurisdiction to the 2016 Placer County Local Hazard Mitigation Plan (LHMP) Update. This Annex is not intended to be a standalone document, but appends to and supplements the information contained in the Base Plan document. As such, all sections of the Base Plan, including the planning process and other procedural requirements apply to and were met by the District. This Annex provides additional information specific to the PHFPD, with a focus on providing additional details on the risk assessment and mitigation strategy for this District.

S.2 Planning Process

As described above, the District followed the planning process detailed in Chapter 3 of the Base Plan. In addition to providing representation on the Placer County Hazard Mitigation Planning Committee (HMPC), the District formulated their own internal planning team to support the broader planning process requirements. Internal planning participants, their positions, and how they participated in the planning process are shown in Table S-1. Additional details on plan participation and District representatives are included in Appendix A.

Table S-1 Placer Hills FPD – Planning Team

Name	Position/Title	How Participated
Ian Gow	Fire Chief	Review and approval of information provided
Gillian Lofrano	District Manager	Provided data and information
Mark D'Ambrogi	Fire Marshal	Participated in meetings, completed required information

Coordination with other community planning efforts is paramount to the successful implementation of this LHMP Update. This section provides information on how the District integrated the previously approved 2016 Plan into existing planning mechanisms and programs. Specifically, the District incorporated into or implemented the 2016 LHMP through other plans and programs shown in Table S-2.

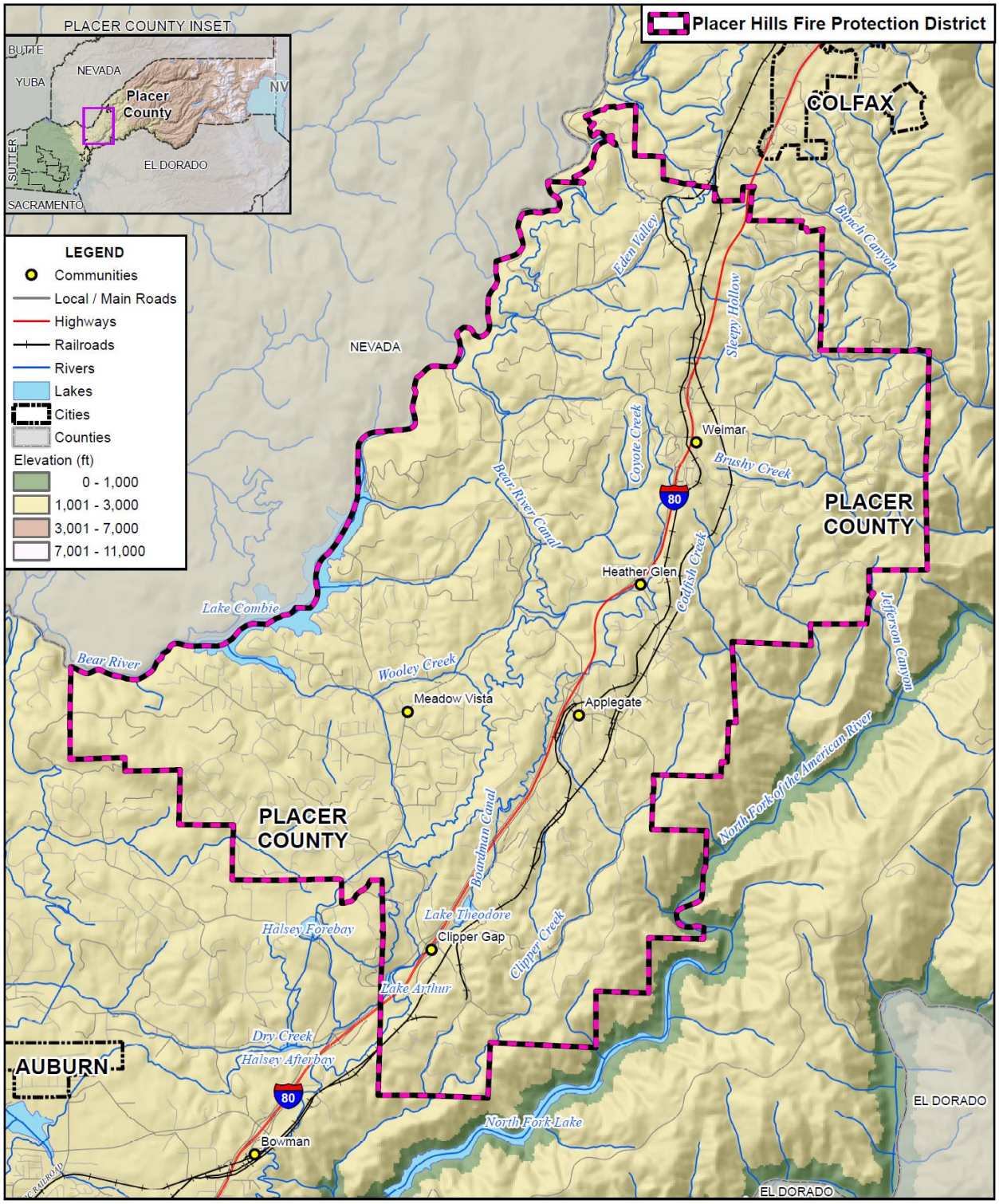
Table S-2 2016 LHMP Incorporation

Planning Mechanism 2016 LHMP Was Incorporated/Implemented In.	Details: How was it incorporated?
N/A	Mitigation related planning mechanisms were completed through coordination with Placer County CDRA

S.3 District Profile

The District profile for the Placer Hills FPD is detailed in the following sections. Figure S-1 displays a map and the location of the District within Placer County.

Figure S-1 Placer Hills FPD



Data Source: Placer County GIS, Cal-Atlas, NVBLM; Map Date: 2021.

S.3.1. Overview and Background

The Placer Hills Fire Protection District (Placer Hills FPD) services a 34 square mile area that houses approximately 12,500 full time residents and a day population of about 15,000 people. The District services the communities of Applegate, Clipper Gap, Eden Valley, Meadow Vista, and Weimar.

In 1949, community members of the Meadow Vista came together through the Grange to create the Meadow Vista Fire Department. In 1988, the Meadow Vista Fire Protection District, Company No. 31 and the Ponderosa Fire Brigade annexed to become the Placer Hills Fire Protection District.

Placer County established Company No. 31 in 1979 at the Weimar Institute to assist in the County contract with the California Department of Forestry. In 1980, members of the Applegate and Weimar communities came together to develop Engine Company No. 31. The community built the fire station in Applegate in 1983 and the County provided an engine and a water-tender. John Velican provided an engine for the Ponderosa Fire Brigade.

With start-up monies budgeted by the Placer County Board of Supervisors, Placer Hills Fire Protection District built a new station at Weimar Crossroads and purchased a new mini-pumper quick attack in 1990. Also in the same year, the Fire Board hired a part-time Fire Marshal to establish a fire prevention program throughout the District. The Placer County Board of Supervisors adopted Ordinance 4225-B, County Code Chapter 7.50 creating the legal authority for fire districts to collect fees in order to mitigate the impacts of new development. The Placer Hills Fire Protection District started collecting the Fire Facilities Fees in late 1990 and has been able to purchase/lease state of the art firefighting engines and equipment.

To further enhance the fire protection of this District, the Fire Board passed a Fire Suppression Benefit Assessment in 1991, which provided daytime staffing during weekdays. Placer Hills Fire Protection District started providing non-transporting Advanced Life Support Services in October 1997. In September 2001 the District staffed one engine with a crew of two, 24 hours per day and an additional engine with 2 during work hours and fire season weekends. The community approved another Benefit Assessment of $49 in June 2004. This enabled the District to staff an engine at both the Meadow Vista and Weimar fire stations 24/7. In 2019 the community approved an additional Benefit Assessment of $185 to continue ALS and full staffing at both stations. The Fire District runs approximately 1,800 calls every year.

S.4 Hazard Identification

Placer Hills FPD identified the hazards that affect the District and summarized their location, extent, frequency of occurrence, potential magnitude, and significance specific to District (see Table S-3).

Table S-3 Placer Hills FPD—Hazard Identification Assessment

Hazard	Geographic Extent	Likelihood of Future Occurrences	Magnitude/ Severity	Significance	Climate Change Influence
Agriculture Pests and Diseases	Limited	Unlikely	Negligible	Low	Medium
Avalanche	Limited	Unlikely	Limited	Low	Medium
Climate Change	Limited	Likely	Critical	Medium	–
Dam Failure	Limited	Occasional	Negligible	Low	Medium
Drought & Water Shortage	Extensive	Likely	Critical	High	High
Earthquake	Limited	Unlikely	Negligible	Low	Low
Floods: 1%/0.2% annual chance	Limited	Likely	Limited	Medium	Medium
Floods: Localized Stormwater	Extensive	Likely	Critical	Medium	Medium
Landslides, Mudslides, and Debris Flows	Limited	Unlikely	Critical	Low	Medium
Levee Failure	Limited	Unlikely	Negligible	Low	Medium
Pandemic	Significant	Unlikely	Critical	Low	Medium
Seiche	Limited	Unlikely	Negligible	Low	Medium
Severe Weather: Extreme Heat	Extensive	Likely	Critical	Medium	High
Severe Weather: Freeze and Snow	Limited	Unlikely	Limited	Medium	Medium
Severe Weather: Heavy Rains and Storms	Limited	Likely	Negligible	Low	Medium
Severe Weather: High Winds and Tornadoes	Limited	Unlikely	Limited	Low	Low
Tree Mortality	Limited	Likely	Limited	Medium	High
Wildfire	Extensive	Highly Likely	Catastrophic	High	High

Geographic Extent
Limited: Less than 10% of planning area
Significant: 10-50% of planning area
Extensive: 50-100% of planning area

Likelihood of Future Occurrences
Highly Likely: Near 100% chance of occurrence in next year, or happens every year.
Likely: Between 10 and 100% chance of occurrence in next year, or has a recurrence interval of 10 years or less.
Occasional: Between 1 and 10% chance of occurrence in the next year, or has a recurrence interval of 11 to 100 years.
Unlikely: Less than 1% chance of occurrence in next 100 years, or has a recurrence interval of greater than every 100 years.

Magnitude/Severity
Catastrophic—More than 50 percent of property severely damaged; shutdown of facilities for more than 30 days; and/or multiple deaths
Critical—25-50 percent of property severely damaged; shutdown of facilities for at least two weeks; and/or injuries and/or illnesses result in permanent disability
Limited—10-25 percent of property severely damaged; shutdown of facilities for more than a week; and/or injuries/illnesses treatable do not result in permanent disability
Negligible—Less than 10 percent of property severely damaged, shutdown of facilities and services for less than 24 hours; and/or injuries/illnesses treatable with first aid

Significance
Low: minimal potential impact
Medium: moderate potential impact
High: widespread potential impact

Climate Change Influence
Low: minimal potential impact
Medium: moderate potential impact
High: widespread potential impact

S.5 Hazard Profile and Vulnerability Assessment

The intent of this section is to profile the District's hazards and assess the District's vulnerability separate from that of the Placer County Planning Area as a whole, which has already been assessed in Section 4.3 Hazard Profiles and Vulnerability Assessment in the Base Plan. The hazard profiles in the Base Plan discuss overall impacts to the Placer County Planning Area and describes the hazard problem description, hazard location and extent, magnitude/severity, previous occurrences of hazard events and the likelihood of future occurrences. Hazard profile information specific to the District is included in this Annex. This vulnerability assessment analyzes the property and other assets at risk to hazards ranked of medium or high significance specific to the District. For more information about how hazards affect the County as a whole, see Chapter 4 Risk Assessment in the Base Plan.

S.5.1. Hazard Profiles

Each hazard vulnerability assessment in Section S.5.3, includes a hazard profile/problem description as to how each medium or high significant hazard (as shown in Table S-3) affects the District and includes information on past hazard occurrences and the likelihood of future hazard occurrence. The intent of this section is to provide jurisdictional specific information on hazards and further describes how the hazards and risks differ across the Placer County Planning Area.

S.5.2. Vulnerability Assessment and Assets at Risk

This section identifies the District's total assets at risk, including values at risk, populations at risk, critical facilities and infrastructure, natural resources, and historic and cultural resources. Growth and development trends are also presented for the District. This data is not hazard specific, but is representative of total assets at risk within the District.

Assets at Risk and Critical Facilities

This section considers the Placer Hills FPD's assets at risk, with a focus on key District assets such as critical facilities, infrastructure, and other District assets and their values. With respect to District assets, the majority of these assets are considered critical facilities as defined for this Plan. Critical facilities are defined for this Plan as:

> ***Any facility, including without limitation, a structure, infrastructure, property, equipment or service, that if adversely affected during a hazard event may result in severe consequences to public health and safety or interrupt essential services and operations for the community at any time before, during and after the hazard event.***

This definition is further refined by separating out three classes of critical facilities:

> ***Class 1 facilities include those facilities that contribute to command, control, communications and computer capabilities associated with managing an incident from initial response through recovery.***

Class 2 facilities include those facilities that house Emergency Services capabilities.

Class 3 facilities are those facilities that enable key utilities and can be used as evacuation centers/shelters/mass prophylaxis sites, etc.

Additional information on the three classes of critical facilities is described further in Section 4.3.1 of the Base Plan.

Table S-4 lists critical facilities and other District assets identified by the District Planning Team as important to protect in the event of a disaster. Placer Hills FPD's physical assets, valued at over $12 million, consist of the buildings and infrastructure to support the District's operations.

Table S-4 Placer Hills FPD Critical Facilities, Infrastructure, and Other District Assets

Name of Asset	Facility Type	Replacement Value	Which Hazards Pose Risk
Station 84	Essential	$5.000,000	Wildfire
Station 85	Essential	$2,000,000	Wildfire
Station 86	Essential	$4,000,000	Wildfire
District Administrative Offices	Essential	$1,000,000	Wildfire
Total		**$12,000,000**	

Source: Placer Hills FPD

Populations Served

Also potentially at risk should the District be affected by natural hazard events are the populations served by the District. Placer Hills FPD provides services to a number of resident types of which include: retired individuals, a majority of the population, senior and elderly persons, working families that commute to school and work, second family homes used periodically throughout the year, and recreational enthusiasts utilizing natural resources in the area.

It is important to note that there are several elderly, disabled, and low income people in the Placer Hills area. In the case of a wildfire evacuation, these people may not have transportation. Likewise, in the event of a power outage during the winter months, these special populations may not be able to get to a shelter for warmth.

Natural Resources

Placer Hills FPD has a variety of natural resources of value to the District. These natural resources parallels that of Placer County as a whole. Information can be found in Section 4.3.1 of the Base Plan.

Historic and Cultural Resources

Placer Hills FPD has a variety of historic and cultural resources of value to the District. These historic and cultural resources parallels that of Placer County as a whole. Information can be found in Section 4.3.1 of the Base Plan.

Growth and Development Trends

General growth in the District parallels that of the Placer County Planning Area as a whole. Information can be found in Section 4.3.1 of the Base Plan. The District is in the planning stages of replacing the current Station 84, anticipating new construction in the next 4-5 years.

Development since 2016

Population growth since 2016 within District boundaries are covered in Section 4.3.1 of the Base Plan and in the individual annexes of the incorporated communities falling within the service area of the District**.**

No District facilities have been constructed since 2016. In 2019 the District purchased a commercial two story building for use as Administrative Offices, Board Meeting Room, and training classroom. Prior to that Administrative Offices were located within Station 84. This facility, like all District facilities, are located within a High Fire Severity Zone. No expansion of service areas is planned.

The Placer Hills Fire Protection District has a cooperative agreement with the Newcastle Fire Protection District for Administrative and Operation services. Of which include: Fire Chief, District Manager, Fire Marshal services, Battalion Chief response, and cross staffing of engine company personnel. Discussions are in process to evaluate the feasibility of consolidation between the two districts.

Future Development

The District has no control over future development in areas the District services. Future development in these areas parallels that of the Placer County Planning Area. The District is in the planning stages of creating an outdoor training facility for all risk hazard training. There are no plans for expansion of the District's service area. More general information on growth and development in Placer County as a whole can be found in "Growth and Development Trends" in Section 4.3.1 Placer County Vulnerability and Assets at Risk of the Base Plan.

S.5.3. Vulnerability to Specific Hazards

This section provides the vulnerability assessment, including any quantifiable loss estimates, for those hazards identified above in Table S-3 as high or medium significance hazards. Impacts of past events and vulnerability of the District to specific hazards are further discussed below (see Section 4.1 Hazard Identification in the Base Plan for more detailed information about these hazards and their impacts on the Placer County Planning Area). Methodologies for evaluating vulnerabilities and calculating loss estimates are the same as those described in Section 4.3 of the Base Plan.

An estimate of the vulnerability of the District to each identified priority hazard, in addition to the estimate of likelihood of future occurrence, is provided in each of the hazard-specific sections that follow. Vulnerability is measured in general, qualitative terms and is a summary of the potential impact based on past occurrences, spatial extent, and damage and casualty potential. It is categorized into the following classifications:

- **Extremely Low**—The occurrence and potential cost of damage to life and property is very minimal to nonexistent.
- **Low**—Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal.
- **Medium**—Moderate potential impact. This ranking carries a moderate threat level to the general population and/or built environment. Here the potential damage is more isolated and less costly than a more widespread disaster.
- **High**—Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past.
- **Extremely High**—Very widespread with catastrophic impact.

Depending on the hazard and availability of data for analysis, this hazard specific vulnerability assessment also includes information on values at risk, critical facilities and infrastructure, populations at risk, and future development.

Climate Change

Likelihood of Future Occurrence–Likely
Vulnerability–Medium

Hazard Profile and Problem Description

Climate change adaptation is a key priority of the State of California. The 2018 State of California Multi-Hazard Mitigation Plan stated that climate change is already affecting California. Sea levels have risen by as much as seven inches along the California coast over the last century, increasing erosion and pressure on the state's infrastructure, water supplies, and natural resources. The State has also seen increased average temperatures, more extreme hot days, fewer cold nights, a lengthening of the growing season, shifts in the water cycle with less winter precipitation falling as snow, and earlier runoff of both snowmelt and rainwater in the year. In addition to changes in average temperatures, sea level, and precipitation patterns, the intensity of extreme weather events is also changing.

Location and Extent

Climate change is a global phenomenon. It is expected to affect the whole of the District, Placer County, and State of California. There is no scale to measure the extent of climate change. Climate change exacerbates other hazards, such as drought, extreme heat, flooding, wildfire, and others. The speed of onset of climate change is very slow. The duration of climate change is not yet known, but is feared to be tens to hundreds of years.

Past Occurrences

Climate change has never been directly linked to any declared disasters. While the District noted that climate change is of concern, no specific impacts of climate change could be recalled. The District and HMPC members did, however, note that in Placer County, the strength of storms does seem to be increasing and the temperatures seem to be getting hotter. Hotter temperatures, combined with recent drought conditions, exacerbates the potential for damaging wildfires.

Vulnerability to and Impacts from Climate Change

The California Adaptation Planning Guide (APG) prepared by California OES and CNRA was developed to provide guidance and support for local governments and regional collaboratives to address the unavoidable consequences of climate change. California's APG: Understanding Regional Characteristics has divided California into 11 different regions based on political boundaries, projected climate impacts, existing environmental setting, socioeconomic factors and regional designations. Placer County falls within the North Sierra Region characterized as a sparsely settled mountainous region where the region's economy is primarily tourism-based. The region is rich in natural resources, biodiversity, and is the source for the majority of water used by the state. This information can be used to guide climate adaptation planning in the District and Placer County Planning Area.

The California APG: Understanding Regional Characteristics identified the following impacts specific to the North Sierra region in which the Placer County Planning Area is part of:

- Temperature increases
- Decreased precipitation
- Reduced snowpack
- Reduced tourism
- Ecosystem change
- Sensitive species stress
- Increased wildfire

Assets at Risk

The District noted that its facilities will most likely not be at risk from climate change.

Drought & Water Shortage

Likelihood of Future Occurrence–Likely
Vulnerability–High

Hazard Profile and Problem Description

Drought is a complex issue involving many factors—it occurs when a normal amount of precipitation and snow is not available to satisfy an area's usual water-consuming activities. Drought can often be defined regionally based on its effects. Drought is different than many of the other natural hazards in that it is not a distinct event and usually has a slow onset. Drought can severely impact a region both physically and economically. Drought affects different sectors in different ways and with varying intensities. Adequate water is the most critical issue and is critical for agriculture, manufacturing, tourism, recreation, and commercial and domestic use. As the population in the area continues to grow, so will the demand for water.

Location and Extent

Drought and water shortage are regional phenomenon. The whole of the County, as well as the whole of the District, is at risk. The US Drought Monitor categorizes drought conditions with the following scale:

- None
- D0 – Abnormally dry
- D1 – Moderate Drought
- D2 – Severe Drought
- D3 – Extreme drought
- D4 – Exceptional drought

Drought has a slow speed of onset and a variable duration. Drought can last for a short period of time, which does not usually affect water shortages and for longer periods. Should a drought last for a long period of time, water shortage becomes a larger issue. Current drought conditions in the District and the County are shown in Section 4.3.10 of the Base Plan.

Past Occurrences

There has been one state and one federal disaster declaration due to drought since 1950. This can be seen in Table S-5.

Table S-5 Placer County – State and Federal Disaster Declarations Summary 1950-2020

Disaster Type	State Declarations		Federal Declarations	
	Count	Years	Count	Years
Drought	1	2014	1	1977

Source: Cal OES, FEMA

Since drought is a regional phenomenon, past occurrences of drought for the District are the same as those for the County and includes 5 multi-year droughts over an 85-year period. Details on past drought occurrences can be found in Section 4.3.10 of the Base Plan.

Vulnerability to and Impacts from Drought and Water Shortage

Based on historical information, the occurrence of drought in California, including the District, is cyclical, driven by weather patterns. Drought has occurred in the past and will occur in the future. Periods of actual drought with adverse impacts can vary in duration, and the period between droughts can be extended. Although an area may be under an extended dry period, determining when it becomes a drought is based on impacts to individual water users. Drought impacts are wide-reaching and may be economic, environmental, and/or societal. Tracking drought impacts can be difficult.

The most significant qualitative impacts associated with drought in the Placer County Planning Area are those related to water intensive activities such as agriculture, wildfire protection, municipal usage, commerce, tourism, recreation, and wildlife preservation. Mandatory conservation measures are typically implemented during extended droughts. Drought conditions can also cause soil to compact and not absorb water well, potentially making an area more susceptible to flooding. With a reduction in water, water

supply issues based on water rights becomes more evident. Climate change may create additional impacts to drought and water shortage in the County and the District.

During periods of drought, vegetation can dry out which increases fire risk. Drought that occurs during periods of extreme heat and high winds can cause Public Safety Power Shutoff (PSPS) events to be declared in the County. More information on power shortage and failure can be found in the Severe Weather: Extreme Heat Section below, as well as in Section 4.3.2 of the Base Plan.

Impacts that may affect the District due to drought are the increased risks of wildfire due to reduced fuel moistures and reduction of water sources for firefighting activities.

Assets at Risk

All District assets (from Table S-4) are at risk from this hazard.

Flood: 1%/0.2% Annual Chance

Likelihood of Future Occurrence–Likely
Vulnerability–Medium

Hazard Profile and Problem Description

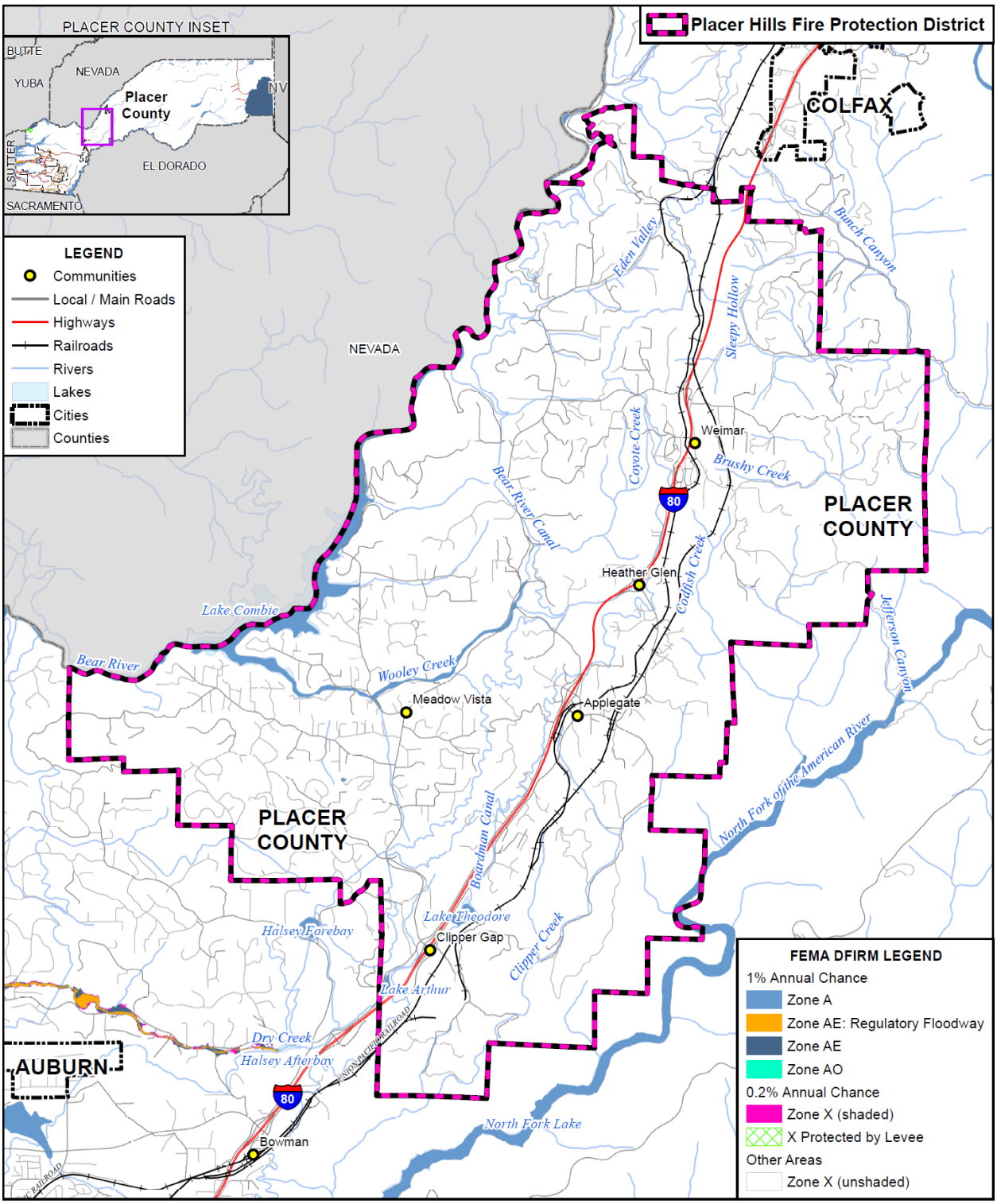
This hazard analyzes the FEMA DFIRM 1% and 0.2% annual chance floods. These tend to be the larger floods that can occur in the County or in the District, and have caused damages in the past. Flooding is a significant problem in Placer County and the District. Historically, the District has been at risk to flooding primarily during the winter and spring months when river systems in the County swell with heavy rainfall and snowmelt runoff. Normally, storm floodwaters are kept within defined limits by a variety of storm drainage and flood control measures. Occasionally, extended heavy rains result in floodwaters that exceed normal high-water boundaries and cause damage.

As previously described in Section 4.3.12 of the Base Plan, the Placer County Planning Area and the Placer Hills FPD have been subject to historical flooding.

Location and Extent

The Placer Hills FPD has areas located in the 1% annual chance floodplain. This is seen in Figure S-2.

Figure S-2 Placer Hills FPD – FEMA DFIRM Flood Zones



Data Source: FEMA DFIRM 11/2/2018, Placer County GIS, Cal-Atlas, NVBLM; Map Date: 2021.

Table S-6 details the DFIRM mapped flood zones within the 1% annual chance flood zone as well as other flood zones located within the District.

Table S-6 Placer Hills FPD– DFIRM Flood Hazard Zones

Flood Zone	Description	Flood Zone Present in the District
A	Areas subject to inundation by the 1% annual-chance flood event generally determined using approximate methodologies. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations (BFEs) or flood depths are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply.	Y
AE	Areas subject to inundation by the 1% annual-chance flood event determined by detailed methods. Base Flood Elevations (BFEs) are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply.	N
AE – Regulatory Floodway	Areas subject to inundation by the 1% annual-chance flood event determined by detailed methods. Base Flood Elevations (BFEs) are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply. Different from AE in that it adds the water course and adjacent lands that must be reserved in order to discharge the base flood without increasing the water surface elevation by more than one foot.	N
AH	An area inundated by 1% annual chance flooding (usually an area of ponding), for which BFEs have been determined; flood depths range from 1 to 3 feet	N
AO	Areas subject to inundation by 100-year shallow flooding (usually sheet flow on sloping terrain) where average depths are between one and three feet	N
Shaded X	500-year flood the areas between the limits of the 1% annual chance flood and the 0.2-percent-annual-chance (or 500-year) flood	N
X Protected by Levee	An area determined to be outside the 500-year flood and protected by levee from 100-year flood	N
X	Areas outside of known floodplains.	Y

Source: FEMA

Additionally, flood extents can generally be measured in volume, velocity, and depths of flooding. Expected flood depths in the District vary, depending on the nature and extent of a flood event; specific depths are unknown. Flood durations in the District tend to be short to medium term, or until either the storm drainage system can catch up or flood waters move downstream. Flooding in the District tends to have a shorter speed of onset, due to the amount of water that flows through the District.

Past Occurrences

A list of state and federal disaster declarations for Placer County from flooding is shown on Table S-7. These events also likely affected the District to some degree.

Table S-7 Placer County – State and Federal Disaster Declarations from Flood 1950-2020

Disaster Type	Federal Declarations		State Declarations	
	Count	Years	Count	Years
Flood (including heavy rains and storms)	16	1950, 1955, 1958 (twice), 1962, 1963, 1969, 1973, 1980, 1983, 1986, 1995 (twice), 1997, 2008, 2017	13	1955, 1958, 1962, 1964, 1969, 1983, 1986, 1995 (twice), 1997, 2006 (twice), 2017

Source: Cal OES, FEMA

Vulnerability to and Impacts from Flood

Floods have been a part of the District's historical past and will continue to be so in the future. During winter months, long periods of precipitation and the timing of that precipitation are critical in determining the threat of flood, and these characteristics further dictate the potential for widespread structural and property damages. Predominantly, the effects of flooding are generally confined to areas near the waterways of the County. As waterways grow in size from local drainages, so grows the threat of flood and dimensions of the threat. This threatens structures in the floodplain. Structures can also be damaged from trees falling as a result of water-saturated soils. Electrical power outages happen, and the interruption of power causes major problems. Loss of power is usually a precursor to closure of governmental offices and community businesses. Roads can be damaged and closed, causing safety and evacuation issues. People may be swept away in floodwaters, causing injuries or deaths.

Floods are among the costliest natural disasters in terms of human hardship and economic loss nationwide. Floods can cause substantial damage to structures, landscapes, and utilities as well as life safety issues. Floods can be extremely dangerous, and even six inches of moving water can knock over a person given a strong current. During a flood, people can also suffer heart attacks or electrocution due to electrical equipment short outs. Floodwaters can transport large objects downstream which can damage or remove stationary structures. Ground saturation can result in instability, collapse, or other damage. Objects can also be buried or destroyed through sediment deposition. Floodwaters can also break utility lines and interrupt services. Standing water can cause damage to crops, roads, foundations, and electrical circuits. Direct impacts, such as drowning, can be limited with adequate warning and public education about what to do during floods. Other problems connected with flooding and stormwater runoff include erosion, sedimentation, degradation of water quality, loss of environmental resources, and economic impacts.

Assets at Risk

No District assets (from Table S-4) are at risk from this hazard.

Flood: Localized Stormwater Flooding

Likelihood of Future Occurrence–Likely
Vulnerability–Medium

Hazard Profile and Problem Description

Flooding occurs in areas other than the FEMA mapped 1% and 0.2% annual chance floodplains. Flooding may be from drainages not studied by FEMA, lack of or inadequate drainage infrastructure, or inadequate maintenance. Localized, stormwater flooding occurs throughout the County during the rainy season from November through April. Prolonged heavy rainfall contributes to a large volume of runoff resulting in high peak flows of moderate duration.

Location and Extent

The Placer Hills FPD is subject to localized flooding throughout the District. Flood extents are usually measured in areas affected, velocity of flooding, and depths of flooding. Expected flood depths in the District vary by location. Flood durations in the District tend to be short to medium term, or until either the storm drainage system can catch up or flood waters move downstream. Localized flooding in the District tends to have a shorter speed of onset, especially when antecedent rainfall has soaked the ground and reduced its capacity to absorb additional moisture.

The District tracks localized flooding areas. localized flood areas identified by the Placer Hills FPD are summarized in Table S-8.

Table S-8 Placer Hills FPD – List of Localized Flooding Problem Areas

Area Name	Flooding	Pavement Deterioration	Washout	High Water	Landslide/ Mudslide	Debris	Downed Trees
Placer Hills Rd at Crother Rd	X			X		X	
Placer Hills Rd along Woolley Creek	X			X		X	
Applegate Rd at railroad undercrossing	X			X			
Boole Rd at Hilltop Rd	X			X		X	
Combie Rd at lower parts	X			X			
Canyon Way at Live Oak	X			X		X	
Placer Hills Rd between Crother Rd and West Weimar Cross Rd					X		X

Source: Placer Hills FPD

Past Occurrences

There have been no federal or state disaster declarations in the County due to localized flooding. The District noted the following past occurrences of localized flooding:

Minor flooding occurs during heavy and prolonged periods of rain throughout the District. Such occurrences cause delays and or re-routing to emergency calls for service. Most all occurrences are confined to county roadways. Locations of the minor flooding that occurs is as follows:

Minor rock debris slides occur during heavy and prolonged periods of rain throughout the District. Such occurrences cause delays and or re-routing to emergency calls for service. Most all occurrences are confined to county roadways which are located along all portions of Placer Hills Rd and portions of Canyon Way.

Vulnerability to and Impacts from Localized Flooding

Historically, much of the growth in the District and County has occurred adjacent to streams, resulting in significant damages to property, and losses from disruption of community activities when the streams overflow. Additional development in the watersheds of these streams affects both the frequency and duration of damaging floods through an increase in stormwater runoff.

Primary concerns associated with stormwater flooding include life safety issues, and impacts to property and to infrastructure that provides a means of ingress and egress throughout the community. Ground saturation can result in instability, collapse, or other damage to trees, structures, roadways and other critical infrastructure. Objects can also be buried or destroyed through sediment deposition. Floodwaters can break utility lines and interrupt services. Standing water can cause damage to crops, roads, and foundations. Other problems connected with flooding and stormwater runoff include erosion, sedimentation, degradation of water quality, losses of environmental resources, and certain health hazards.

The District's concerns with localized flooding include increased response times to emergencies and the ability of citizen evacuation in flooded areas.

Assets at Risk

No District assets (from Table S-4) are at risk from this hazard.

Severe Weather: Extreme Heat

Likelihood of Future Occurrence–Likely
Vulnerability–Medium

Hazard Profile and Problem Description

According to FEMA, extreme heat is defined as temperatures that hover 10 degrees or more above the average high temperature for the region and last for several weeks. Heat kills by taxing the human body beyond its abilities. In extreme heat and high humidity, evaporation is slowed, and the body must work extra hard to maintain a normal temperature." Most heat disorders occur because the victim has been overexposed to heat or has over-exercised for his or her age and physical condition. Older adults, young children, and those who are sick or overweight are more likely to succumb to extreme heat.

In addition to the risks faced by citizens of the District, there are risk to the built environment from extreme heat. While extreme heat on its own does not usually affect structure, extreme heat during times of drought

can cause wildfire risk to heighten. Extreme heat and high winds can cause power outages and PSPS events, causing issues to buildings in the District.

Extreme Heat and Power Shortage/Power Failure

The US power grid crisscrosses the country, bringing electricity to homes, offices, factories, warehouses, farms, traffic lights and even campgrounds. According to statistics gathered by the Department of Energy, major blackouts are on the upswing. Incredibly, over the past two decades, blackouts impacting at least 50,000 customers have increased 124 percent. The electric power industry does not have a universal agreement for classifying disruptions. Nevertheless, it is important to recognize that different types of outages are possible so that plans may be made to handle them effectively. In addition to blackouts, brownouts can occur. A brownout is an intentional or unintentional drop in voltage in an electrical power supply system. Intentional brownouts are used for load reduction in an emergency. Electric power disruptions can be generally grouped into two categories: intentional and unintentional. More information on these types of power outages can be found in Section 4.3.2 of the Base Plan.

Public Safety Power Shutoff (PSPS)

A new intentional disruption type of power shortage/failure event has recently occurred in California. In recent years, several wildfires have started as a result of downed power lines or electrical equipment. This was the case for the Camp Fire in 2018. As a result, California's three largest energy companies (including PG&E), at the direction of the California Public Utilities Commission (CPUC), are coordinating to prepare all Californians for the threat of wildfires and power outages during times of extreme weather. To help protect customers and communities during extreme weather events, including periods of high winds, high temperatures, and low humidity, electric power may be shut off for public safety in an effort to prevent a wildfire. This is called a PSPS. More information on PSPS criteria can be found in Section 4.3.2 of the Base Plan.

Location and Extent

Heat is a regional phenomenon and affects the whole of the District. Heat emergencies are often slower to develop, taking several days of continuous, oppressive heat before a significant or quantifiable impact is seen. Heat waves do not strike victims immediately, but rather their cumulative effects slowly affect vulnerable populations and communities. Heat waves do not generally cause damage or elicit the immediate response of floods, fires, earthquakes, or other more "typical" disaster scenarios.

The NWS has in place a system to initiate alert procedures (advisories or warnings) when extreme heat is expected to have a significant impact on public safety. The expected severity of the heat determines whether advisories or warnings are issued. The NWS HeatRisk forecast provides a quick view of heat risk potential over the upcoming seven days. The heat risk is portrayed in a numeric (0-4) and color (green/yellow/orange/red/magenta) scale which is similar in approach to the Air Quality Index (AQI) or the UV Index. This can be seen in Section 4.3.2 of the Base Plan.

Past Occurrences

There has been no federal or state disaster declarations in the County for heat. The District Planning Team noted that since extreme heat is a regional phenomenon, events that affected the County also affected the District. Those past occurrences were shown in the Base Plan in Section 4.3.2.

The District has experienced increased wildfire danger during times of extreme heat and increased medical responses due to heat related illness.

During times of PSPS the District has been affected with loss of power that impacts communications such as internet and phone. Station 84, Station 86, and the Administrative Offices have back-up generators to continue continuity of services.

Vulnerability to and Impacts from Extreme Heat

The District experiences temperatures in excess of 100°F during the summer and fall months. The temperature moves to 105-110°F in rather extreme situations. During these times, drought conditions may worsen. Also, power outages and PSPS events may occur during these times as well, especially when combined with the potential for severe wind events. Health impacts, including loss of life, are often the primary concern with this hazard, though economic impacts are also an issue.

Days of extreme heat have been known to result in medical emergencies, and unpredictable human behavior. Periods of extended heat and dryness (droughts) can have major economic, agricultural, and water resources impacts. Extreme heat can also dry out vegetations, making it more vulnerable to wildfire ignitions and spread.

Extreme heat is a concern to the District. During extreme hot weather, the risk of wildfire increases. This can be further exacerbated during periods of drought. Also vulnerable to the effects of extreme hot weather is the elderly population located within District boundaries. The District contains a significant elderly population, with some residing in homes that have not been sufficiently updated to protect against extreme temperatures. The effects of extreme heat to the District include increased wildfire danger and potential heat related issues to personnel engaging in emergency response.

Assets at Risk

No District assets (from Table S-4) are at risk from this hazard.

Severe Weather: Freeze and Snow

Likelihood of Future Occurrence–Unlikely
Vulnerability–Medium

Hazard Profile and Problem Description

According to the NWS and the WRCC, winter snowstorms can include heavy snow, ice, and blizzard conditions. Heavy snow can immobilize a region, stranding commuters, stopping the flow of supplies, and

disrupting emergency and medical services. Accumulations of snow can collapse roofs and knock down trees and power lines. In rural areas, homes and farms may be isolated for days, and unprotected livestock may be lost. The cost of snow removal, damage repair, and business losses can have a tremendous impact on cities and towns.

Heavy accumulations of ice can bring down trees, electrical wires, telephone poles and lines, and communication towers. Communications and power can be disrupted for days until the damage can be repaired. Power outages can have a significant impact on communities, especially critical facilities such as public utilities. Even small accumulations of ice may cause extreme hazards to motorists and pedestrians.

Some winter storms are accompanied by strong winds, creating blizzard conditions with blinding wind-driven snow, severe drifting, and dangerous wind chills. Strong winds accompanying these intense storms and cold fronts can knock down trees, utility poles, and power lines. Blowing snow can reduce visibility to only a few feet in areas where there are no trees or buildings. Serious vehicle accidents with injuries and deaths can result. Freezing temperatures can cause significant damage to the agricultural industry.

Location and Extent

Freeze and snow are regional issues, meaning the entire District is at risk to cold weather and freeze events. While there is no scale (i.e. Richter, Enhanced Fujita) to measure the effects of freeze, the WRCC reports that in a typical year, minimum temperatures fall below 32°F on 22.6 days with 0 days falling below 0°F in western Placer County. Snowfall is measured in depths, and the WRCC reports that average snowfall on the western side of the County is 1.4 inches. Freeze and snow have a slow onset and can generally be predicted in advance for the County. Freeze events can last for hours (in a cold overnight), or for days to weeks at a time. Snow event can last for hours or days, but is more unlikely in the western portion of the County. When it does snow, the snow often melts relatively quickly.

Past Occurrences

There has been no federal and one state disaster declarations in the County for freeze and snow, as shown on Table S-9.

Table S-9 Placer County – State and Federal Disaster Declarations from Freeze and Snow 1950-2020

Disaster Type	State Declarations		Federal Declarations	
	Count	Years	Count	Years
Freeze	1	1972	0	–

Source: Cal OES, FEMA

The District noted that cold and freeze is a regional phenomenon; events that affected the County also affected the District. Those past occurrences were shown in the Base Plan in Section 4.3.3.

The most eastern portion of the District that include the communities of Applegate, Weimar, and unincorporated Colfax experience snow and freezing. Typically this occurs 4-8 times a year requiring fire apparatus to utilize chains on response vehicles to navigate these conditions. This will usually result in

extended response times. An increase for calls of service due to broken water pipes does occur during these events.

Vulnerability to and Impacts from Severe Weather: Freeze and Snow

The District experiences temperatures below 32 degrees during the winter months. Freeze can cause injury or loss of life to residents of the District. While it is rare for buildings to be affected directly by freeze, damages to pipes that feed buildings can be damaged during periods of extreme cold. Freeze and snow can occasionally be accompanied by high winds, which can cause downed trees and power lines, power outages, accidents, and road closures. Transportation networks, communications, and utilities infrastructure are the most vulnerable physical assets to impacts of severe winter weather in the County.

Freeze and snow are a concern to the District. During periods of freeze and snow, pipes in both residential and commercial buildings freeze and crack, and transit becomes difficult with many roads in the area freezing over. The impact to the area road system is not just a concern to residents, but also to the emergency service crews who can become immobilized during emergency situations. Even the small snow events that occur half a dozen times every year in the Weimar area create significant traffic issues for cars and school buses. According to the Placer Hills FPD planning team, winter storms resulting in up to three feet of snow occurred in 1990 causing moderate property damage, and closing businesses, schools, and roads creating significant impacts to the area. During extreme winter events, response times to emergencies may be extended. Also vulnerable to the effects of freeze and snow is the elderly population located within District boundaries. The District contains a significant elderly population, with some residing in homes that have not been sufficiently updated to protect against extreme temperatures.

Impacts to the District include extended response times, increase in freeze related incidents of broken water pipes, increase in vehicle accidents, and medical emergencies related to freezing conditions.

Assets at Risk

No District assets (from Table S-4) are at risk from this hazard.

Tree Mortality

Likelihood of Future Occurrence–Likely
Vulnerability–Medium

Hazard Profile and Problem Description

One of the many vulnerabilities of drought in Placer County is the increased risk of widespread tree mortality events that pose hazards to people, homes, and community infrastructure, create a regional economic burden to mitigate, and contribute to future fuel loads in forests surrounding communities. During extended drought, tree mortality is driven by a build-up in endemic bark beetle populations and exacerbated by latent populations of a suite of native insects and disease. Non-native forest pests (insects and/or pathogens) can also contribute to tree mortality events.

Location and Extent

Onset of tree mortality events can be relatively fast; however conditions – such as high stand densities – that lead to tree mortality accumulate slowly over time. Duration of tree mortality is lengthy, as once the tree dies, it remains in place until removed by human activity, wildfire, or breakdown of the wood by nature. Many areas in Placer County have seen increases in tree mortality. The County has mapped these areas, and that map was shown in Section 4.3.18 of the Base Plan. Using a color legend, the map provided by CAL FIRE shows a scale of:

- Deep burgundy depicting areas with more than 40 dead trees per acre
- Red depicting 15 - 40 dead trees per acre
- Orange depicting 5 -15 dead trees per acre
- Yellow depicting 5 or less dead trees per acre

In the past decade, mortality has increased in the middle and eastern portion of Placer County. During the 2012-2018 drought, the state of California Tree Mortality Task force designated multiple Tier 1 and Tier 2 High Hazard Zones where tree morality posed an elevated risk to human health, properties, and resource values. A number of Placer County areas were designated during this event and the majority of Placer County watersheds were designated as Tier 2 high hazard zones because of the significant levels of tree mortality, along with numerous Tier 1 High hazard "hot spots".". A map of these areas was shown in in Section 4.3.18 of the Base Plan.

There have been several locations where tree mortality has been present in the District. Most areas have been relatively small in scale limited to 5-10 dead trees per acre on private properties. These areas have been mitigated by property owner actions to eliminate the dead trees.

Past Occurrences

There have been no state or federal disasters in the County related directly to tree mortality, though it has most likely contributed to the intensity of past wildfires in the County. Those events are shown in the Past Occurrences section of Wildfire below. In 2015, then-Governor Edmund G. Brown Jr. proclaimed a state of emergency due to the extreme hazard of the dead and dying trees. Following the proclamation, 10 counties were determined to be most affected, which included Placer County. Placer County proclaimed a local emergency due to tree mortality conditions on Dec. 8, 2015.

Past tree mortality in the District has been very limited, 1-2 trees on any given private parcel. Majority of tree mortality has occurred at higher elevations including the North Fork Shaded Fuel Break contingent to District boundary. This project is a Cal Fire project and tree mortality is addressed through the implementation.

Vulnerability to and Impacts from Tree Mortality

Placer County is unique in that many residential and business areas of the community are in the wildland urban interface/intermix with the forest. Trees in these interface/intermix areas are particularly vulnerable to insect and/or drought driven mortality because of the additional stressors that urban environments impose

on trees (i.e. Soil compaction, altered hydrology, physical damage, heat islands etc.). This exacerbates the occurrence of tree mortality within the populated settings of the County.

Dead trees are a hazard to the general public and forest visitors, but the risk of injury, death, property damage or infrastructure damages varies depending how the hazard interacts with potential targets. Dead trees within the wildland urban intermix or wildland urban interface or urban areas therefore pose a greater risk to due to their proximity to residents, businesses, and road, power, and communication infrastructure.

Dead trees may fall or deteriorate in their entirety or in part – either mechanism has the potential for injury, death, or inflicting severe damage to targets. As the time since tree mortality increases, so does the deterioration of wood and the potential for tree failure.

The primary concerns the District has concerning tree mortality is the increased dead fuel loading for wildfire and falling dead trees into structures causing damage and or injury.

Assets at Risk

No District assets (from Table S-4) are at risk from this hazard.

Wildfire

Likelihood of Future Occurrence–Highly Likely
Vulnerability–High

Hazard Profile and Problem Description

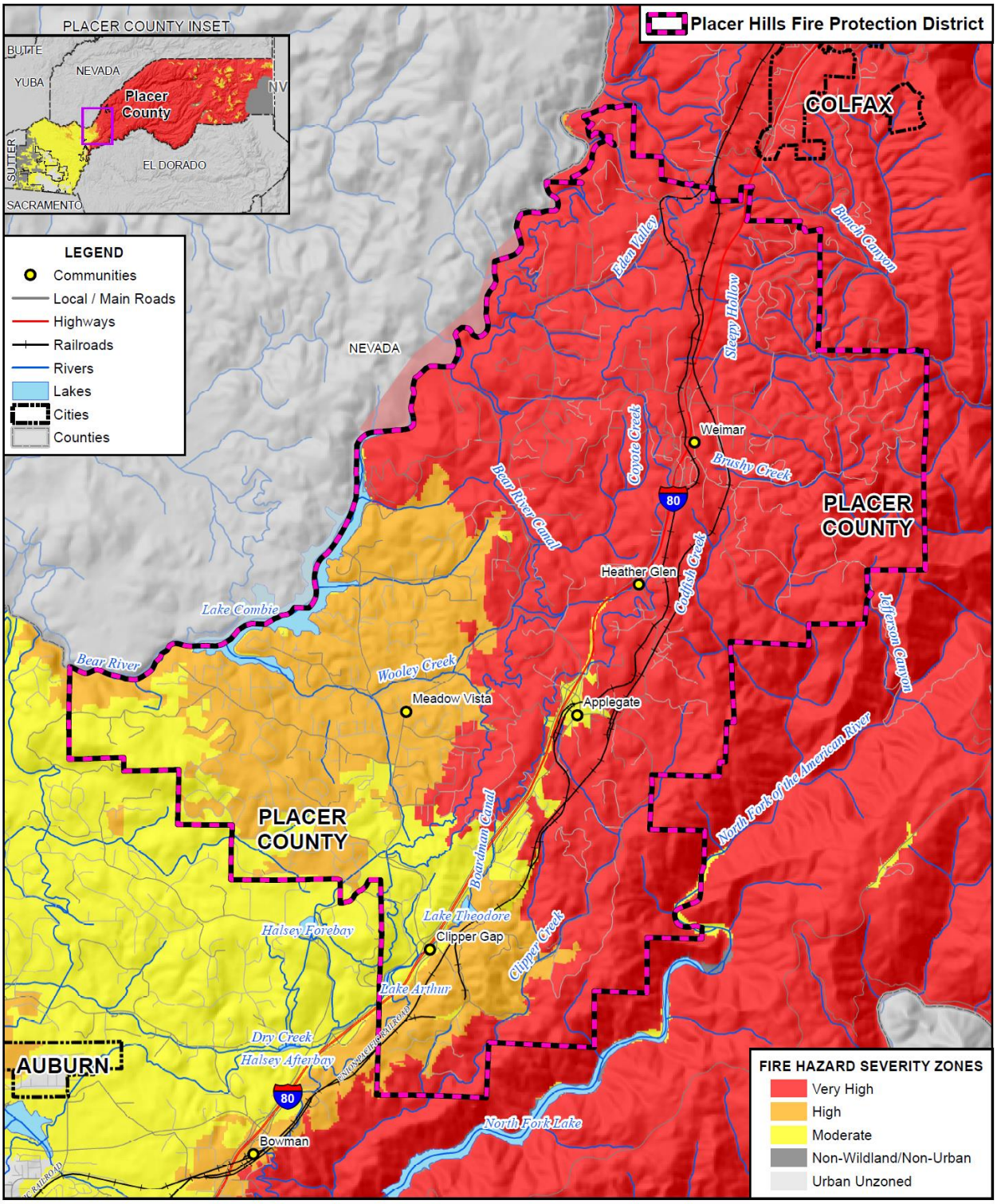
Wildland fire and the risk of a conflagration is an ongoing concern for the Placer Hills FPD. Throughout California, communities are increasingly concerned about wildfire safety as increased development in the foothills and mountain areas and subsequent fire control practices have affected the natural cycle of the ecosystem. Wildland fires affect grass, forest, and brushlands, as well as any structures located within them. Where there is human access to wildland areas the risk of fire increases due to a greater chance for human carelessness and historical fire management practices. Historically, the fire season extends from early spring through late fall of each year during the hotter, dryer months; however, in recent years, the risk of wildfire has become a year around concern. Fire conditions arise from a combination of high temperatures, low moisture content in the air and fuel, accumulation of vegetation, and high winds. While wildfire risk has predominantly been associated with more remote forested areas and wildland urban interface (WUI) areas, significant wildfires can also occur in more populated, urban areas.

Location and Extent

Wildfire can affect all areas of the District. CAL FIRE has estimated that the risk varies across the District and has created maps showing risk variance. Following the methodology described in Section 4.3.19 of the Base Plan, wildfire maps for the Placer Hills FPD were created. Figure S-3 shows the CAL FIRE FHSZ in the District. As shown on the maps, fire hazard severity zones within the District range from Moderate to Very High.

The entire Placer Hills Fire District is within State Responsibility Area (SRA). Cal Fire is the primary agency for wildfire with assistance from the Placer Hills Fire District. Wildfire activity is captured and recorded by Cal Fire for the LHMP.

Figure S-3 Placer Hills FPD – Fire Hazard Severity Zones



Data Source: Cal-Fire (Draft 09/2007 - c31fhszl06_1, Adopted 11/2007 - fhszs06_3_31, Recommended 12/2008 - c31fhszl06_3), Placer County GIS, Cal-Atlas, NVBLM; Map Date: 2021.

Wildfires tend to be measured in structure damages, injuries, and loss of life as well as on acres burned. Fires can have a quick speed of onset, especially during periods of drought or during hot dry summer months. Fires can burn for a short period of time, or may have durations lasting for a week or more.

Past Occurrences

There has been five state and six federal disaster declarations for Placer County from fire. These can be seen in Table S-10.

Table S-10 Placer County – State and Federal Disaster Declarations Summary 1950-2020

Disaster Type	State Declarations		Federal Declarations	
	Count	Years	Count	Years
Fire	5	1961, 1965, 1973, 1987, 2010	6	2002, 2004, 2008, 2009, 2014 (twice)

Source: Cal OES, FEMA

The Placer Hills Fire District responds to structure fires. There have been no significant sole structure fires within the District in the last 5 years.

Vulnerability to and Impacts from Wildfire

Risk and vulnerability to the Placer County Planning Area and the District from wildfire is of significant concern, with some areas of the Planning Area being at greater risk than others as described further in this section. High fuel loads in the Planning Area, combined with a large built environment and population, create the potential for both natural and human-caused fires that can result in loss of life and property. These factors, combined with natural weather conditions common to the area, including periods of drought, high temperatures, low relative humidity, and periodic winds, can result in frequent and potentially catastrophic fires. During the nearly year around fire season, the dry vegetation and hot and sometimes windy weather results in an increase in the number of ignitions. Any fire, once ignited, has the potential to quickly become a large, out-of-control fire. As development continues throughout the County and the District, especially in these interface areas, the risk and vulnerability to wildfires will likely increase.

Potential impacts from wildfire include loss of life and injuries; damage to structures and other improvements, natural and cultural resources, croplands, and loss of recreational opportunities. Wildfires can cause short-term and long-term disruption to the District. Fires can have devastating effects on watersheds through loss of vegetation and soil erosion, which may impact the District by changing runoff patterns, increasing sedimentation, reducing natural and reservoir water storage capacity, and degrading water quality. Fires can also affect air quality in the District; smoke and air pollution from wildfires can be a severe health hazard.

Although the physical damages and casualties arising from large fires may be severe, it is important to recognize that they also cause significant economic impacts by resulting in a loss of function of buildings and infrastructure. Economic impacts of loss of transportation and utility services may include traffic delays/detours from road and bridge closures and loss of electric power, potable water, and wastewater services. Schools and businesses can be forced to close for extended periods of time. Recently, the threat

of wildfire, combined with the potential for high winds, heat, and low humidity, has caused PG&E to initiate PSPSs which can also significantly impact a community through loss of services, business closures, and other impacts associated with loss of power for an extended period. More information on power shortage and failure can be found in the Severe Weather: Extreme Heat Section above, as well as in Section 4.3.2 of the Base Plan. In addition, catastrophic wildfire can create favorable conditions for other hazards such as flooding, landslides, and erosion during the rainy season.

Since all of the District is within a Fire Hazard Severity Zone as identified by Cal Fire and is a combination of Wildland Urban Intermix and Wildland Urban Interface, main concerns are for the safety of citizens and protection of structures from wildfire. Given the right conditions; weather, fuels, and topography, a wildfire can significantly impact and cause catastrophic damage to development within the District.

Assets at Risk

All District assets (from Table S-4) are at risk from this hazard.

S.6 Capability Assessment

Capabilities are the programs and policies currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. This capabilities assessment is divided into five sections: regulatory mitigation capabilities, administrative and technical mitigation capabilities, fiscal mitigation capabilities, mitigation education, outreach, and partnerships, and other mitigation efforts.

S.6.1. Regulatory Mitigation Capabilities

Table S-11 lists regulatory mitigation capabilities, including planning and land management tools, typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are in place in the Placer Hills FPD.

Table S-11 Placer Hills FPD Regulatory Mitigation Capabilities

Plans	Y/N Year	Does the plan/program address hazards? Does the plan identify projects to include in the mitigation strategy? Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan/General Plan	N	
Capital Improvements Plan	Y	Mitigation measure to be incorporated into each specific project
Economic Development Plan	N	
Local Emergency Operations Plan	Y	Through coordination with Placer County
Continuity of Operations Plan	Y	Local District Operating Procedures, to follow Placer County Plan
Transportation Plan	N	
Stormwater Management Plan/Program	N	
Engineering Studies for Streams	N	
Community Wildfire Protection Plan	Y	In coordination with the Placer Sierra Fire Safe Council

Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)	N	
Building Code, Permitting, and Inspections	**Y/N**	**Are codes adequately enforced?**
Building Code	Y	Version/Year: Enforced through Placer County CDRA
Building Code Effectiveness Grading Schedule (BCEGS) Score	N	Score: ??(Placer County?)
Fire department ISO rating:	Y	Rating: 3/3Y
Site plan review requirements	Y	Enforced through District Standard Conditions for Development
Land Use Planning and Ordinances	**Y/N**	**Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced?**
Zoning ordinance	N	(All these areas the District falls under Placer County)
Subdivision ordinance	N	
Floodplain ordinance	N	
Natural hazard specific ordinance (stormwater, steep slope, wildfire)	N	
Flood insurance rate maps	N	
Elevation Certificates	N	
Acquisition of land for open space and public recreation uses	N	
Erosion or sediment control program	N	
Other	N	
How can these capabilities be expanded and improved to reduce risk?		
Continued cooperative planning and building review processes to ensure all agencies apply mitigation measures and conditions for development.		

Source: Placer Hills FPD

New Development: Project Guidelines

The District has and continues to adopt Ordinances to mitigate issues related to fire and life safety. These Ordinances include adoption of the most current California Fire Code, Placer County Hazardous Vegetation Ordinance with an MOU for enforcement/abatement services, Fee schedules for plan review, approval, and inspection to ensure compliance with Ordinances.

These guidelines contain fire prevention requirements for new development. Key elements include requirements for the following:

- Addresses and Access
- Water Supply, rural and municipal
- Fire suppression systems
- Vegetation Abatement and defensible space
- Fire Alarm Systems

- Hydrants and water storage for firefighting

S.6.2. Administrative/Technical Mitigation Capabilities

The Board is comprised of 5 members and is selected by registered voters within the District. The Board serves as the governing body for the District's residents. The Board of Directors approves District Rules and Regulations and, through the Fire Chief, ensures adherence to District policies. The Placer Hills FPD provides services through three fire stations: Meadow Vista, Applegate, and Weimar.

Placer Hills FPD's dispatch services are provided by the Placer County Sheriff's Office 911 center in Auburn. The 911 center uses computer aided dispatching to ensure optimal resource monitoring and management utilizing the closest resource backed up by station cover assignments in a multi-tiered alarm structure. Table S-12 identifies the personnel responsible for activities related to mitigation and loss prevention in the District.

Table S-12 Placer Hills FPD's Administrative and Technical Mitigation Capabilities

Administration	Y/N	Describe capability Is coordination effective?
Planning Commission	Y	In coordination with Placer County, Yes
Mitigation Planning Committee	N	
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	N	
Mutual aid agreements	Y	Through Western Placer County Fire Chiefs Association, closest resources response agreement
Other	Y	Placer County Code Enforcement for abatement of hazardous vegetation
Staff	**Y/N FT/PT**	**Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation? Is coordination between agencies and staff effective?**
Chief Building Official	Y	In coordination with Placer County
Floodplain Administrator	N	
Emergency Manager	Y	In coordination with Placer County
Community Planner	Y	In coordination with Placer County
Civil Engineer	Y	In coordination with Placer County
GIS Coordinator	Y	In coordination with Placer County
Other		
Technical		
Warning systems/services (Reverse 911, outdoor warning signals)	Y	In coordination with Placer County
Hazard data and information	Y	In coordination with Placer County
Grant writing	N	
Hazus analysis	N	

Other
How can these capabilities be expanded and improved to reduce risk?
Continued cooperative planning and inspection processes to ensure all agencies apply mitigation measures and conditions to reduce risk.

Source: Placer Hills FPD

S.6.3. Fiscal Mitigation Capabilities

Table S-13 identifies financial tools or resources that the District could potentially use to help fund mitigation activities.

Table S-13 Placer Hills FPD's Fiscal Mitigation Capabilities

Funding Resource	Access/ Eligibility (Y/N)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Capital improvements project funding	Y	From Impact Fees and Special Assessments
Authority to levy taxes for specific purposes	Y	Voter approved only, to sustain funding for services
Fees for water, sewer, gas, or electric services	N	
Impact fees for new development	Y	Used for capital expenses
Storm water utility fee	N	
Incur debt through general obligation bonds and/or special tax bonds	Y	Not Used
Incur debt through private activities	N	
Community Development Block Grant	N	
Other federal funding programs	Y	SAFER Grant for former Fire Marshal position
State funding programs	N	
Other	N	
How can these capabilities be expanded and improved to reduce risk?		
The District will continue to seek grant monies from all sources in order to better protect residents and structures in District territories.		

Source: Placer Hills FPD

S.6.4. Mitigation Education, Outreach, and Partnerships

Table S-14 identifies education and outreach programs and methods already in place that could be/or are used to implement mitigation activities and communicate hazard-related information.

Table S-14 Placer Hills FPD's Mitigation Education, Outreach, and Partnerships

Program/Organization	Yes/No	Describe program/organization and how relates to disaster resilience and mitigation. Could the program/organization help implement future mitigation activities?
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	YN	Placer Sierra Fire Safe Council, Placer County Fire Alliance. Evaluate risk and identify projects to reduce wildfire risk.
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Y	Updated web site, social media- Facebook, Twitter. To get safety messages out to public.
Natural disaster or safety related school programs	Y	School programs
StormReady certification	N	
Firewise Communities certification	Y	Through Placer County Fire Alliance and FIREWISE Coordinator.
Public-private partnership initiatives addressing disaster-related issues	N	
Other	N	
How can these capabilities be expanded and improved to reduce risk?		
Continued participation with allied agencies and organizations and collaborate with single messaging on specific issues.		

Source: Placer Hills FPD

The Placer Hills FPD has automatic aid agreements with bordering Districts and mutual aid agreements with other fire agencies throughout the area. The District relies heavily upon this aid from neighbors.

The District also works with other agencies on wildfire-related matters. Working with professional fire experts from the U.S. Forest Service and California Department of Forestry and Fire Protection helps ensure that the District's work complements state and federal work and is up to standard for controlling wildfires.

S.6.5. Other Mitigation Efforts

The District has many other completed or ongoing mitigation efforts that include the following:

- In 2017/18 the District received a FEMA Fire Prevention Award for a Fire Marshal position. An individual was hired for this position and when funding ended (one year funding) the individual moved on to another agency. The Fire Marshal position was retained as a part-time position as it functions to this day.
- In 2019 the District was successful in passing of Measure A. A parcel tax for all properties within the District that brings in an approximate additional 1 million dollars. This funding allows the retention of two stations staffed 24/7 with paramedic capability, an internship program that provides a third FF on each engine company, ability to reserve funds for capital improvements, and as of this date and time, all full-time positions are filled.
- The District has developed Standards for new development and implemented a fee schedule for pre-development and inspection services.
- The District has adopted the Placer County Hazardous Abatement Ordinance and has a MOU with Placer County for Code Enforcement and Abatement processes. This Ordinance is used extensively for compliance of defensible space requirements within the District.

- An Administrative building was purchased in 2020 where District Administration functions, including meeting and training rooms.
- An agreement for services was implemented between the Newcastle Fire District and Placer Hills Fire District. Placer Hills provides administrative services; Fire Chief, Fire Marshal, District Manager, Battalion Chiefs, and allows for the sharing of firefighting personnel between the two agencies to ensure maximum staffing for each work shift. Discussion of consolidating the two agencies is ongoing.

The District is involved in a variety of mitigation activities including public education, fuels management projects, and other activities to reduce fuel loads and fire risk. These mitigation activities include:

- Public Education and Fire Safety
  - ✓ A variety of public outreach activities are conducted throughout the district on an ongoing basis.
  - ✓ The District has a program where they make address signs and provide them to the public at cost.
  - ✓ The District promotes the use of the County Chipper for local residents.

- Defensible Space
  - ✓ When staffing is available for program management, the District provides defensible space inspections for area residents upon request.
  - ✓ When staffing is available for program management complaint based inspections occur for vegetation management on private properties to be in compliance with the Hazardous Vegetation Ordinance.

- New Development
  - ✓ The District has a comprehensive review, approval, and inspection process for all new development within the Districts that address fire and life safety issues in addition to the Placer County development process.

S.7 Mitigation Strategy

S.7.1. Mitigation Goals and Objectives

The Placer Hills FPD adopts the hazard mitigation goals and objectives developed by the HMPC and described in Chapter 5 Mitigation Strategy.

S.7.2. Mitigation Actions

The planning team for the Placer Hills FPD identified and prioritized the following mitigation actions based on the risk assessment. Background information and information on how each action will be implemented and administered, such as ideas for implementation, responsible office, potential funding, estimated cost, and timeline are also included. The following hazards were considered a priority for purposes of mitigation action planning:

- Climate Change
- Drought & Water Shortage
- Floods: 1%/0.2% annual chance
- Floods: Localized Stormwater
- Severe Weather: Extreme Heat

- Severe Weather: Freeze and Snow
- Tree Mortality
- Wildfire

It should be noted that many of the projects submitted by each jurisdiction in Table 5-4 in the Base Plan benefit all jurisdictions whether or not they are the lead agency. Further, many of these mitigation efforts are collaborative efforts among multiple local, state, and federal agencies. In addition, the countywide public outreach action, as well as many of the emergency services actions, apply to all hazards regardless of hazard priority. Collectively, this multi-jurisdictional mitigation strategy includes only those actions and projects which reflect the actual priorities and capacity of each jurisdiction to implement over the next 5-years covered by this plan. It should further be noted, that although a jurisdiction may not have specific projects identified for each priority hazard for the five year coverage of this planning process, each jurisdiction has focused on identifying those projects which are realistic and reasonable for them to implement and would like to preserve their hazard priorities should future projects be identified where the implementing jurisdiction has the future capacity to implement.

Multi-Hazard Actions

Action 1. Address signage for residential and commercial structures.

Hazards Addressed: Multi-hazard (Climate Change, Drought & Water Shortage, Floods: 1%/0.2% annual chance, Floods: Localized Stormwater, Severe Weather: Extreme Heat, Severe Weather: Freeze and Snow, Tree Mortality, and Wildfire)

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background: Many structures throughout the fire district have either no addressing or limited addressing that is not consistent. Many structures were built at a time when there was no addressing standard in place. There is now a standard created by Placer County for consistent addressing in unincorporated areas of Placer County.

Project Description: Apply Placer County standard for addressing for all new construction throughout the fire district. Identify structures needing appropriate addressing and inform and educate property owners of a standard and consistent addressing means.

Other Alternatives: No other alternatives are identified at this time.

Existing Planning Mechanism(s) through which Action Will Be Implemented: Addressing for new construction will be identified and implemented during the plan review and approval process as a condition to develop. Through inspection as well as emergency response to incidents where addressing is lacking, inform and educate property owners of the value of appropriate addressing.

Responsible Agency/ Department/Partners: Placer Hills Fire Protection District staff officers and engine company personnel.

Cost Estimate: No costs identified, use of district personnel to implement. Costs for address signage will be the responsibility of the property owner. Estimated at $40-$60 dependent upon where obtained.

Benefits (Losses Avoided): Prevent delay in emergency response to incidents. Can assist in incidents requiring evacuation and in pre-planning communities for major incidents.

Potential Funding: Possible grant funding for large scale "addressing project". The Placer Hills Firefighter Association creates address signs for citizens as a fund raising project.

Timeline: Ongoing

Project Priority (H, M, L): High

Action 2. Defensible space inspection and implementation throughout the District.

Hazards Addressed: Wildfire, Climate Change, Drought and Water Shortage, and Extreme Heat

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background: Most all of the District lies within Very High or High Fire Severity Zones as identified by Cal Fire. The application of defensible space and home hardening are ways to reduce the risk of wildfire destruction. Although homeowners/business owners are aware of such risks, through an inspection process property owners can be better informed of what action they can do to reduce such risks.

Project Description: Through an inspection process, educate, inform, and make recommendation for property owners on what actions to take to reduce the risk of destruction from wildfire. Identify vegetation to remove, reduce, and maintain to achieve defensible space. Identify potential areas of home hardening to better prepare for wildfire. Conduct inspections on private properties to identify specific needs of that property to achieve defensible space.

Other Alternatives: No other alternatives are identified at this time.

Existing Planning Mechanism(s) through which Action Will Be Implemented: All new construction will be conditioned to create and maintain defensible space through the plan review and approval process as a condition to build. Through an inspection program, identify areas to conduct property inspections. The basis of the inspection program will utilize Public Resource Code (PRC), Placer County Hazardous Vegetation Ordinance, and local fire district adopted ordinance.

Responsible Agency/ Department/Partners: Placer Hills Fire Protection District designated staff will implement and manage this inspection program.

Cost Estimate: Currently the District has one part-time funded Fire Marshal position to manage this program. Additional funding will increase success in implementation. Property owners are responsible for implementing clearance requirements.

Benefits (Losses Avoided): Reduction of property loss due to wildfire may be obtained through such a program.

Potential Funding: Possible grant funding for fulltime and or additional personnel for project management and inspection. Potential of charging fee for inspection.

Timeline: Ongoing

Project Priority (H, M, L): High

Action 3. Private roadway and driveway vegetation clearances.

Hazards Addressed: Wildfire, Tree Mortality, Climate Change, Drought and Water Shortage, and Extreme Heat

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background: Many private roadways and driveways throughout the fire district contain dense flammable vegetation along the shoulders of the roadway/driveway as well vertical clearances. This can impede fire resource response and somewhat limit access in the event of an emergency. During wildfire conditions this can pose significant risk to responders as well as civilians.

Project Description: Through inspection, identify those areas needing fuel reduction along private roadways and driveways. Optimal clearance is 10 feet from each shoulder and 15 vertical clearance. Inform property owners of the importance and their responsibility to create and maintain these accesses for emergency response and civilian evacuation. Implement the formal process of "Notice to Abate" as needed.

Other Alternatives: No other alternatives are identified at this time.

Existing Planning Mechanism(s) through which Action Will Be Implemented: All new constructed roads and driveways will be conditioned to create and maintain clearance through the plan review and approval process as a condition to develop. Through inspection as well as emergency response to incidents, personnel will identify areas needing appropriate clearance. Once identified, a process will be initiated based on the Placer County Hazardous Vegetation Ordinance and local fire district adopted ordinance.

Responsible Agency/ Department/Partners: Placer Hills Fire Protection District staff officers and engine company personnel.

Cost Estimate: Currently the District has one part-time funded Fire Marshal position to manage this program. Additional funding will increase success in implementation. Property owners are responsible for implementing clearance requirements.

Benefits (Losses Avoided): Prevent delay in emergency response to incidents and potentially increased ability of civilian evacuation. Reduce vegetation to reduce fuel loading and the risk of wildfire.

Potential Funding: Possible grant funding for large scale roadside clearing projects for project management and fuel reduction implementation.

Timeline: Ongoing

Project Priority (H, M, L): High

Action 4. Participate and collaborate with the Placer Sierra Fire Safe Council (PSFSC) and contribute to the Community Wildfire Protection Plan (CWPP)

Hazards Addressed: Wildfire, Climate Change, Drought and Water Shortage, and Extreme Heat

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background: The Placer Hills Fire Protection District is within the boundaries of the GAAFSC. Participation from Placer Hills Fire Protection District continues strong over the years. Two (2) members of the Placer Hills Fire Protection District have been appointed to the PSFSC. The Fire Safe Council's in Placer County contribute greatly to the CWPP. This is opportunity for local fire agencies to be involved in such a process.

Project Description: Continued participation and collaboration will occur on an on-going basis. Attending monthly meetings and participate in PSFSC events by command staff member(s).

Other Alternatives: No other alternatives have been identified that includes such collaboration

Existing Planning Mechanism(s) through which Action Will Be Implemented: Identify staff personnel to attend meetings and PSFSC events.

Responsible Agency/ Department/Partners: Placer Hills Fire Protection District command staff.

Cost Estimate: No costs are associated with this action.

Benefits (Losses Avoided): Keep current on projects and public outreach campaigns. Develop a collaborative approach to the wildfire risks and reduction methods. Participate in the CWPP process.

Potential Funding: Possible grant funding through the PSFSC to assist Placer Hills Fire Protection District with fuel reduction and related projects.

Timeline: Ongoing

Project Priority (H, M, L): High

Action 5. Heavy Rains, Localized Flooding, Flood, Freeze, and Snow Mitigation

Hazards Addressed: Natural events that create flooding, localized flooding, freezing, and snow.

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background: From time to time, the District experiences localized heavy rains that create minor flooding on streets and roads used for emergency response. In addition, freezing may occur occasionally. This natural occurrence of rain, and freeze can have an impact on response to emergencies.

Project Description: Obtain the most up-to-date information regarding adverse weather, predicted weather events, and related weather that may impact District response to emergencies.

Other Alternatives: No other alternatives are identified at this time.

Existing Planning Mechanism(s) through which Action Will Be Implemented: Coordinate with Placer OES on specific predicted weather events. Plan response accordingly to specific event: alternate routes for flooded areas and apparatus with appropriate chains for ice. Notify Placer County Roads through Placer Dispatch for problem areas that include flooding; need for storm drain clearing, sanding of roads for ice and snow, and road closures.

Responsible Agency/ Department/Partners: Newcastle Fire Protection District staff officers and engine company personnel.

Cost Estimate: No costs identified with this operational procedure.

Benefits (Losses Avoided): Prevent delay in emergency response to incidents and safety of responding personnel.

Potential Funding: None identified for this mitigation.

Timeline: Ongoing

Project Priority (H, M, L): Medium