6   Nevada County Action Plan

This section identifies actions that can be implemented by the County, community members, and interested parties to reduce wildfire risk to the community. Actions identified in this section would need to be funded and approved by the appropriate regulatory authority prior to implementation, where necessary. In some cases, completion of an environmental review would be necessary prior to project implementation.

The Nevada County Community Wildfire Protection Plan (CWPP) is a living document and has been created to allow for ongoing management, updates, and community input intended to reduce the impact of wildfires in the Plan Area. Therefore, OES, along with Plan Area interested parties and community members, intends to evaluate this CWPP routinely and invite agencies, landowners, and community members to identify additional actions that promote community wildfire protection.

6.1   County-Wide Issues

The following list summarizes the common issues present throughout Nevada County as they relate to wildfires. These issues were obtained from community member input, collaboration with interested parties, field visits, and a review of wildfire-related spatial data. This list is not inclusive of all issues within the County, yet it describes major themes that have a large influence on community wildfire risk. The list has been organized into categories by common issue theme.

Evacuation and Access Challenges

- Evacuation issues are widespread throughout the County and include:
  - Communities with limited access (e.g., "one way in, one way out").
  - Narrow and often windy roads, potentially preventing emergency ingress and egress from occurring simultaneously.
  - Limited roadside vegetation clearance, with vegetation often overhanging roadways.
  - Many communities exist a considerable distance away from major evacuation routes.
  - Many roads in the County are private roads, and therefore roadside vegetation management/fuel reduction is more difficult due to access constraints.

Wildfire Hazard

- Hazardous vegetation is widespread throughout the County and is often in close proximity to communities.

Structure Exposure

- Many structures in the County were built prior to the ignition-resistant requirements currently mandated in Chapter 7A of the California Building Code. Such structures feature poor ignition

resistance and include features such as wood siding, large exterior vents, single-pane windows, raised wooden decks, and ember-receptive roofing material.

- The vast majority of communities resemble moderate to low-density development with wildland vegetation interspersed between structures (i.e., wildland urban intermix).

Community Participation and Education

- Community members have expressed uncertainties about who to hire to conduct defensible space and structural hardening.
- Community members have expressed uncertainties about how to prioritize structural hardening efforts.
- Community members express wanting to be more involved in community planning.

Financial Barriers

- Community members often express the difficulty of undertaking structural hardening efforts and creating 100 feet of defensible space due to associated costs.

Jurisdiction and Land Ownership

- The County encompasses a mosaic of landowners with a wide-range range of public entities and private landowners. The County also includes multiple jurisdictions at the City, County, State, and Federal levels. Therefore, this creates issues related to conducting cross-ownership/cross-wildfire risk reduction efforts.

6.2 County Level 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. **Common wildfire risk reduction approaches involve vegetation management/fuel reduction, reducing structural ignitability, and community education and outreach**, which are described in more detail in the following sections. Additional approaches can also be effective on a case-by-case basis depending on assets at risk and resource availability.

6.2.1 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.

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

Table 19. Nevada County Recommendations for Reducing Structural Ignitability

Action/Recommendation	Issue	Scale
Encourage structural retrofits through inspections, community education, and grant funding opportunities.	Structure Exposure	Landscape
	Community Participation and Education	Community
	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	Landscape
	Community Participation and Education	Community
	Financial Barriers	
Work to encourage home hardening self-assessments through community education.	Structure Exposure	Landscape
		Community

Table 19. Nevada County Recommendations for Reducing Structural Ignitability

Action/Recommendation	Issue	Scale
	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 Participation and Education Financial Barriers	Community
Encourage structure inspections in tandem with existing defensible space inspection programs.	Structure Exposure	Landscape Community
Evaluate and pursue grant funding opportunities for structural retrofits, including micro-grants other reimbursement or cost-share programs.	Structure Exposure Financial Barriers	Landscape

6.2.2   Defensible Space

Reducing structure exposure to wildfire is also achieved via vegetation management 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.

Immediate Zone (0−5 feet around the home): The Immediate Zone, sometimes referred to as the "Ember Resistant Zone," is the area nearest the house and includes the surfaces of the structure itself, vegetation, equipment, outdoor furniture, toys, or anything else that can be ignited by embers. No vegetation or combustible items are allowed within this zone to avoid ignitions from windblown embers landing on or near the structure. Clear soil, rocks, gravel, or concrete should be used instead of landscape mulch or wood chips. This area is especially crucial since research from the Insurance Institute for Business and Home Safety (IBHS) shows that the first 0 feet to 5 feet around the house has the greatest impact on reducing the risk of losing a home to a wildfire.
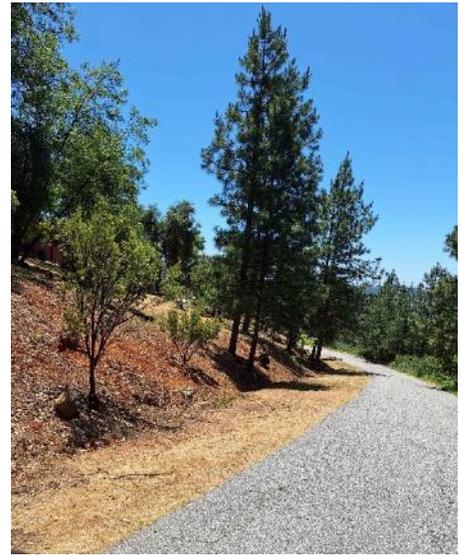

Immediate and intermediate zones near a house in the Plan Area

Intermediate Zone (5−30 feet around the home): The Intermediate Zone, sometimes referred to as the "Home Protection Zone," extends from 5 feet from the structure to 30 feet. This zone should be designed

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to create and maintain a landscape that, if ignited, will not transmit fire to the home. This includes having a minimum planting zone with low-density planting to medium-density planting as you move farther away from the structure. Depending upon the type of wildland vegetation in the area and the steepness of the slope, this zone should have an area at least 30 feet wide (50 feet for slopes above 20%) that is lean, clean, and green. Trees should be spaced to allow a minimum of 10 feet of clearance to the structure at full maturity.

Extended Zone (30–100 feet around the home): The Extended Zone, sometimes referred to as the "Reduced Fuel/Thinning Zone," extends from 30 feet to at least 100 feet. This zone also serves as a connection to the natural environment in promoting habitat restoration while eliminating continuous, dense vegetation, to decrease the energy and speed of a wildfire. To help with this function, vegetation should not be removed from the bare soil, and the use of heavy equipment on hillsides should be avoided as they can cause soil erosion and mudslides. More defensible space may be required depending on site-specific characteristics such as topography, building construction, and vegetation types, or within certain areas of Nevada County.

Roadside Zone: The roadside zone extends a minimum of 10 feet from the edge of the roadway and provides horizontal and vertical vegetation clearance. The goal of vegetation management in this zone is to prevent ignitions and provide safe emergency ingress and egress. For roadways serving as primary ingress and egress to the parcel, flammable vegetation should be removed a minimum of a 10- horizontal feet from the edge of the driving surface including the shoulder of a roadway serving as primary ingress and egress to the parcel. In addition, vegetation should be cleared to a minimum of 15 feet above the ground surface.

Roadside Zone along a Plan Area roadway

Table 20. Nevada County 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	Landscape Community
Focus efforts to increase defensible space inspection rates, education, and compliance levels in communities with higher wildfire risk exposure. Also, focus these efforts on disadvantaged communities with high wildfire risk exposure.	Structure Exposure Wildfire Hazard	Landscape Community
Increase defensible space education and resource deployment in vulnerable populations with high wildfire risk exposure.	Structure Exposure Wildfire Hazard	Community

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Table 20. Nevada County Defensible Space Recommendations

Action/Recommendation	Issue	Scale
	Community Participation and Education	
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
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	Landscape
Evaluate opportunities for creating sustainable programmatic residential green waste programs to facilitate treatment and removal of material generated during vegetation management/fuel reduction activities. Consider a variety of solutions including, but not limited to, chipping services, roll-off containers, hauling, composting, cogeneration, biomass utilization, air curtain burners, and prescribed and pile burning.	Structure Exposure Wildfire Hazard Wildfire Ignitions	Landscape
Emphasize the importance of creating an Ember Resistant Zone (Zone 0) around all structures.	Structure Exposure Wildfire Hazard Wildfire Ignitions Community Participation and Education	Landscape
Emphasize the importance of storing firewood away from structures during fire season.	Structure Exposure Community Participation and Education	Community

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Table 20. Nevada County Defensible Space Recommendations

Action/Recommendation	Issue	Scale
Develop Community based volunteer programs where community members can assist one another with defensible space creation.	Structure Exposure Community Participation and Education	Community
Emphasize the relationship between winter storm debris and defensible space. Promote defensible space as a year-round activity.	Structure Exposure Wildfire Hazard Community Participation and Education	Landscape Community

6.2.3   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 or organizations for the purposes of wildfire risk reduction, especially at the landscape scale. Such actions would be conducted as identified in the County's LMP. The LMP is one component of the County's Roadmap to Resilience and outlines a framework for managing vegetation within the Plan Area. It acknowledges that vegetation is a dynamic component of wildfire hazard necessitating an adaptive management approach and therefore functions to guide the implementation of vegetation management projects by outlining management types and fire risk reduction techniques and identifying a series of best management practices (BMPs) to be implemented during vegetation management activities to reduce or avoid impacts to natural resources. It is anticipated that vegetation management projects will be further clarified at advanced stages of project planning, with detailed management prescriptions and management area boundaries defined. Environmental review would also be conducted prior to implementation, where necessary. The County's LMP can be found in Appendix F.

Table 21. Nevada County Vegetation Management/Fuel Reduction Recommendations

Action/Recommendation	Issue	Scale
Promote partnership between the USFS and private timberland owners to collaborate in cross-ownership vegetation management/fuel reduction projects.	Wildfire Hazard Jurisdiction and Land Ownership	Landscape
Promote partnership between federal agencies, state agencies, and private landowners to collaborate in cross-ownership vegetation management/fuel reduction projects.	Wildfire Hazard Jurisdiction and Land Ownership	Landscape
Explore supporting private landowner forest management assistance programs.	Wildfire Hazard Jurisdiction and Land Ownership	Landscape

Table 21. Nevada County Vegetation Management/Fuel Reduction Recommendations

Action/Recommendation	Issue	Scale
Evaluate opportunities to implement vegetation management/fuel reduction projects throughout the County within Project Priority Areas where they meet strategic objectives for wildfire risk reduction.	Wildfire Hazard Wildfire Ignitions Evacuation and Access Challenges	Landscape
Evaluate opportunities to implement vegetation management/fuel reduction projects within Project Priority Areas that also meet objectives of restoring ecological function, promoting forest health, and/or biomass utilization.	Wildfire Hazard	Landscape
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
Collaborate with relevant jurisdictions (e.g., USFS, BLM, and CA State Parks) to increase the level of vegetation management/fuel reduction on State and Federally owned lands.	Wildfire Hazard	Landscape
Conduct roadside vegetation management/fuel reduction along major evacuation routes and where roadside ignitions are common.	Wildfire Ignitions Evacuation and Access Challenges	Landscape Community
Ensure that vegetation management/fuel reduction projects include adaptive management phases to address changes in condition throughout the project lifetime in order to achieve long-term benefits.	Wildfire Hazard Wildfire Ignitions Wildfire Hazard	Landscape
Expand the number of shaded fuel breaks/hazardous fuel reduction areas along major evacuation routes.	Wildfire Ignitions Evacuation and Access Challenges	Landscape
Expand the number of 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	Landscape
Conduct vegetation management/fuel reduction around critical infrastructure and critical resources.	Wildfire Hazard Wildfire Ignitions	Landscape
Increase utilization of the CalVTP and other environmental review streamlining options when planning vegetation management/fuel reduction projects.	Wildfire Hazard	Landscape

Table 21. Nevada County Vegetation Management/Fuel Reduction Recommendations

Action/Recommendation	Issue	Scale
Increase the level of vegetation management/fuel reduction projects aimed at improving forest health and carbon storage.	Wildfire Hazard	Landscape
Conduct vegetation management/fuel reduction projects around high-use recreation facilities to decrease the potential for ignitions.	Wildfire Ignitions Evacuation and Access Challenges Wildfire Hazard	Landscape
Pursue opportunities for biomass solutions from vegetation management/fuel reduction activities.	Wildfire Hazard	Landscape
Encourage the development of wildfire risk reduction projects that also promote climate resilience.	Wildfire Hazard	Landscape
Encourage the development of wildfire risk reduction projects that also address tree mortality.	Wildfire Hazard	Landscape

The Nevada County LMP provides a toolbox of regionally specific and technically vetted best practices for wildfire risk reduction treatments that can be deployed at multiple scales from that of the individual landowner of one acre on up through the non-governmental organization or agency seeking to implement a project across thousands of acres. The LMP works in conjunction with the CWPP to identify the "how" by establishing the minimum standard for appropriate sustainable wildfire mitigation actions in Nevada County. The LMP identifies management actions to reduce wildfire risk while considering public safety, sensitive environmental resources, and valued community resources. The LMP identifies several vegetation management techniques based on the vegetation type and nature of the Nevada County landscape. The incorporation of the LMP into the Nevada County CWPP supports increasing the pace and scale of wildfire mitigation by not only identifying where risk reduction actions need to take place but also the matter in which they should occur. As such this will create a "project pipeline" allowing entities to identify projects under the Nevada County CWPP and identify project activities under the LMP.

6.2.3.1   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 CWPP identified monitoring strategies that may be employed during vegetation management 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 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 pots 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.

6.2.4 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. The County coordinates Ready Nevada County, a multimedia awareness campaign to raise awareness and mobilize the community to prevent and prepare for wildfires. Through increased planning, strategic partnerships, improved communication, quarterly stakeholder meetings, and robust public engagement, this campaign expands Nevada County's wildfire readiness, increases funding for special projects, and engages the community in disaster preparedness and prevention efforts. By engaging the whole community, Ready Nevada County enhances citizen participation, improves constituent services, and fosters intergovernmental cooperation and coordination. Ready Nevada County serves as both a signpost and a trusted source of information for Nevada County residents, highlighting the concept that fire heeds no boundary, so Nevada County must exercise creativity and tenacity as it works with partners at the community, local, state, and federal level to maximize resources and advance public safety (California State Association of Counties 2020). The following education and preparedness programs and resources are currently active in Nevada County to address wildfire risk:

Ready Nevada County Dashboard — This dashboard is an interactive informational tool to be used before, during, and after a major event. This tool provides real-time updates on Red Flag Warnings, Evacuation Warning and Order Areas, Community Reverse 911 messages, weather, Public Safety Power Shutoff information, and much more. The Ready Nevada County Dashboard proved critical during the August 2020 Jones Fire and was lauded by community leaders, first responders, and the public as a key resource during a potentially catastrophic fire that residents may use to view wildfire-related data in one area.
https://nevcounty.maps.arcgis.com/apps/MapSeries/index.html?appid=dfae8e3b36e3455bbf9dcc865 349e72e.

Emergency Preparedness Toolkit — The County compiled a toolkit that residents may visit to find educational resources related to wildfire preparedness topics: Emergency Preparedness, Emergency Alerts, Defensible Space Resources, Wildfire Research Fact Sheets, and a YouTube playlist of informational videos from Ready Nevada County.
https://www.nevadacountyca.gov/2792/Preparedness-Toolkit.

Ready Nevada County - The Ready Nevada County website (https://readynevadacounty.org/) breaks down wildfire preparedness into three actions—Ready, Set, Go—with resources provided for approaching each action. The County produces and mails to every resident in Nevada County a handbook of these actions. The handbook can be found here:
https://www.nevadacountyca.gov/DocumentCenter/View/44617/2024-Ready-Set-Go-Handbook-PDF?bidId=.

CodeRED – CodeRED is an opt-in notification system used by the County of Nevada to notify residents in an emergency. These alerts may be received as text, email, landline, cell phone, and TTY. Message and data rates may apply to send and/or received texts. Interested residents may opt-in at:
https://public.coderedweb.com/CNE/en-US/CA8B57E20D17.

Defensible Space Education and Inspections — The County provides resources on its website to educate residents on defensible space requirements and home hardening principles. Embers are the number one cause of structure ignition during a wildfire, and a coupled approach of creating effective defensible space with focused home hardening retrofits can increase a structure's likelihood of surviving a wildfire.

Defensible space resources and information can be found at https://nevadacountyca.gov/"3004/Defensible-Space. Property owners or occupants can request a defensible space inspection by going to: https://nevadacounty.jotform.com/231176343180046.

Red Flag Warnings — A Red Flag Warning means that critical fire weather conditions are either occurring now or will shortly. A combination of strong winds, low relative humidity, and warm temperatures can create extreme fire behavior. The National Weather Service provides daily fire weather forecasts in close coordination with local fire agencies. The Red Flag Warning Program enables firefighting agencies to manage critical resources and prepare appropriate suppression responses for protecting life and property. Red Flag Warnings are typically issued within 24 hours of an impending critical fire weather event. Residents can sign up for Red Flag Warning text alerts by texting the word "redflag" to 888777. More information about Red Flag Warnings and fire weather in Nevada County can be found at: https://www.nevadacountyca.gov/2756/Red-Flag-Warnings.

Nevada County Veterinary Disaster Response Team — The Nevada County Veterinary Disaster Response Team (NCVDRT), also known as Nevada County Animal Evacuation, is a 501(c)(3) volunteer organization that got started during the 49er Fire in 1988 and helped evacuate animals to a safe place. Animals who are evacuated by NCVDRT are housed, fed, and receive medical attention if needed. Since then, NCVDRT has been mobilized for other fires, and provides mutual aid when called on for fires and floods in other counties. More information about the team and its services can be found at: http://www.nevcoanimalevac.org/evacuation.html.
Information related to disaster planning for pets can be found at: http://www.nevcoanimalevac.org/be-prepared.html.

Humane Emergency Animal Rescue Team— The Nevada County Sheriff's Humane Emergency Animal Rescue Team (H.E.A.R.T.) is a 501(c)(3) non-profit organization dedicated to helping animals and their owners in the community who need rescue and evacuation during an emergency. The Sheriff's Office partnered with highly skilled and well-trained volunteers from the community to form the Sheriff's HEART and continues to welcome new HEART volunteers to the team today. The Sheriff's HEART carries out animal rescue and evacuation functions for Nevada County. More information about the team and its services can be found at: https://nevadacountyca.gov/3844/Animal-Rescue-HEART.**Firewise Communities —** The Firewise USA recognition program, administered by the NFPA, promotes collaboration within communities to organize and improve the ignition resistance of

Banner Mountain Firewise Community members

homes and communities. Communities can receive a Firewise community designation through the California Office of the State Fire Marshal's Community Wildfire and Preparedness and Mitigation Division. Currently, there are 90 communities in Nevada County with a Firewise USA designation. In addition to financial support for conducting risk reduction projects, homeowners living within Firewise

designated communities are qualified to receive insurance discounts with the California Fair Plan. More information about the program can be found at: https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire/ Firewise-USA.

In addition to the above-listed programs, the actions presented in Table 22 are recommended to address community outreach and education in the Plan Area.

Table 22. Nevada County Community Outreach and Education Recommendations

Action/Recommendation	Issue	Scale
Continue to distribute wildfire education and awareness materials at community events. Partner with nonprofits and other agencies to engage with the public about wildfire-related issues.	Community Participation and Education	Community
Continue to prioritize in-person wildfire education and awareness events that meet the community where they are at.	Community Participation and Education	Community
Continue to maintain a dedicated webpage for the CWPP and GIS Application.	Community Participation and Education	Landscape
Continue to explore options for sharing wildfire education and awareness information through various media outlets (e.g., online, print, television).	Community Participation and Education	Landscape
Support the development of fire planning efforts in incorporated cities through information and data sharing.	Jurisdiction and Land Ownership	Community
Promote coordination amongst internal County departments to ensure consistency with other County planning documents and fire hazard reduction goals and strategies included in this CWPP.	Jurisdiction and Land Ownership	Landscape
Identify key locations and coordinate with appropriate agencies to install signage to notify the public of an area's high fire hazard, including in recreational areas and within neighborhoods.	Community Participation and Education	Landscape
Develop outreach strategies to engage with seasonal residents, absentee landowners, and visitors.	Community Participation and Education	Landscape
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	Landscape
Work with camps, recreational facilities, and other guest-oriented businesses to develop evacuation plans and enhance wildfire preparedness.	Jurisdiction and Land Ownership	Community

Table 22. Nevada County Community Outreach and Education Recommendations

Action/Recommendation	Issue	Scale
Conduct outreach specific to address wildfire hazards, emergency communications, and evacuation procedures with vulnerable populations.	Community Participation and Education	Landscape
Coordinate with adjacent communities, incorporated cities, and stakeholders (e.g., CAL FIRE, California State Parks) to facilitate information and data sharing, resource sharing, coordination of management activities, property access, grant funding, and cost-sharing opportunities.	Jurisdiction and Land Ownership Financial Barriers	Landscape
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 education strategies for gaining cross-jurisdictional and cross-landowner/land manager support for vegetation management/fuel reduction projects.	Community Participation and Education Jurisdiction and Land Ownership	Landscape
Develop outreach and education strategies that promote all-hazard disaster preparedness.	Community Participation and Education	Landscape
Develop outreach and education to support land management and land management planning for public and private landowners.	Community Participation and Education	Landscape
Develop outreach and education to engage with stakeholders and communities around climate and wildfire resilience.	Community Participation and Education	Landscape

6.2.5 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. The NCSO communicates the need for evacuation to the public using various communication methods as described further in Section 2.6.

Evacuation preparedness and planning should follow the process of developing a personal action plan using the County's Ready! Set! Go! Program as a guide. A copy of the Ready! Set! Go! Handbook can be found at:

https://www.nevadacountyca.gov/DocumentCenter/View/44617/2024-Ready-Set-Go-Handbook-PDF?bidId=.

The handbook also includes best practices for evacuating large animals.

Reentering an evacuated area requires as much forethought and planning as an evacuation order. The safety of residents and emergency responders is of the utmost concern and must drive the decision of when to repopulate. Fire Departments and NCSO determine when it is safe for residents, pets, and large animals to move back into an area affected by wildfire.

The actions presented in Table 23 are recommended to address evacuation in the Plan Area.

Table 23. Nevada County 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	Landscape 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 agencies having jurisdiction over rights-of-way (e.g., Caltrans, Public Works, incorporated cities, homeowners' associations) to implement roadside vegetation treatments on public roads.	Evacuation and Access Challenges Wildfire Ignitions Jurisdiction and Land Ownership	Landscape
Coordinate with private landowners to implement roadside vegetation removal along private roadways.	Wildfire Ignitions Jurisdiction and Land Ownership	Community
Facilitate information sharing to responding fire agency personnel who may be from out of the area. Provide relevant pre-attack plans, temporary refuge areas, safe refuge areas, and evacuation routes in an accessible form.	Jurisdiction and Land Ownership Evacuation and Access Challenges	Landscape

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Table 23. Nevada County Evacuation Recommendations

Action/Recommendation	Issue	Scale
Prioritize efforts to address community evacuation priorities as identified in the Nevada County Evacuation Study.	Evacuation and Access Challenges	Community
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
In communities where one emergency egress/ingress road exists, explore opportunities to identify, improve, or construct secondary evacuation routes.	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	Landscape
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 the nexus with emergency alerts.	Evacuation and Access Challenges	Landscape

Table 23. Nevada County Evacuation Recommendations

Action/Recommendation	Issue	Scale
	Community Participation and Education	
Support the development of local community grant programs that improve evacuation on private roads.	Evacuation and Access Challenges Financial Barriers	Community

6.2.6   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 leveraging a diversity of media sources, languages, and methods of delivery of these notifications to reach most residents in the Plan area. The following systems are currently active in Nevada County to alert residents of wildfire emergencies:

Nevada County uses a layered approach to emergency alerts and includes the following systems:

- **CodeRED Emergency Alerts:** CodeRed is an opt-in emergency alert system and is the primary system used by the County to notify residents in the case of an emergency. Notifications are sent based on the address users register in the system. It can send emergency alerts to cell phones, landlines, and emails.
- **CodeRED Mobile Alert App:** The CodeRED Mobile Alert app pushes emergency notifications to your smartphone within 25 miles of your current location. Users are required to download the app to their phone.
- **Genasys Protect App:** Genasys Protect App allows users to follow a zone or turn on their location to get notified if the status of that zone changes to and evacuation order or warning. Download is required for use.
- **Wireless Emergency Alert:** Wireless Emergency Alerts send emergency alerts to cellphones based on their location. No registration is required; this alert is issued by local governments as part of the Integrated Public Alert and Warning System.
- **Emergency Alert System:** Emergency Alert System sends emergency alerts to radio listeners and TV viewers. No registration is required; this alert is issued by local governments as part of the Integrated Public Alert and Warning System.
- **Hi-Lo Siren:** The Hi-Lo Siren alerts neighborhoods of an evacuation order using a European-style two-tone siren. Law enforcement will of door to door when an evacuation order has been issued.

More information on emergency alerts and staying informed can be found in Section 2.6.

Table 24. Nevada County Emergency Communication 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	Landscape
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	Landscape
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	Landscape 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	Landscape
Evaluate opportunities for installing wildfire cameras in strategic locations in the County.	Evacuation and Access Challenges Community Participation and Education	Landscape

6.2.7   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 25 are recommended to address post-fire recovery in the Plan Area.

Table 25. Nevada County 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	Landscape
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	Landscape
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	Landscape
Support the community by providing post-fire educational resources related to physical recovery, monetary support, and social services.	Community Participation and Education	Community
Support policy and recommendations about fire insurance improvements.	Community Participation and Education	Landscape
Encourage residents and property owners to participate in wildfire insurance reduction programs.	Community Participation and Education	Landscape Community Individual

6.2.8   Funding Opportunities

Funding is critical to implementing projects identified in this CWPP. Development of funding sources and incentive programs for landowners, land managers, and residents of the Plan Area can encourage the reduction of wildfire hazards and risks. The following provides information on potential project funding opportunities:

6.2.8.1 Local

County Community Micro Grants: The County provides the opportunity for micro-grants with the objective of strengthening Nevada County's community wildfire preparedness. This program provides micro-grants of $3,600 each to the National Fire Protection Association (NFPA) recognized Firewise Community in the County to increase defensible space, remove hazardous vegetation, clear or improve evacuation routes on private roadways, or acquire wildfire preparation equipment or materials. More information can be found at: https://www.nevadacountyca.gov/3595/Firewise-Community-Grants.

Truckee Fire Protection District Community Wildfire Prevention Grant Program: Truckee Fire Protection District has a local block grant program that helps the community get more work done faster by utilizing new capacities and fostering a way for the community to bring their projects to the table, all of which are objectives of Measure T and Community Wildfire Resilience. This funding helps enhance forest management and fuel reduction projects, and supports new projects and programs, with the objective of reducing the threat and intensity of wildfire in the Truckee and Donner Summit Wildland Urban Interface (WUI) by reducing fuel loads and better preparing the community for wildfire. More information can be found at: https://www.truckeefire.org/grants.

Nevada City Home Hardening Microgrants: The City of Nevada City provides $100 in reimbursement to the first 100 participating homes. Eligible expenses for grant reimbursement include materials, labor/services, and basic tools. Qualifying retrofits include vents, weather stripping, and caulking. More information can be found at: https://www.nevadacityca.gov/286/Home-Hardening-Micro-Grant.

6.2.8.2 State

California Department of Forestry and Fire Protection (CAL FIRE): CAL FIRE provides grant funding for various project types, including Forest Health, Wildfire Prevention, and Wildfire Resilience projects. Eligible project types under these grant programs include fuels management, fire reintroduction, treatment of degraded areas, conservation of forests, hazardous fuels reduction, wildfire prevention planning, and wildfire prevention education. More information regarding CAL FIRE grants can be found at https://www.fire.ca.gov/grants/.

California Fire Safe Council: The California Fire Safe Council has several grant programs, including:

- **State Fire Capacity Program**: The California Fire Safe Council administers the State Fire Capacity Grant Program to support hazardous fuels reduction, community wildfire prevention planning, and education and mitigation activities in California and the Tahoe region of Nevada. This grant program emphasizes fire risk reduction activities by landowners and residents in at-risk communities to restore and maintain resilient landscapes and create fire-adapted communities. Projects may focus on one or more of these categories:
  - Fuel Hazard Mitigation on non-federal land, such as chipping, thinning, grazing, herbicide application, and mastication
  - Community Hazard Mitigation Planning such as Community Wildfire Protection Plans, Firewise assessments, hazard assessments, and similar types of plans

- Prevention and Mitigation Education such as outreach, mailings, workshops, events, public service announcements, and other education programs

More information regarding the State Fire Capacity Program can be found at: https://cafiresafecouncil.org/grants-and-funding/2023-2024-sfc-grant-program/.

- **County Coordinators Grant:** The objective of the County Coordinators Grant is to educate, encourage, and develop county-wide collaboration and coordination among various wildfire mitigation groups operating within counties containing SRA lands. Grants to be used to cover administrative costs relevant to county-wide coordination efforts (salary, support, and administrative costs) for a designated County Coordinator. More information regarding County Coordinator Grants can be found at https://cafiresafecouncil.org/find-your-county-coordinator/.

California Wildfire Mitigation Program: This program, developed by Cal OES and CAL FIRE, institutes a home hardening initiative to retrofit, harden, and create defensible space for homes at high risk of wildfires, focusing on high socially vulnerability communities and providing financial assistance for low- and moderate-income households. This project is in its pilot phase and currently operating only in San Diego, Shasta, and Lake Counties. More information can be found at https://www.caloes.ca.gov/cal-oes-divisions/recovery/disaster-mitigation-technical-support/california-wildfire-mitigation-program.

California Healthy Soils Program: The Healthy Soils Program stems from the California Healthy Soils Initiative, a collaboration of state agencies and departments to promote the development of healthy soils on California's farmlands and ranchlands. Covered management practices include but are not limited to cover cropping, no-till, reduced-till, mulching, compost application, and conservation plantings. More information can be found at: https://www.cdfa.ca.gov/oefi/healthysoils/.

California Forest Improvement Program (CFIP): CFIP is intended to encourage private and public investment in, and improved management of, California forest lands and resources. This focus is to ensure adequate high quality timber supplies, related employment and other economic benefits, and the protection, maintenance, and enhancement of a productive and stable forest resource system for the benefit of present and future generations. The program scope includes the improvement of all forest resources including fish and wildlife habitat, and soil and water quality. Cost-share assistance is provided to private and public ownerships containing 20 to 5,000 acres of forest land. More information can be found at: https://www.fire.ca.gov/what-we-do/grants/california-forest-improvement.

California Department of Fish and Wildlife (CDFW): CDFW administers numerous grant programs focused on watershed restoration, fish and wildlife management, and conservation planning and protection. Some programs may provide benefits that support wildfire risk reduction (e.g., forest resilience). More information can be found at: https://wildlife.ca.gov/Grants.

Sierra Nevada Conservancy: The Sierra Nevada Conservancy provides grants focused on forest and watershed health, land conservation and stewardship, and community resilience. Grants are issued to public agencies, nonprofits, and tribes for efforts that protect Sierra-Cascade watersheds and communities. This includes project development, implementation, and capacity building. More information can be found at: https://sierranevada.ca.gov/grants/.

6.2.8.3 Federal

United States Department of Agriculture (USDA) Community Wildfire Defense Grants: Community Wildfire Defense Grants are intended to help at-risk local communities and Tribes plan and reduce the risk of wildfire. The program prioritizes at-risk communities in an area identified as having high or very high wildfire hazard potential, are low-income, and/or have been impacted by a severe disaster. Grants assist WUI communities to restore and maintain landscapes, create fire-adapted communities, and improve wildfire response. More information regarding Community Wildfire Defense Grants can be found at: https://www.fs.usda.gov/managing-land/fire/grants.

Environmental Quality Incentives Program (EQIP): A cost-share program for working landscapes that can address wildfire preparation or damage, including fuel reduction, reforestation, soil erosion control, and water quality protection, often on parcels 1 acre or more or smaller parcels with natural resource concerns. Neighbors can collaborate to meet acreage requirements. Information regarding EQIP can be found at https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/eqip/.

Federal Emergency Management Agency (FEMA) Hazard Mitigation Assistance Grants: FEMA's hazard mitigation assistance provides funding for eligible mitigation measures that reduce disaster losses. The following programs are applicable to wildfire:

- **Hazard Mitigation Grant Program (HMGP):** Provides funding to state, local, tribal, and territorial governments to implement hazard mitigation projects. Eligible projects include the creation of defensible space, application of ignition-resistant and/or non-combustible materials on new and existing homes, and treatment of hazardous fuels proximate to at-risk structures. More information regarding FEMA's Hazard Mitigation Grant Program can be found at https://www.fema.gov/grants/mitigation/hazard-mitigation.
- **Hazard Mitigation Grant Program Post-Fire Grant:** Post-fire assistance to help communities implement hazard mitigation measures after wildfire disasters. Eligible projects include wildfire mitigation (e.g., removal of burned trees), infrastructure retrofits (e.g., water system repairs), soil/slope stabilization, and post-fire flood prevention/sediment reduction. More information regarding FEMA's Hazard Mitigation Grant Program Post-Fire Grants can be found at https://www.fema.gov/grants/mitigation/post-fire.

- **Building Resilient Infrastructure and Communities (BRIC) Grants:** Support states, local communities, tribes, and territories in hazard mitigation projects to reduce the risks faced by disasters and natural hazards. A wide variety of projects are eligible for Building Resilient Infrastructure and Communities Grant funding. More information regarding these grants can be found at https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities.

The actions presented in Table 26 are recommended to address funding opportunities in the Plan Area.

Table 26. Nevada County Funding Opportunities

Action/Recommendation	Issue	Scale
Research funding opportunities for collaborative multi-beneficial wildfire projects and apply for	All	Landscape

Table 26. Nevada County Funding Opportunities

Action/Recommendation	Issue	Scale
appropriate funding programs. Wildfire projects may include those associated with wildfire risk reduction in the CWPP Project Priority Areas.		
Support efforts to create multi-beneficial projects within the CWPP Project Priority Areas that protect and develop the wildfire resilience of at-risk communities identified by the Office of the State Fire Marshal and CAL FIRE NEU Unit Plan.	Financial Barriers Wildfire Hazard Wildfire Ignition Structure Exposure	Landscape
Coordinate with and support agencies, organizations, land managers, and communities in applying for grant funding for wildfire risk reduction projects in Project Priority Areas	All	Landscape
Pursue funding to support defensible space and home hardening assistance programs.	Financial Barriers Structure Exposure Wildfire Hazard	Landscape
In addition to grants, explore other funding opportunities in order to increase capacity for wildfire risk reduction measures.	Financial Barriers	Landscape
Research and pursue funding opportunities that support workforce development for implementing wildfire risk reduction activities.	Financial Barriers Community Participation and Education Wildfire Hazard	Landscape
Identify opportunities to implement market-driven solutions to address biomass at scale.	Financial Barriers Wildfire Hazard	Landscape
Explore opportunities to offer subsidized green waste solutions to residents.	Financial Barriers Wildfire Hazard	Landscape
Pursue funding opportunities to ensure that planning efforts that pertain to wildfire, emergency preparedness, and disasters remain up to date.	All	Landscape

6.2.9   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/infrastructure intended to alert the community or fire managers about wildfires (e.g., fire detection cameras), or provide data to fire and emergency managers (e.g., remote automated weather stations).

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- **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.