



**Sierra Nevada Watershed Improvement Program**  
**Wildfire Recovery & Forest Resilience Grant Program**  
 Summer 2022  
**CONCEPT PROPOSAL**



<b>SNC Project #</b>	1513
<b>Project Title</b> 60-character limit	Ponderosa West Grass Valley Defense Zone Extension
<b>Project Category</b>	<input type="checkbox"/> Planning <input checked="" type="checkbox"/> Implementation
<b>Anticipated Funding Amount Requested</b>	\$ 750,000
<b>Anticipated Total Project Cost</b> SNC request plus funding or in-kind from other sources	\$ 1,500,000
<b>Applicant Organization</b>	County of Nevada
<b>Applicant Authorized Representative</b> Person who is authorized to sign the grant agreement  <b>Name</b> <b>Title</b> <b>Phone</b> <b>Email</b> <b>Mailing and/or Physical Address</b>	Craig Griesbach Director, Office of Emergency Services 1-530-265-1583 <a href="mailto:craig.griesbach@nevadacounty.ca.gov">craig.griesbach@nevadacounty.ca.gov</a> 950 Maidu Avenue Suite 130 Nevada City, CA 95959
<b>Applicant Day-to-Day Contact</b> Person who manages the project  <b>Name</b> <b>Title</b> <b>Phone</b> <b>Email</b> <b>Mailing and/or Physical Address</b>	Alex Keeble-Toll Senior Administrative Analyst, Office of Emergency Services 1-530-557-5118 <a href="mailto:alex.keeble-toll@co.nevada.ca.us">alex.keeble-toll@co.nevada.ca.us</a> 950 Maidu Avenue Suite 130 Nevada City, CA 95959
<b>Subregion(s)</b>	Central Sierra
<b>County(ies)</b>	Nevada County
<b>SNC Project Lead</b>	Chris Dallas



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**Project Area Contact Information**

**In compliance with SNC's governing statute, SNC will notify and may consult with project area stakeholders during project evaluation. If additional space is needed you may submit this information on a separate sheet.**

<b>Tribal Contact(s)</b>	
Tribe Name Contact Name Phone Number Email or Mailing Address	<i>Nevada City Rancheria Nisenan                      Shelly Covert                      530-570-0846                      P.O. Box 2624                      Nevada City, CA 95959</i>
Tribe Name Contact Name Phone Number Email or Mailing Address	<i>United Auburn Indian Community                      Rebecca Allen                      530-883-2390                      10720 Indian Hill Road                      Auburn, CA 95959</i>
Tribe Name Contact Name Phone Number Email or Mailing Address	Click or tap here to enter text.
Tribe Name Contact Name Phone Number Email or Mailing Address	Click or tap here to enter text.
<b>County(ies) Planning Director</b>	
Contact Name Contact Title Phone Number Email or Mailing Address	<i>Brian Foss                      Director of Planning                      1-530-265-1256                      950 Maidu Avenue                      Nevada City, CA 95959</i>
Contact Name Contact Title Phone Number Email or Mailing Address	Click or tap here to enter text.
<b>Nearest Public Water Agency</b>	
Contact Name	Nevada Irrigation District



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Contact Title	Greg Jones, Assistant General Manager
Phone Number	1-530-273-6185
Email or Mailing Address	1036 West Main Street Grass Valley, CA 95945

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A note on using the fillable form fields in this document:

All of the fillable form fields in this document allow you to vary the text format as needed, using font sizes, bold, italics, underlines, tables, and lists. Bullet and numbered lists work in the form fields except on the first and last line of each field; you may use enter/return to add an extra line before and after a list as needed. You may also compose answers in word, then cut and paste into the form fields and adjust formatting as needed.

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Please be concise when answering the narrative questions below.  
The Concept Proposal should not exceed 17 pages.

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## Project Summary

Provide a Project Summary, including purpose, location, landownership, acreage, partners, and estimated cost.

*Please limit the response to six sentences or bullet points.*

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In order for fuels reduction projects to remain effective regular maintenance must be conducted or within five years all benefit is lost. The purpose of this project is to leverage and extend the \$3.5M spent to implement the 1,200-acre Ponderosa West Grass Valley Defense Zone Project by conducting timely maintenance of the project area at a cost of \$1.5M which will be shared equally by Sierra Nevada Conservancy and Congressionally Directed Funding. In 2019, the Ponderosa Project was identified by the California Department of Forestry and Fire Protection (CAL FIRE) and California Governor Newsom as one of the State's **highest priority** fuels reduction projects. Maintenance of this shaded fuel break, located in a high fire severity area adjacent to the City of Grass Valley on both private and Nevada County-maintained lands, directly protects nearly 3,000 improved parcels within 1.5 miles of the project boundary and indirectly provides protection to a thriving rural community of over 100,000 people in a County widely recognized for its historic Gold Rush significance and home to two of California's 14 Cultural Districts. Continued partnership with CAL FIRE, Nevada County Consolidated Fire District, the Coalition of Firewise Communities, Fire Safe Council of Nevada County, and the individual property owners within the project footprint will support reduced catastrophic wildfire risk and promote forest health while creating safer public evacuation and wildfire suppression routes.



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## Project Location

### Location Description

**Describe the project location, including the county, nearby communities and public lands, the watershed in which the project is located, nearby forest health projects, and project acreage.**

Nevada County has 43 communities considered at-risk for catastrophic wildfire. Located in western Nevada County just below Rough and Ready Highway and above McCourtney Road, the 1,200-acre Ponderosa West Grass Valley Defense Zone Maintenance Project area is rated as a High Fire Hazard Severity Zone by Cal Fire. (See Location Maps, pages 1-3). The project, located in the Bear River watershed, is comprised of private and Nevada County-maintained lands and is in close proximity to nearly 400 acres owned by the Bureau of Land Management (BLM).

**Ecological Conditions:** The forest ecosystems in and around the County of Nevada are predominately early to-mid seral stage, less fire tolerant species (often in monocultures), with tree stand densities that far exceed historic circumstances. Unlike the majority of urban cities, where the built environment has created a hardscape around areas of commerce and public activity, community centers in Nevada County sit within a west-side Sierran mixed-conifer forest (Sierra Nevada Foothills Ecoregion, M261F) where 92% of residents live in a High or Very High Fire Severity Zones. Within the project footprint, the primary vegetation type prior to initial implementation was brush and timber; specifically overgrown conifer forest, thick with manzanita understory and rampant ladder fuels.

**Nearby Communities:** Located in western Nevada County just below Rough and Ready Highway and above McCourtney Road, the Ponderosa West Grass Valley Defense Zone Maintenance Project area offers vital protection to the densely populated communities of Lake Wildwood, Penn Valley and Rough and Ready to the west, as well as the highly developed City of Grass Valley to the east. This region not only contains essential egress/ingress routes, but includes a high concentration of homes, as well as a senior mobile home park. Per state agency standards several disadvantaged communities are nearby that would directly benefit from reduced wildfire risk.

The California Department of Water Resources (DWR) defines a disadvantage community (DAC) as a community where the annual median household income (MHI) is less than 80% of the Statewide annual MHI (PRC Section 75005(9)), while a "Severely Disadvantaged Community" is one where the annual MHI is less than 60% of the Statewide annual MHI. Per these standards, one severely disadvantaged community will benefit from this project - Grass Valley (MHI: \$35,544), and two communities with MHI's just over the threshold for severely



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disadvantaged will benefit - Penn Valley (MHI: \$40,668) and Rough and Ready (MHI: \$40,821).

**Ingress and Egress:** Highway 20, which bisects the Ponderosa West Grass Valley Defense Zone area from east to west, is considered by the Circulation Element of the Nevada County General Plan to be a principal artery for evacuation. It serves as a main transportation route for goods and services as well as emergency equipment and first responders. It is a critical to the safety of nearby communities including Grass Valley, Rough and Ready, Penn Valley, and Lake Wildwood. Within the 1.5 miles of the Project boundary there are more than 3,000 improved parcels in these communities and surrounding areas. Maintaining access to key roadways in the vicinity will ensure that if a wildfire occurs people are able to safely evacuate, and that fire suppression equipment and personnel have access to safely combat wildfire in the vicinity or other nearby populated areas.

**Critical Infrastructure & Key Assets:** Critical infrastructure and key assets that are directly at-risk if the Ponderosa Project is not maintained include power, hydro-electric, water, communications, sewer, and waste utilities. In addition, Nevada County's only animal shelter, Sammie's Friends, and the McCourtney Road Transfer Station are located within the project footprint. Within a mile of the project boundary there are 7 churches, 12 bridges, 6 schools, 3 fire stations, 2 government buildings, and 4 shelters including the Nevada County Fairgrounds. In addition to the known structures listed above there are proprietary private energy and telecommunication utility infrastructure, productive farmland and a number of local businesses. Additionally, the historic City of Grass Valley is located directly east of the defense zone. With a population of nearly 13,000 people, the City of Grass Valley is a Gold Rush town and tourist destination with dozens of historic landmarks, rich recreational opportunities, and is one of 14 California Cultural Districts. (See Location Maps, page 3).

**Forest Health Projects:** The Ponderosa West Grass Valley Defense Zone Maintenance Project is part of a larger strategic plan on behalf of the County of Nevada to systematically ensure that priority shaded fuel break and roadside vegetation abatement projects are supported and implemented. (See Location Maps, page 2). Like the Ponderosa Project, these projects involve working with private property owners to conduct hazardous fuels mitigation work on their land.

Directly adjacent to the Ponderosa West Grass Valley Defense Zone Maintenance Project is the Ponderosa West Grass Valley Extension Project that was recently awarded FY22 Congressionally Directed Community Project Funding. This project will leverage and extend the original 1,200-acre Ponderosa West Grass Valley Defense Zone Project by conducting fuels reduction activities on 600 additional acres of private lands.

Other shaded fuel break projects in the vicinity include the 410 acre Woodpecker Ravine Project and the South County Shaded Fuel Break Project. The Woodpecker Ravine Project is



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roughly bounded by Rattlesnake, Lower Colfax, and Mount Olive Roads. The project will focus on primary and secondary evacuation routes in the area, in addition to select strategic ridgelines in order to tie road system arteries into a wildfire defense zone. The South County Shaded Fuel Break Project will treat 339-acres on 226 parcels, which will serve as a vital wildfire holding point and key evacuation route for residents. Funding will support removal of hazardous fuels 75 feet on either side of the roadway resulting in a 150-foot-wide shaded fuel break along 9-miles on Buck Mountain Road, Lodestar Drive, and Brewer Road in the community of Alta Sierra.

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### PDF Location Maps to be included with Proposal

**Include at least one general project location map in PDF format in the Submission Folder.**

**The map(s) may be combined into one PDF file with the proposal form, or uploaded as a separate file with the naming convention #####\_Map.**

**Confirm the number of maps submitted below.**

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Three maps are being submitted with this proposal, uploaded as a separate PDF file.

### Background & Need

**Concisely describe the background and need for the project. Why is this project a priority? What risk will be mitigated or recovery reached by implementing this project? Is it part of a larger plan? How is this project a strategic approach to address local or landscape-scale priorities?**

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**This Project is a Top Priority:** In 2019, the Ponderosa Project was identified by the California Department of Forestry and Fire Protection (CAL FIRE) and California Governor Newsom as one of the State's *highest priority* fuels reduction projects. By conducting critical maintenance, the project proposed here leverages and extends millions of dollars in investment by state, federal, and local partners to reduce the threat of catastrophic wildfire in a High Fire Hazard Severity Zone. The Ponderosa West Grass Valley Defense Zone Maintenance Project provides protection to a thriving rural community of over 100,000 people in a County widely recognized for its historic Gold Rush significance.

**Maintenance is Economically Sustainable:** On-going maintenance of the Ponderosa West Grass Valley Defense Zone area is a critical need. Maintenance is far less expensive than



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implementation, averaging approximately \$1,000 per acre versus the \$4,000 per acre cost associated with initial implementation. With each maintenance cycle completed (on a 3 year basis) the effort required to maintain the wildfire mitigation benefit becomes less demanding and less costly. Often after a single round of post-implementation maintenance the landscape fuels have been sufficiently reduced to the point where prescribed fire can be used as the primary maintenance tool. Fire is by far the least expensive (less than \$500 per acre) and the most effective maintenance tool. The economics of maintenance versus re-implementation cannot be overstated. If maintenance does not occur, implementation must be repeated every 5 years. The price difference over a 20-year period roughly equates to \$20,000 per acre for a project that does not receive maintenance and \$8,000 per acre for a project that does receive maintenance. The economic reality is that ongoing re-implementation is not fiscally sustainable – yet if projects are not maintained all benefits are lost. Maintenance makes sense from a financial and risk management perspective.

This project directly protects life and property by reducing wildfire risk and improving evacuation routes via timely maintenance of a shaded fuel break project that was initially completed in late 2021. In total, 2,988 improved parcels valued at more than \$10,000 are located within 1.5 miles of the Ponderosa West Grass Valley Defense Zone Maintenance Project area; in total the combined value of these homes equals \$591,438,842. In other words, nearly \$600M is the potential avoided loss if the wildfire mitigation actions are successful in preventing structure loss. Furthermore, all hazardous fuels reduction maintenance serves to harden vital ingress/egress infrastructure by decreasing continuity of fuels, reducing fuels loading and diminishing the intensity of the fire, thus safeguarding against loss of life by allowing for safe and timely evacuation.

**There is Alignment with Plan Priorities & Strategic Approaches:** The Ponderosa West Grass Valley Defense Zone Maintenance Project directly aligns with stated goals and objectives listed in the California Strategic Fire Plan, the CAL FIRE Unit Ignition Fire Plan for Nevada-Yuba-Placer, the Nevada County Community Wildfire Protection Plan, the 2018-2019 Nevada County Wildfire Hazard Reduction and Preparedness Plan, and the 2017 Nevada County Local Hazard Mitigation Plan Update.

## Anticipated Outcomes

**Describe anticipated outcomes of the project, including expected deliverables and long-term public benefits that will result from this project.**

The overarching anticipated outcome of this project is that the wildfire mitigation benefit conveyed by the implementation of the Ponderosa West Grass Valley Defense Zone Project is





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maintained and by conducting maintenance the economic sustainability of ongoing project maintenance is fostered. The intent of the project is to reduce the likelihood of wildfire from places where fire is not tolerable on the landscape – in this case, the communities, homes, infrastructure, and other highly valued resources in and around the project area. These objectives are achieved most directly through *avoided* wildfire emissions. Eliminating wildfire starts, catching wildfires before they propel into wildland areas, and facilitating firefighting efforts and safety all contribute to reduced wildfire emissions over time.

Outcomes of the Ponderosa West Grass Valley Defense Zone Maintenance Project include: continued disruption of contiguous fuel arrangements and removal of ladder fuels on 1,200 acres; maintenance of thinned fuel loads to reduce wildfire intensity; and maintained defense zone for fire suppression personnel to safely combat fire. Maintenance of the shaded fuel break defense zone will not remove all vegetation and is not intended to halt the spread of wildfire entirely. Rather, the defense zone is designed to slow the spread of fire and provide a safe and effective location for fire suppression activities including the staging of ground resources for direct fire attack.

## Anticipated Schedule

**Anticipated start and completion dates of the project, and any key deadlines, if known. Awards will be made no earlier than March 2023.**

This project is anticipated to begin August 2023 and be completed by June 2025. Key milestones include:

### **Task 1: Landowner Outreach: August 2023-October 2023**

Right of Access, Land Tenure, and Maintenance Agreements were provide by landowners within the project footprint as part of the original Ponderosa West Grass Valley Defense Zone implementation project. It is anticipated that securing permissions to conduct maintenance will be swift and well-received.

### **Task 2: Treatment Design: August 2023-December 2023**

This timeframe will provide sufficient time to conduct a competitive bid process to hire a Registered Professional Forester to develop treatment prescriptions for maintenance and to meet with landowners to discuss and get buy-in of the treatment. The maintenance treatment developed by the Registered Professional Forester will be designed to provide a direct benefit to State Responsibility Area lands through the reduction of fire hazards in and near communities and essential infrastructure. This treatment will also increase carbon sequestration through improved forest health and resilience. Treatment prescription will adhere



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to the overarching design developed for the original implementation as CEQA is already complete for this project.

**Task 3: Treatment Implementation: *January 2024-June 2025***

At the lower elevations of Nevada County, work may be implemented during dry days throughout the year. However, fire conditions may limit the number of days that is safe to work, thus this task has been scoped with sufficient time to get the job done. To ensure safe operations, weather forecasts will be monitored so work does not coincide with Red Flag weather conditions.

## Project Partners

**Identify other partners involved in the project. Describe who is/was engaged in project planning and who will be responsible for implementation. Identify if the project is part of a larger plan, collaborative group, or process that included public input. Highlight local agencies, citizen groups, or tribal organizations engaged with the project. Identify what other partners are contributing in-kind or financial resources to the project, and if that funding has been secured.**

Participating landowners will be among the primary partners for this project. These community members have already engaged on this project as part of the initial implementation. For this project they will be consenting to have maintenance activities take place, something that has been repeatedly requested by the community. These residents will volunteer their time to assist in flagging property boundaries, meet the Registered Professional Forester to verify treatment prescriptions and help monitor the Licensed Timber Operator conducting the maintenance. CAL FIRE will partner to continue to provide technical insight to this project and will additionally be involved in the adjacent Ponderosa West Grass Valley Extension Project (see Project Location for details on this project). Firesafe Council of Nevada County will act as the liaison with the Firewise Communities in the vicinity of this project. Finally, the granting agency associated with the Congressionally Directed Funding that will serve as match for this project will be a partner. The Office of Emergency Services learned this week that this \$750,000 funding request for the Ponderosa West Grass Valley Defense Zone Maintenance Project has successfully made it into the interior subcommittee budget.

## Organizational Capacity



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**Describe the applicant's ability to complete the project as proposed. Identify the resources (staff, project partners, or contractors) intended to complete the tasks described in the work plan and explain the applicant's expertise or experience completing similar projects.**

The County of Nevada has extensive experience in applying for and successfully managing grants, including private, state and federal grants, maintaining a stellar track record of successful outcomes, completion, and compliance. The Nevada County Office of Emergency Services (OES) specifically secures and manages major state and federal grants and prides itself on the timely completion of grant funded projects while reaching desirable milestones. Nevada County OES regularly applies for, receives, and manages the Emergency Management Performance Grant and the Homeland Security Grant. Other recent large grants OES has secured include:

Ponderosa West Grass Valley Defense Zone: CAL FIRE #5GG18114: \$2,536,477 + \$1,000,000 in a separate contract; South County Shaded Fuel Break: CAL FIRE #5GG20116: \$952,610; Access and Functional Needs – 4353: FEMA HMGP #DR-4353-0230033R: \$516,273.75; Access and Functional Needs – 4344: FEMA HMGP #DR-4353-0230033R: \$498,167.29; Ponderosa West Grass Valley Defense Zone Extension: FY22 Federal Earmark: \$750,000; Woodpecker Ravine Shaded Fuel Break: CAL FIRE #5GG1227: \$2,178,004 Nevada County Evacuation Route Planning: California Firesafe Council #5GG21105: \$135,422.

All grant applications countywide are approved by the CEO's office, and fiscal alignment monitored and supported by the Auditor/Controller.

## Community Support

**SNC strongly encourages engagement with communities and local government during project planning and implementation. Describe community support for the project, as well as any known opposition to the project. Explain any concerns and efforts to address those concerns.**

**Letters of Support are strongly encouraged and may be submitted with a Full Proposal but are not required as part of the Concept Proposal.**

The Ponderosa West Grass Valley Defense Zone Maintenance Project has broad-based support in the community. The proposal for the original implementation project was accompanied by nine letters of support from entities including the Fire Safe Council, Nevada County Consolidated Fire District, Nevada County Superintendent of Schools, Sierra Business Council, The Sierra Fund, Nevada Irrigation District, Sherwood Forest Firewise Community,



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Coalition of Firewise Communities, YubaNet, Nevada County Digital Media Center, and the City of Grass Valley. These same entities are invested in the ongoing maintenance of this important project. The project was highly visible in the community throughout the initial implementation and received numerous community accolades. This project has built the trust of individual landowners within the 1,200-acre treatment area, all of whom were grateful to be the beneficiaries of reduced wildfire risk. A recent article in The Union Newspaper underscored the sentiment around this project in the western Nevada County community. Visit [A fighting chance: Shaded fuel break helps in fight against wildfire in Grass Valley | TheUnion.com](#) to read the story.

### Engagement with California Native American Tribes

**Recognizing that Native Americans have inhabited and cared for the land of present-day California since time immemorial, the SNC strongly encourages engagement with Native American tribes as early as possible in the development, planning, and implementation of projects. SNC staff can assist with identifying Native American tribes whose ancestral homelands may be in the project area and help provide contact information for those tribes.**

**In the space below, identify Native American tribes (other than the applicant, if the applicant is a tribal entity) that may have an interest in the project. Describe any current or anticipated role for local tribes in the project. SNC grant funds can be used to provide financial support for tribal participation in the project.**

**Letters of Support are strongly encouraged and may be submitted with a Full Proposal but are not required with the Concept Proposal.**

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The following Native American Tribes may have an interest in this project:

The Nevada City Rancheria Nisenan Tribe are the original indigenous people of Nevada County. They are a traditional Tribe that has mounted a considerable effort to obtain federal recognition. Nevada County has supported them in this effort and the Nevada County Board of Supervisors has passed a formal resolution to this effect.

United Auburn Indian Community (UAIC) is the federally recognized tribe who may have interest in this project based on a potential for this project to encompass ancestral homelands.



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**Anticipated Project Budget**

SNC understands that the budget below is an estimate that is likely to change before the Full Proposal.

Complete the charts below. The charts do not automatically calculate totals and percentages.

Administrative Costs must not exceed 15% of Direct Project costs.

For Additional Project Costs, include in-kind or funding from sources other than SNC used within the scope and timeline of the project described here.

Direct Project Costs	SNC Funding
<i>Project Management: County of Nevada Salaries</i>	\$ 40,425
<i>Project Management: County of Nevada Benefits</i>	\$ 12,075
<i>Registered Professional Forester</i>	\$ 7,500
<i>Hazardous Vegetation Removal</i>	\$ 615,000
enter text.	\$ enter text.
enter text.	\$ enter text.
enter text.	\$ enter text.
enter text.	\$ enter text.
enter text.	\$ enter text.
<b>Total Direct Project Costs</b>	<b>\$ 675,000</b>

<b>Administrative Cost</b> (not to exceed 15% of the Direct Project Costs)	<b>\$ 75,000</b>
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<b>TOTAL SNC REQUEST</b> (Total Direct plus Administrative Costs)	<b>\$ 750,000</b>
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Additional Project Costs by Source	Pending or Secured?	In-Kind or Funding from Other Sources
<i>Project Management: County of Nevada Salaries</i>		\$ 40,425
<i>Project Management: County of Nevada Benefits</i>		\$ 12,075
<i>Registered Professional Forester</i>		\$ 7,500
<i>Hazardous Vegetation Removal</i>		\$ 615,000
<i>Indirect @ 10%</i>		\$ 75,000
<b>Total Additional Project Costs</b>		<b>\$ 750,000</b>

<b>TOTAL PROJECT COST</b> (SNC Request plus Additional Project Costs)	<b>\$ 1,500,000</b>
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## Environmental Compliance

All projects must comply with the California Environmental Quality Act (CEQA) at the time the SNC Governing Board authorizes a grant. Since the complexity of CEQA compliance will vary depending on project activities and type of grantee, it is important to consult with SNC staff regarding which documents may be required in what timeframe. In addition to CEQA compliance, National Environmental Policy Act (NEPA) compliance is required for all projects proposed on federal land and a NEPA decision must be in place at the time the SNC Governing Board authorizes a grant.

For projects not exempt from CEQA, if CEQA is not complete at the time of Full Proposal submission the Lead Agency for CEQA must be identified in the Full Proposal. If no project partner has standing to serve as CEQA Lead Agency, then SNC will consider a request to serve as Lead Agency. This request must be made in this section during the Concept Proposal phase.

Provide a brief description of CEQA and NEPA status below, including if the project is exempt, Lead Agency or if there is a request for SNC to serve as Lead Agency, and expected timeline if CEQA or NEPA is not yet complete. Please include the title of or a link to any existing documents.

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This project is shovel ready. For the original implementation CAL FIRE requested suspension of Division 13 (commencing with section 21000) of the Public Resources Code and regulations adopted pursuant to that Division, commonly known as the California Environmental Quality Act, for the Ponderosa West Grass Valley Defense Zone – Fuel Break Project, which is one of the thirty-five priority projects identified in the Community Wildfire Prevention and Mitigation Report (February 22, 2019). This maintenance project will adhere to all stipulations set forth in the Protective Measures. See Additional Supporting Documentation.

## Site Visits for Implementation Projects

SNC intends to conduct site visits for all Implementation projects to gain a greater understanding of the project and assist in developing the project and the Full Proposal. Key participants include a representative from the applicant organization (required), technical expert(s) associated with the project, landowner(s), and appropriate SNC staff. If the applicant is not a tribal entity and does not already have tribal representation on their team, they are strongly encouraged to invite tribal representatives who have been contacted through outreach efforts to participate in this site visit.



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All site visits will be limited to a maximum of two hours and may occur during inclement weather. SNC will contact applicants after submission of the Concept Proposal to schedule a visit; all site visits should be complete before October 7, 2022. SNC encourages applicants to anticipate that scheduling a site visit will require cooperative responsiveness and flexibility.

For Implementation projects, in the space below please note if there are any concerns related to site visit scheduling or participation.

There are no known concerns relate to scheduling a site visit.

### Confirmation of Nonprofit Eligibility

All tax-exempt entities (such as nonprofits) applying for a grant must confirm their tax-exempt status and eligible standing by submitting

1. a current IRS Exemption Determination Letter, and
2. the organization's Articles of Incorporation.

State below if both documents are being submitted through the Submission Folder, or enter N/A if the applicant is not a tax-exempt entity.

Not Applicable



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### Requirements for a Future Full Proposal

Please review the following requirements if projects are deemed eligible to submit a Full Proposal. These items are not required for the Concept Proposal.

1. **Project Maps in pdf format which show the boundaries of the activities to be supported by SNC, as well as the project location within the larger landscape with approximate locations of larger project and/or nearby complementary activities.**
2. **Geospatial files of project location**
3. **Photographs of the project site**
4. **Letter(s) of Support, if applicable**
5. **Letter(s) from Landowner(s) stating intent to enter into tenure agreement for an implementation project, or permission for a planning project.**
6. **If CEQA is complete, CEQA documents OR online links.**
7. **If CEQA is not yet complete, a letter from CEQA Lead Agency confirming intent to serve as Lead and expected timeline for completion.**
8. **For projects on federal land, NEPA documents OR online links included.**
9. **Authorization to Apply, such as a project-specific governing board resolution, a letter of authorization, or documentation of delegated authority**

### Concept Proposal Submission Checklist

Please save the documents listed below to your submission folder. Check the boxes below to confirm that the following documents are included, using the naming convention described with the assigned project number.

<input checked="" type="checkbox"/>	<p><b>Completed Concept Proposal form.</b> The form may be saved as a .pdf or remain in the existing Word document format. Naming Convention: #####_ConceptProposal</p>
<input checked="" type="checkbox"/>	<p><b>Project Location Map (.pdf format)</b> Naming Convention: #####_Map</p>
<input type="checkbox"/>	<p><b>Organizational Documents – <i>Required for tax-exempt organizations ONLY</i></b>  <ol style="list-style-type: none"> <li>1. <b>IRS determination letter of tax-exempt status</b></li> <li>2. <b>Articles of Incorporation</b></li> </ol> Naming Convention: #####_OrgDocs</p>
<input checked="" type="checkbox"/>	<p><b>Additional Supporting Documentation – NOT REQUIRED.</b> If there is additional supporting documentation relevant to the project, please compile into one .pdf document. Naming Convention: #####_DocumentType</p>





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## Submission Instructions

- 1. Upload the Proposal Form and Supporting Documentation to your Project Submission Folder using the link in your Welcome email.**
  1. Name all documents with the project number and document type.  
For example: #####\_maps, #####\_photos, #####\_letters
  2. Compile all GIS files into one folder before uploading to submission folder.
  3. If you cannot find or have difficulty accessing the link, please contact the SNC Grants Team at [grants.snc@sierranevada.ca.gov](mailto:grants.snc@sierranevada.ca.gov), 530-906-4771 or 530-906-7345.
  4. SNC recommends that applicants only upload files to the Project Submission Folder once they are final, to avoid potential issues related to editing files in a protected folder.
  5. SNC recommends that applicants maintain a complete record of all documents submitted.
  
- 2. Send an email to the SNC Grants Team when all final documents are in the Project Submission folder.**
  1. Use the project number as the subject of the email, and state that all documents are in the Submission Folder.
  2. Send to: [grants.snc@sierranevada.ca.gov](mailto:grants.snc@sierranevada.ca.gov)
  3. DO NOT attach the Project Submission Folder to the email.

This email will serve as the official submission of your Proposal Form. The SNC Grants Team will confirm receipt and initiate the review process.



April 10, 2019

Chief Porter, Director  
Department of Forestry and Fire Protection  
1416 9<sup>th</sup> Street, Suite 1505  
Sacramento, CA 95814

Re: Ponderosa West Grass Valley Defense Zone – Fuel Break Project

Dear Chief Porter,

On March 22, 2019, Governor Newsom proclaimed a state of emergency involving forest conditions near vulnerable communities. The proclamation suspends State environmental statutes, rules, regulations, and requirements to the extent necessary to complete priority fuel management projects started this calendar year, upon the request of the Secretary for the California Environmental Protection Agency or Natural Resources Agency, as appropriate. In considering whether to suspend any requirements, the Secretaries must determine that the proposed activities are eligible to be conducted under this suspension and will take protection of the environment into account while ensuring timely implementation.

CAL FIRE has requested suspension of Division 13 (commencing with section 21000) of the Public Resources Code and regulations adopted pursuant to that Division, commonly known as the California Environmental Quality Act, for the Ponderosa West Grass Valley Defense Zone – Fuel Break Project, which is one of the thirty-five priority projects identified in the Community Wildfire Prevention and Mitigation Report (February 22, 2019).

### **Project Description**

The Ponderosa West Grass Valley Defense Zone – Fuel Break Project was designed to protect approximately 3,000 residences in the Wildland Urban Interface communities of Lake Wildwood, Penn Valley, Rough and Ready and the City of Grass Valley. The area has not burned for over 100 years and fuels have been largely unmanaged, making this a very high fire-danger area.

The project will also provide protection for critical infrastructure supporting state commerce, such as State Highway 20, power and water infrastructure, and various Nevada County facilities. Within 1 mile of the project, there are 7 churches, 12 bridges, 6 schools, 3 fire stations, 2 government buildings, and 4 emergency shelter sites including the county fairgrounds.

1416 Ninth Street, Suite 1311, Sacramento, CA 95814 Ph. 916.653.5656 Fax. 916.653.8102 <http://resources.ca.gov>



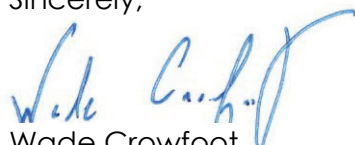
The proposed project will build off a larger multi-phased fuel break and extend the fuel break approximately 400 acres using a combination of hand crews (30 %), heavy equipment (30%), chipping (30%) and biomass (10%). Nevada County has taken a lead role in development and implementation of this fuel break and will continue to support this critical expansion. The California Department of Fish and Wildlife, State Water Resource Control Board, and the California Native Plant Society have all contributed to the development of the fuel break project.

Immediate implementation of this project is necessary to protect vulnerable communities, including the communities of Grass Valley and Penn Valley. CAL FIRE has incorporated protection of the environment into the design of this project. While specific measures may vary by emergency project, required protective measures include those described in CAL FIRE's "Protective Practices for CAL FIRE's 35 Emergency Fuels Reduction Projects" (April 2019). In addition, CAL FIRE has contacted local offices of the Department of Fish and Wildlife and Regional Water Quality Control Board to invite staff to visit the site and provide input on project design.

### **Suspension**

Because the Ponderosa West Grass Valley Defense Zone – Fuel Break Project is urgently needed to protect vulnerable communities and because CAL FIRE has incorporated environmental protection into project design, I find that this project is eligible under the Governor's Proclamation. Therefore, Division 13 (commencing with section 21000) of the Public Resources Code and regulations adopted pursuant to that Division are hereby suspended for that project. This suspension may be revised or further conditioned as necessary to protect public health and the environment. Suspension of additional regulatory requirements may be considered as project implementation proceeds. This suspension does not alter any requirements imposed by federal law.

Sincerely,



Wade Crowfoot  
Secretary for Natural Resources

## **Ponderosa West Grass Valley Defense Zone – Emergency Fuel Break Grass Valley, Nevada County, CAL FIRE Nevada Yuba Placer Unit.**

In response to Governor Newsom's [Executive Order N-05-19](#) issued on January 9, 2019, CAL FIRE released a report, called the [Community Wildfire Prevention and Mitigation Report](#). This report delivered recommendations to reduce public safety hazards associated with catastrophic wildfire and specifically prioritized 35 projects that will protect 200 of California's most wildfire-vulnerable communities.

The Ponderosa West Grass Valley Defense Zone – Fuel Break Project is a phased fuel break designed to protect over 3,000 residences and critical infrastructure within the Wildland Urban Interface of Grass Valley and surrounding communities. The proposed project will build off past treatments and extend the fuel break approximately 400 acres using a combination of hand crews (30%), heavy equipment (30%), chipping (30%) and biomass (10%). Nevada County has taken a lead role in development and implementation of this fuel break and will continue to support this critical expansion. The California Department of Fish and Wildlife, State Water Resource Control Board, and the California Native Plant Society have all contributed to the development of the fuel break project.

### **1. Laws requested to be suspended:**

Per directive 4 in the Emergency Proclamation issued March 22, the Department of Forestry and Fire Protection (CAL FIRE) requests suspension of the California Environmental Quality Act (CEQA), Division 13 (commencing with section 21000) of the Public Resources Code and regulations adopted pursuant to that Division for this priority fuels reduction project.

### **2. Project description:**

The project was designed through cooperative local fire planning efforts to protect approximately 3,000 residences in the Wildland Urban Interface communities of Lake Wildwood, Penn Valley, Rough and Ready and the City of Grass Valley. The project will also provide protection for critical infrastructure supporting state commerce, such as State Highway 20, power and water infrastructure, and various Nevada County facilities. Within 1 mile of the project, there are 7 churches, 12 bridges, 6 schools, 3 fire stations, 2 government buildings, and 4 emergency shelter sites including the county

fairgrounds. The area has not burned for over 100 years and fuels have been largely unmanaged and increase the risk of wildfire.

To diminish the risk and/or rate of fire spread across the fuel break, specific treatments will be utilized based upon the suitability of the material being treated (e.g., hand crews, heavy equipment, pruning, vegetation removal, chipping, biomass). Treatments focus on removing dead, diseased, dying, decadent, or dense trees and chaparral species. When healthy small trees and chaparral species are removed, the focus is on spacing that will help prevent fire spread from canopy to canopy. Large diameter trees and chaparral plants with unique structural features and located on the outer edges of the fuel break may be retained to support and promote wildlife species and habitat. Generally, all downed dead trees and shrubs are removed if they are solid (not rotten) and are not yet embedded into the ground. Downed trees and chaparral that are embedded into soil and which cannot be removed without soil disturbance are left in place. Chipping and masticating of dead material is often used as an alternative to removal. When possible, fuel breaks are blended into the surrounding environment. This is accomplished by feathering the edges of the fuel break into the adjacent untreated areas for aesthetic purposes. Soils, site factors, and timing of application must be suitable for any ground-based equipment utilized for creating a fuel break to avoid excessive compaction, rutting, or damage to the soil surface layer.

### **3. Project location:**

The project is located in and adjacent to the City of Grass Valley, in Nevada County, CA. The fuel break extends southwest from Grass Valley toward Penn Valley and then south toward American Ranch Hill. See attached map.

### **4. Treatment methods and equipment that will be used:**

Live and dead vegetative fuels will be treated to eliminate fuel ladders, decrease horizontal and vertical continuity of flammable vegetation, decrease flammability, and accelerate decomposition. The target post treatment average stand density is 75-100 square feet basal area on tree dominated sites. On brush dominated sites, at least one bush or groups of brush shall be retained so that no point is further than 150 feet from a specimen. On poorly vegetated sites, one shrub or group of shrubs shall be retained so that no point is further than 30 feet from a live shrub. All conifer trees greater than 12 inches diameter breast height (DBH), hardwoods greater than 10 inches diameter breast height and brush greater than 8 inches stump diameter (6" above ground, uphill side) shall be retained unless:

- (1) A tree of any size is a direct threat to personnel safety or infrastructure;  
or
- (2) An RPF determines that an alternative standard better meets management objectives or improves the health of the forest stand;  
and
- (3) Is identified prior to cutting by a Registered Professional Forester or supervised designee.

The goal is to retain wildlife trees, snags and/or large woody debris identified by a Biologist and RPF or supervised designee as important elements of value to wildlife; at least one element per acre averaged across the treatment unit.

Heavy equipment or mastication treatment may be applied to trees and brush dominated vegetation types present in the project area, up to a maximum slope of 30% for wheeled equipment, 50% for tracked equipment, and 65% for walking excavator type equipment.

General tree removal will involve cutting conifer trees less than 12 inches DBH within the drip line of trees larger than 12 inches DBH. Hardwoods less than 10 inches DBH within the drip line of larger hardwood trees greater than 12 inches DBH will be removed. Outside the drip line of larger trees conifers less than 12 inches DBH and hardwoods less than 10 inches DBH will be thinned to achieve an average tree spacing of 17 feet (includes trees of all sizes).

Operations will be conducted to prevent erosion and sedimentation to watercourses, per the CAL FIRE Best Management Practices established for the 35 fuel reduction projects.

## **5. Communities protected:**

This fuel break will allow CAL FIRE to better defend the communities of Grass Valley, Penn Valley and surrounding WUI areas in the event of an overwhelming wildfire.

## **6. Considerations for ecological and cultural resources:**

Project activities are designed to avoid significant effects and avoid taking special status species that are listed as rare, threatened, or endangered under Federal law; or rare, threatened, endangered, candidate, or fully protected under State law; or as a sensitive species by the California Board of Forestry and Fire Protection.

A California Natural Diversity Database search has been completed and appropriate field review conducted to detect species prior to project

disturbance. If protected species are found within the project boundary a CAL FIRE or DFW Biologist will be consulted for appropriate protection measures.

In addition, a current archeological records check has been completed. An archeological field review will be conducted by qualified personnel. In addition, a Registered Professional Forester or designee will be onsite sufficiently during operations to evaluate the presence of cultural resources and ensure cultural resource protection through avoidance.

#### **7. Best Management Practices used in this project:**

To ensure environmental protection when designing and constructing fuels reduction projects, CAL FIRE utilizes the standard protection practice of identifying and avoiding sensitive resources. A comprehensive list of required Best Management Practices (BMPs) has been developed by CAL FIRE through cooperation with the California Department of Fish and Wildlife and State Water Resource Control Boards. These BMPs will be used to provide natural resource protection when implementing all 35 priority fuels reduction projects (See attached CAL FIRE Best Management Practices).

Additional BMPs may be developed for specific projects by the local CDFW office and Regional Water Quality Control Board and implemented by CAL FIRE.

#### **8. California Natural Diversity Database(CNDDDB) search:**

A CNDDDB search has been completed and results have been analyzed and avoidance measures have been implemented in project design. Results of CNDDDB query are on file at the local CAL FIRE Unit.

Initial project scoping indicates the potential presence of the following species in or around the project region: Raptors, bats, sensitive plant species, and Foothill yellow-legged frog (*Rana boylei*) may be present. Should any species be located within the project area during field review, Best Management Practices will be developed and implemented through coordination with local California Department of Fish and Wildlife staff.

CAL FIRE will work closely with the County of Nevada and the California Native Plant Society to ensure sensitive plants within the project boundary are protected.

**9. California Office of Historic Preservation, California Historic Information Centers (CHRIS) archeological database search:**

The California Office of Historic Preservation, California Historic Information Centers (CHRIS) archeological database has been searched for sensitive cultural resources in the project area. A CAL FIRE Archeologist will be consulted as necessary to help ensure cultural resource protection.

**10. Outreach to the Regional Water Quality Control Board (RWQCB):**

Notification letters have been submitted to the pertinent local RWQCB staff and are on file at the local CAL FIRE Unit.

**11. Outreach to the California Department of Fish and Wildlife (CDFW):**

Notification letters have been submitted to the pertinent local CDFW staff and are on file at the local CAL FIRE Unit.

**12. Verbal outreach communication status with other agencies:**

Initial outreach was provided to both RWQCB and CDFW local staff via phone call to explain the project. Communication, consultation, and site visits will be ongoing throughout the project.

**13. Outreach to local government:**

County of Nevada, Fire Safe Council of Nevada County, Nevada County Resource Conservation District, Sierra Streams Institute and California Native Plant Society have been involved in planning and implementation.

Local outreach for the project has been continual and ongoing. CAL FIRE's Fire Planning process coordinates local fuel reduction priorities with community protection to ensure projects are designed and implemented cooperatively. This allows for a sharing of resources to facilitate an informed, educated and efficient implementation of priority projects.

**14. Lead contact person for the project:**

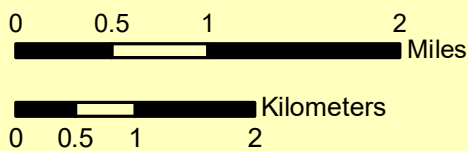
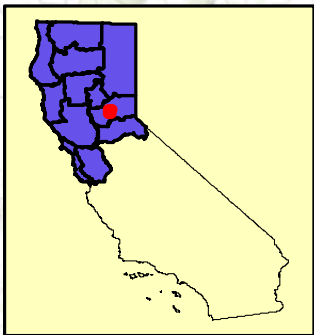
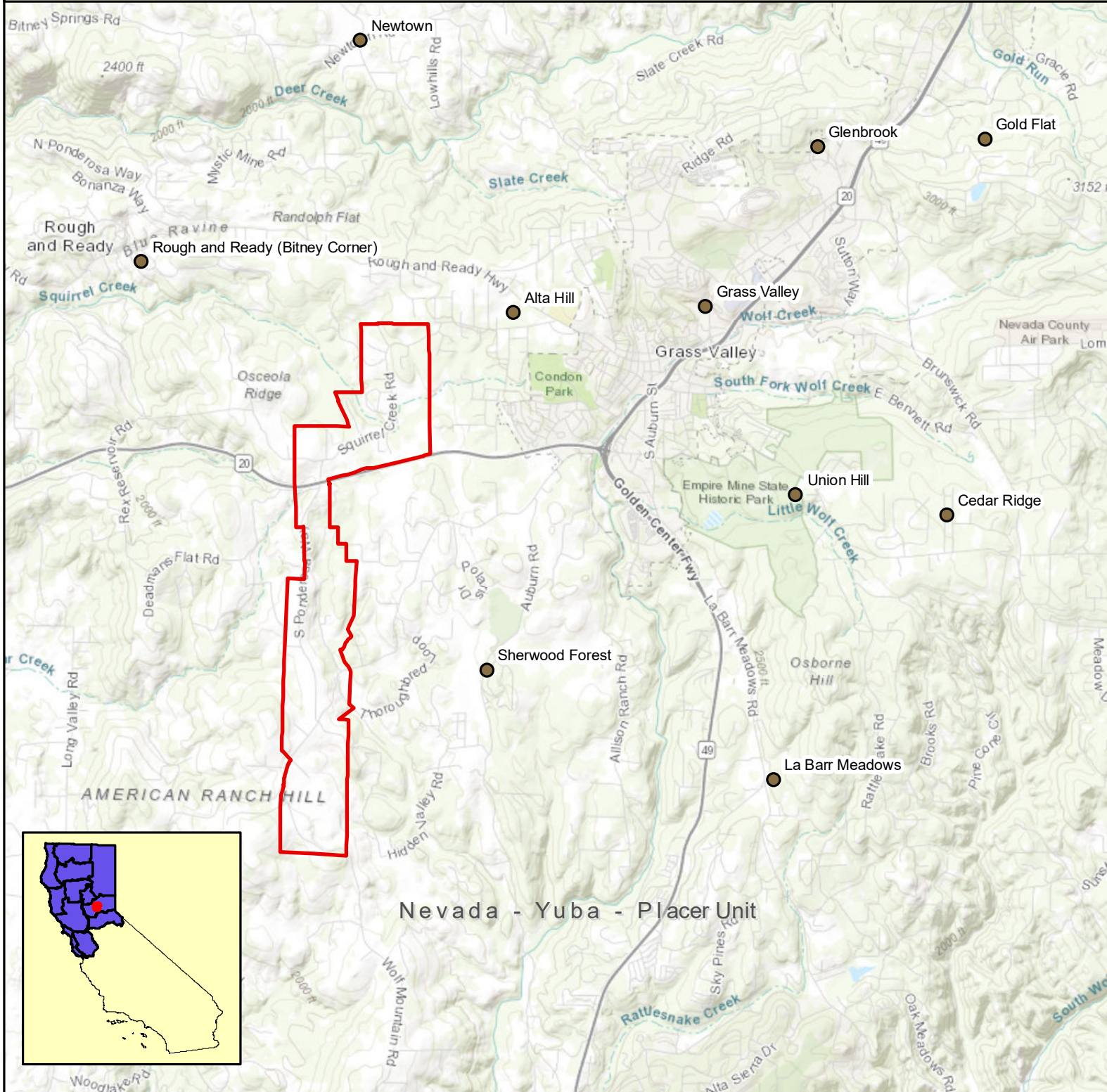
CAL FIRE, Nevada-Yuba-Placer Unit Forester, Steve Garcia (530) 889-0111  
General Information (530) 823-4904

**15. Estimated Start Date:** Project is ready to begin immediately following CEQA clearance and contracting.



# Ponderosa - West Grass Valley Valley Defense Zone

## Nevada - Yuba - Placer Unit Fuels Reduction

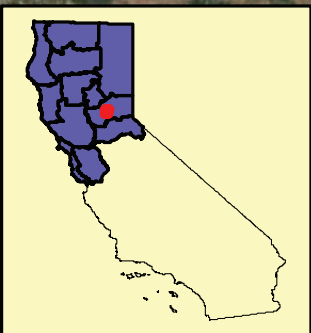
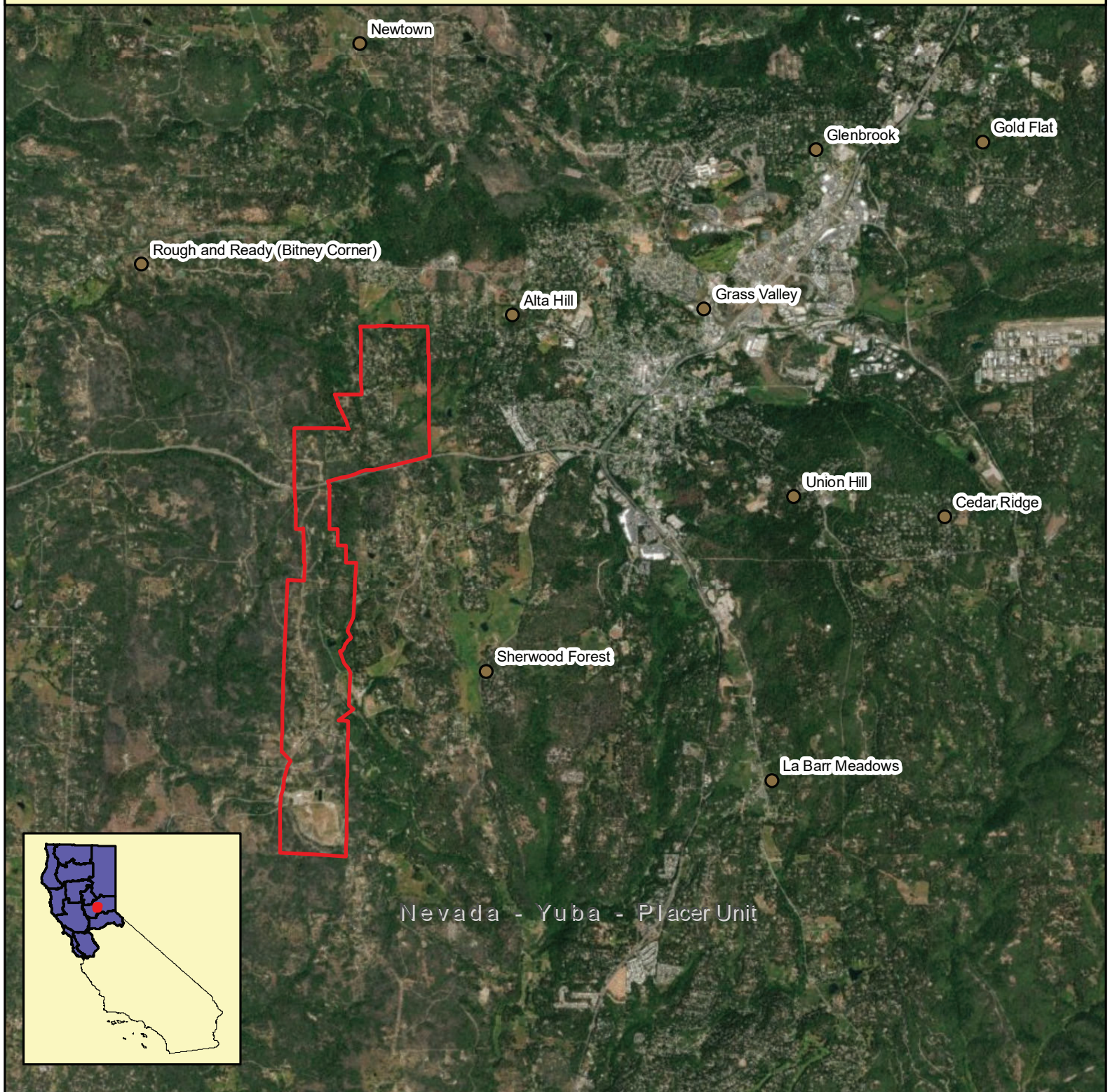


- Ponderosa-West Grass Valley Defense Zone
- CAL FIRE Units
- Communities at Risk



# Ponderosa - West Grass Valley Valley Defense Zone

Nevada - Yuba - Placer Unit  
Fuels Reduction



- Ponderosa-West Grass Valley Defense Zone
- CAL FIRE Units
- Communities at Risk



# Protective Practices for CAL FIRE's 35 Emergency Fuels Reduction Projects

April 5, 2019

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## Summary:

To fulfill Governor Newsom's [Executive Order N-05-19](#) issued on January 9, 2019, CAL FIRE released a report, called the [Community Wildfire Prevention and Mitigation Report](#). This report delivered recommendations to reduce public safety hazards associated with catastrophic wildfire and specifically prioritized 35 projects that will protect 200 of California's most wildfire-vulnerable communities. To enable immediate implementation of these 35 priority public safety projects, Governor Newsom proclaimed a [State of Emergency](#) on March 22, 2019. In response to this proclamation, CAL FIRE has requested suspension of the California Environmental Quality Act [CEQA] for the 35 emergency projects.

For each of these 35 projects, CAL FIRE will provide a packet of information containing the following:

- Identification of specific laws to be suspended for each project
- Complete project description including:
  - Brief narrative describing the project and desired accomplishments
  - Project location-map of the area showing areas of treatment
  - Communities to be protected by the project
  - Special considerations regarding ecological or cultural resources
- Description of the Best Management Practices
- Status of California Natural Diversity Database search
- Status of the California Office of Historic Preservation, California Historic Information Centers (CHRIS) archeological database search
- Status of outreach letter transmitted to the Regional Water Quality Control Board (RWQCB)
- Status of outreach letter transmitted to the California Department of Fish and Wildlife (CDFW)
- Verbal outreach communication status with other agencies
- Record of outreach to local governments (could be list of local leaders who have/will receive briefing on the project). Entities to consider could include County, City, Fire Safe Councils, Resource Conservation Districts, local stakeholders and interest groups
- The lead contact person for the project, and contact information

- An estimated start date for the project

Project packet information will be posted on CAL FIRE's website. Additionally, to ensure communication for project activities, CAL FIRE field staff have verbally communicated project objectives with local and regional CDFW and RWQCB staff. Written notification has also been provided. Continual coordination will occur through CAL FIRE's Fire planning process with local stakeholders and cooperators. This process combines local fuel reduction priorities with desired community protection to ensure projects are designed and implemented cooperatively. The fire plan process helps ensure a sharing of resources to facilitate an informed, educated and efficient implementation of priority projects.

Projects implemented under this CEQA suspension will be light touch vegetation removal focused on reducing the vertical and horizontal continuity of fuels. Generally, this means the non-commercial removal of smaller trees in the understory to eliminate ladder fuels, and thinning forests to a density where a crown fire is less likely to occur. A few projects may involve commercial timber harvest and will comply with the California Forest Practice Act and Rules prior to timber operations. Other activities beyond vegetation treatment such as new road construction and watercourse crossing will require site specific CEQA compliance through consultation with pertinent agencies.

In implementing the 35 emergency projects, CAL FIRE and its contractors will utilize CAL FIRE's established protection practices to protect natural and cultural resources while fulfilling the intent of the Executive Order, in addition to Best Management Practices (BMPs) identified by the California Department of Fish and Wildlife (CDFW) and the State Water Resources Control Board and the nine Regional Water Quality Control Boards (Water Boards). Additional BMPs may be implemented on a project-by-project basis as necessary.

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## General Best Management Practices

CAL FIRE has a suite of comprehensive natural resource and environmental protection programs. CAL FIRE employs various resource professionals including Registered Professional Foresters, Environmental Scientists, Archeologists, Hydrologists, Soil Scientists, Fire Scientists, and various other experts in natural resource protection. CAL FIRE uses the totality of its resource professionals to ensure environmental protection for any project it undertakes, including fuel breaks. To ensure environmental protection when designing and constructing fuel breaks, CAL FIRE utilizes the standard protection practice of identifying and avoiding sensitive resources. There is a great deal of flexibility in fuel break design and adjusting a fuel break location is often all that is needed to avoid sensitive resources.

The following represent standard Best Management Practices that will be implemented for the 35 projects identified in the report and as directed in the Emergency Proclamation.

1. Project Notifications: For each of the 35 projects, CAL FIRE will send letters of notification to the Department of Fish and Wildlife, the relevant Regional Water Quality Control Board, and Native American Tribes. These letters will advise the recipients of the project location, scope and timing, and request that they contact the CAL FIRE Unit implementing the project with any concerns regarding natural and cultural resource protection.
2. CAL FIRE, the local Regional Water Quality Control Board (RWQCB) and the local California Department of Fish and Wildlife (CDFW) will exchange and maintain a current list of contacts and back up contacts for each project area. CAL FIRE should ensure all staff, contractors and sub-contractors have the CDFW and RWQCB contact information and coordination expectations.
3. A Registered Professional Forester (RPF) or their designee will be sufficiently available onsite during project implementation to assist with cultural resource surveys, identification and protection. All resources identified for protection will be flagged, painted or marked prior to operations. The standard practice of resource identification and avoidance will be adhered to for resource protection.

4. Resource Identification – Project Planning: All protected resources should be flagged, painted, or otherwise marked prior to the start of operations by someone knowledgeable of the resources at risk, their location, and the applicable protection measures to be applied. This work should be performed by a RPF, or their designee.

## **Cultural Resource Measures**

5. Known Cultural Resources Sites: CAL FIRE will avoid damaging known archaeological or historical sites. Information on these sites may be available from the Information Centers of the California Historical Resources Information System within the California Department of Parks and Recreation. CAL FIRE queries this system during project scoping and will also have a RPF or their designee onsite sufficiently during operations to evaluate the presence of cultural resources and ensure cultural resource protection through avoidance.
6. Prior to the start of operations, if any cultural resource sites have been identified within the activity area, identified cultural resource sites will be appropriately marked and locations communicated to operating contractors to ensure protection and avoidance. Confidentiality of cultural resources sites must be maintained with a minimal disclosure of site locations.

## **Biological Resource Measures**

7. Known sites of rare, threatened, or endangered plants or animals should not be disturbed, threatened, or damaged during the construction of a fuel break. Information on some of these sites may be available from the CDFW Natural Diversity Database. CAL FIRE queries this database during project scoping. A RPF or their designee will be sufficiently present onsite during operations to evaluate the presence of biological resources and ensure biological resource protection through avoidance.
8. If any wildlife is encountered during project activities, said wildlife will be allowed to leave the area unharmed and if any listed wildlife is encountered and cannot leave the project site on its own, CAL FIRE

should contact CDFW immediately consult regarding species relocation protocol.

## **Riparian and Water Quality Measures**

9. Tractor or heavy equipment operations shall not be conducted on slopes greater than 50%.
10. Tractor road construction is often not required during fuel break implementation. If necessary, tractor roads shall not be constructed on slopes greater than 40%.
11. New road construction or reconstruction is often not required during fuel break implementation. If necessary, new road construction or reconstruction should not be beyond 600 feet. Any road construction should be kept to a minimum and the appropriate agencies may be notified prior to any new road construction.
12. Tractor or heavy equipment operations should not be conducted on known slides or unstable areas.
13. Heavy equipment operations should not be conducted within the standard width of a Watercourse and Lake Protection Zone (WLPZ; see Table 1), except for maintenance of roads and drainage facilities or structures.
14. Fuel Break activities should not involve watercourse crossings. If watercourse crossings are required, necessary agencies will be notified prior to construction. Crossings will be designed to meet the 100-year flood flow and associated debris standards in the Act and Rules.



**Table 1:** The WLPZ means a strip of land, along both sides of a watercourse or around the circumference of a lake or spring, where additional practices should be undertaken for protection of the quality and beneficial uses of water, fish, and riparian wildlife habitat, other forest resources, and for controlling erosion. The following table may be used to identify the standard width of a WLPZ:

<b>Procedures for Determining Watercourse and Lake Protection Zone Widths</b>				
<u>Water Class</u>	<u>Class I</u>	<u>Class II</u>	<u>Class III</u>	<u>Class IV</u>
Characteristics or Key Indicator Beneficial Use	1) Domestic supplies, including springs, on site and/or within 100 feet downstream of the operations area and/or 2) Fish always or seasonally present onsite, includes habitat to sustain fish migration and spawning.	1) Fish always or seasonally present offsite within 1000 feet downstream and/or 2) Aquatic habitat for non-fish aquatic species. 3) Excludes Class III waters that are tributary to Class I waters.	No aquatic life present, watercourse showing evidence of being capable of sediment transport to Class I and II waters under normal high-water flow conditions after completion of tree operations.	Man-made watercourses, usually downstream, established domestic, agricultural, hydroelectric supply or other beneficial use.
Protection Width	150 feet	100 feet	25 feet < 30% slope, 50 Feet >30% slope	25 feet < 30% slope, 50 Feet >30% slope

15. Fuel break construction within the standard width of a WLPZ should be designed to avoid impacts to riparian and aquatic function. Class I protection zones involving anadromous salmonid habitat and/or where waterbodies are Clean Water Act section 303(d) listed (impaired) for temperature/sediment should comply with the standard Act and Rules WLPZ protections. Dead or dying trees within a WLPZ should be marked by, or under the supervision of, a RPF prior to tree removal operations. Removal of vegetation within a WLPZ should be limited to situations where it is necessary to create and maintain fuel break function and effectiveness. A CAL FIRE RPF or their designee will determine the necessity for removal of vegetation from within a WLPZ and practices to reduce impacts to biological resources.

16. Shade-producing canopy within WLPZ should be retained where waterbodies are 303(d) listed for temperature.

17. Disturbance and/or creation of bare areas will be avoided or designed to avoid sediment discharge to waterbodies.

18. Avoid removing vegetation from a stream or stockpiling it in the stream bed or on its bank.
19. Avoid removing living native vegetation from the channel, bed, or banks of a stream.
20. If water drafting becomes necessary, drafting sites should be planned to avoid adverse effects to special status aquatic species and associated habitat, in-stream flows, and depletion of pool habitat. Relevant agencies will be notified prior to any water drafting.
21. De-watering streams or other aquatic features should be avoided. No work shall occur within a flowing stream. If there is an unavoidable need, agencies will be consulted prior to any de-watering activities to develop site specific protection measures.
22. During fuel break operations, fuel and hazardous materials will be kept at a sufficient distance from watercourses to provide protection from accidental leaks or spills.
23. Should operations extend into the winter period, as defined by the Act and Rules, limitations on operations related to using saturated roads, stabilizing erodible soils, and installing erosion control measures will be followed.
24. Equipment maintenance will occur outside the WLPZ (according to prescribed protection widths; Table 1).
25. Should pile burning occur, it will not be conducted within 25' of a WLPZ.

## **Erosion Control and Bank Stabilization**

26. Avoid placing spoil on the stream side slope where it could enter the stream, or over vegetation.
27. Locate permanent spoil storage sites away from a stream/lake, to avoid spoil washing back into a stream/lake, and away from where it should cover aquatic or riparian vegetation, intact upland vegetation, and areas documented with sensitive species.

## **Chemical Treatment Measures**

28. Herbicide will be used sparingly. Should herbicides be used, they will be applied by a licensed applicator in accordance with all applicable state, federal, and local regulations.
29. Herbicide mixing sites should only be located in areas devoid of vegetation, and where there is no potential of a spill reaching a vegetated area or a stream.

## **Invasive Species Control Measures**

30. Fuel break activities will be conducted to avoid introducing or spreading any invasive pests (plant or animal).

## **Fuel Break Design, Construction and Prescribed Fire**

### **Fuel Break Practices and Protective Measures**

A fuel break is generally wide strip of land on which vegetation has been modified so that a fire burning into it can be more readily controlled. Fuel breaks are not designed to stop fire spread, especially during periods of strong winds when fire brands can be blown across these linear features. However, fuel breaks do provide opportunities for firefighting success under less extreme fire weather conditions by providing areas of lower fireline intensities, improved firefighter access, and enhanced fireline production rates. The concept of a fuel break is that fire intensity is reduced by reducing fuel loading. In addition to reducing fire intensity, fuel breaks increase fireline construction rates, reduce the fire-retardant coverage levels required to effectively coat vegetation, and provide for points of access and travel for ground-based firefighters. The lighter fuels, often grasses, associated with fuel breaks, also provide opportunities for indirect fireline construction through backfire or burn-out operations to consume fuel ahead of the spread of the fire.

CAL FIRE commonly designs and constructs fuel breaks in a variety of vegetation types throughout the State. There are multiple objectives that a fuel break can achieve including creating strategic control points to allow firefighters to safely engage a wildfire, improving opportunities to control wildfire in the initial attack phase, and improving opportunity to control a wildfire prior to it reaching homes

or other assets at risk. In addition, certain fuel breaks can act as part of a community fuel break system to protect the community, wildlife, and other watershed values. Fuel breaks can also be used to improve ingress and egress routes along existing roads and driveways, allowing for safe civilian evacuations and emergency responder access. Despite considerable variability in fuel types there are common design, construction, and environmental protection standards that CAL FIRE may use for all fuel breaks.

## **Fuel Break Design Standards**

31. Fuel Break Description: The purpose for protection should be identified and a brief explanation of what is being protected, why it is being protected, and where the protection is specifically needed should be included.
32. Fuel Break Width and Length: The fuel break width and length should be sufficient to reduce fire spread and intensity. Width on level ground will vary based on fuel types; i.e., short widths are generally required in grasses (approx. 150 feet) and longer widths are required on forested sites (approx. 300 feet). Variation in width is largely determined by vegetation type, slope, access, and other site-specific needs and objectives. Fuel break length will generally be designed to match the length of the ignition source to the extent feasible, such as along a road or highway.
33. Fuel Break Connectivity: Fuel breaks are designed to connect with natural or artificial fire barriers such as large rock outcrops, wet meadows, roads, or areas with low fuel loads or flammability. When possible, fuel breaks favor locations that are linked to road systems to facilitate firefighting access.

## **Fuel Break Construction**

34. Standard Fuel Treatments: To diminish the risk and/or rate of fire spread across the fuel break, specific techniques are used suitable to the material being treated (e.g., mowing, prescribed grazing, pruning, vegetation removal, chipping, prescribed burning, and masticating). Treatments focus on dead, diseased, and dying trees before any healthy trees are removed. When healthy trees are removed, the focus is on smaller diameter trees and trees that will help prevent fire from spreading from

the forest floor into the tree canopy. Large diameter trees may be removed to achieve desired spacing between trees. Large diameter trees with unique structural features that do not pose a safety hazard are often retained to support and promote wildlife species and habitat.

35. Dead Vegetation: Generally, all downed dead trees and shrubs are removed if they are solid (not rotten) and are not yet embedded into the ground. Downed trees that are embedded into soil and which cannot be removed without soil disturbance are left in place.
36. Fuel Break Aesthetics: When possible, fuel breaks are blended into the surrounding environment. This is accomplished by feathering the edges of the fuel break into the adjacent areas for aesthetic purposes.
37. Equipment Use: Soils, site factors, and timing of application should be suitable for any ground-based equipment utilized for creating a fuel break to avoid excessive compaction, rutting, or damage to the soil surface layer. Equipment is used on the contour where feasible. For safety purposes and to protect site resources, treatment methods involving equipment are generally not applied on slopes exceeding 50 percent
38. Maintenance: Future regrowth of natural or planted vegetation is often controlled by pruning, mowing, or other techniques to maintain the specified reduced fuel load. Maintenance activities are generally less costly and time consuming than initial treatment activities.

## **Prescribed Fire Practices and Protection Measures**

CAL FIRE uses a variety of standard practices and protections measure to develop and implement prescribed fire projects. The following represent commonly used prescribed fire practices and protection measures:

39. Burn Plan Development: A burn plan is developed that includes a fire behavior model output of First Order Fire Effects Model and BEHAVE or other fire behavior modeling simulation that predicts fire behavior, calculates consumption of fuels, tree mortality, predicted emissions, GHG emissions, and soil heating. The results of the analysis are included with the burn plan. The burn plan is created with input from the appropriate local CAL FIRE Unit personnel.

40. Burn Prescription: The prescribed fire burn prescription is designed to initiate a surface fire of sufficient intensity that will only consume surface and ladder fuels while protecting soil resources from direct soil heating impacts.
41. Ignition will occur outside of the WLPZ (according to prescribed protection widths; Table 1).
42. Where feasible, utilize existing roads, trails, and natural fuel breaks for fire lines.
43. Air Quality: Prescribed fire should comply with all local, state, and federal air quality regulations and ordinances. The local Air Pollution Control District or Air Quality Management District will be contacted to determine local requirements.
44. Standard Public Notifications: Approximately two weeks prior to the commencement of prescribed burning operations, the project coordinator will: 1) post signs along the closest major road way to the area describing the activity, timing, and requesting for smoke sensitive persons in the area to contact the project coordinator; 2) publish a public interest notification in a local newspapers or other widely distributed media source describing the activity, timing, and requesting for smoke sensitive persons in the area to contact the local CAL FIRE Unit; and 3) develop a list of smoke sensitive persons in the area and contact them prior to burning.
45. Burn Plan Communications: Prior to the start of operations, CAL FIRE personnel should meet with the project coordinator onsite to discuss resource protection measures. Additionally, the project coordinator should specify the resource protection measures and details of the burn plan in the incident action plan and should attend the pre-operation briefing to provide further information.

## Chaparral

The historical fire regime of chaparral ecosystems of California is significantly different from other vegetative ecosystems in either northern California or southern California. Generally, the ecosystems do not receive the same amount of precipitation or cold months as in other areas of the state.

46. **Standard Fuel Treatments:** To diminish the risk and/or rate of fire spread across the fuel break, specific techniques are used suitable to the material being treated (e.g., mowing, prescribed grazing, pruning, vegetation removal, chipping, prescribed burning, and masticating). Treatments focus on removing dead, diseased, dying, decadent, or dense trees and chaparral species. When healthy small trees and chaparral species are removed, the focus is on spacing that will help prevent fire from spreading from canopy to canopy. Removal also benefits by increasing growing capacity with an increase in available nutrients, water, and sunlight. Healthier remaining vegetation allows an increased resistance to insect, pathogen and disease outbreaks. Large diameter trees and chaparral plants with unique structural features and located on the outer edges of the fuel break will be retained to support and promote wildlife species and habitat.
  
47. **Vegetation Treatment:** Generally, all downed dead trees and shrubs are removed if they are solid (not rotten) and are not yet embedded into the ground. Downed trees and chaparral that are embedded into soil and which cannot be removed without soil disturbance are left in place. Chipping and masticating of dead material is often used as an alternative to removal. Attention will be given to decreasing horizontal continuity of residual vegetation. By chipping and masticating vegetation, root systems are left in place which helps maintain slope stability and mimics the historic fire regime of the area. Chaparral typically burns in stand-replacing fire events, which remove the above-ground vegetation; however, the below-ground material is generally intact, allowing for sprouting and recolonization of the stand immediately following the fire (perturbance) event.

48. Fuel Break Edges: When possible, chaparral fuel breaks are blended into the surrounding environment. This is accomplished by feathering the edges of the fuel break into the adjacent protected areas for aesthetic purposes. The edges of the fuel break will be treated to prepare the fuels outside the fuel break for future use.
49. Chaparral Over Story Canopy Retention: Fuel breaks in the chaparral will retain sparse canopy that varies by width of the fuel break. Larger width fuel breaks will generally have more unique or large chaparral specimens retained in the outer edges. Below is a general guide for canopy retention in chaparral fuel breaks. Distances are from the centerline of the fuel break. The retained canopies will be estimated in the field.
- a. 0-150 feet: retain 0% or more of over story canopy
  - b. 150-250 feet: retain 5% or more of distributed over story canopy
  - Greater than 250 feet: retain 10% or more of distributed over story canopy
50. Equipment Use: Soils, site factors, and timing of application should be suitable for any ground-based equipment utilized for creating a fuel break to avoid excessive compaction, rutting, or damage to the soil surface layer. Equipment is used on the contour where feasible. For safety purposes and to protect site resources, treatment methods involving equipment are generally not applied on slopes exceeding 50 percent.
51. Maintenance: Future regrowth of natural or planted vegetation is often controlled by pruning, removal, mowing, or other techniques to maintain the specified reduced fuel load.
52. Be designed to prevent vegetation type conversion, specifically in sensitive habitats such as chaparral and coastal sage-scrub.
53. Tractor or heavy equipment operations should not be conducted on slopes greater than 50%.
54. Tractor or heavy equipment operations should not be conducted on known slides or unstable areas.



55. Fuel break construction within the standard width of a WLPZ is designed to avoid impacts to riparian and aquatic function. Dead or dying trees within a WLPZ should be marked by, or under the supervision of, a Registered Professional Forester prior to tree removal operations. Removal of vegetation within a WLPZ should be limited to situations where it is necessary to create and maintain fuel break function and effectiveness. A RPF or their designee will determine the necessity for removal of vegetation from within a WLPZ.

## Implementation Monitoring

### Maintenance

CAL FIRE will continue to work with local stakeholders and cooperators through the normal Fire Planning process to ensure maintenance of fuels breaks. This will involve a combination of local planning and prioritization, identification of funding options and project level development, coordination and implementation.

Maintenance that involves chemical treatments will require consultation with a licensed pesticide control advisor (PCA). No chemical treatments should occur within the WLPZ.

### Monitoring

CAL FIRE will ensure implementation monitoring occurs to determine whether the required BMPs were applied to the project as specified and planned. Implementation monitoring tracks whether a given practice was successfully applied from project planning through completion. Its purpose is to ensure that proposed work was successfully completed as designed.

The monitoring checklist below will be used to document field-related BMP implementation as follows:

- E (Exceeds BMP standards)
- A (Acceptable)
- D (Departure from BMP standards)
- N/A (Not Applicable)

Main implementation monitoring categories for the checklist will include water quality- related BMPs, wildlife-related BMPs, cultural resource-related BMPs, and vegetation/slash treatment-related BMPs:

<b>Observer(s):</b>	<b>Project #</b>	<b>Date:</b>
<b>Implementation Ratings: E (exceeds BMP standards), A (acceptable), D (departure from BMP standards), N/A (not applicable)</b>		
<b>BMP Description</b>	<b>Rating</b>	<b>Comments</b>
<b>Water Quality-Related</b>		
No tractor use on slopes >50%		
Tractor roads not constructed on slopes >40%		
New road construction or reconstruction ≤ 600 ft.		
No tractor use not on unstable areas or known slides		
Heavy equipment use limited to areas outside of FPR WLPZs where possible, and designed to avoid riparian impacts		
Fire breaks, roads, skid trails capable of generating runoff and discharging to watercourse drained with waterbars		
During dry conditions, native surface roads wetted/treated for dust		
WLPZ vegetation removal limited to areas necessary to create or maintain fuel break function and effectiveness		
Heavy equipment use on slope contours where feasible		
<b>Wildlife-Related</b>		
Known sites of rare, threatened, or endangered plants or animals not disturbed, threatened, or damaged during construction		
Non-disturbance buffers established around nests discovered during surveys conducted, if vegetation to be removed Feb 1-Aug 31		
Living vegetation removal from channel, bed, or banks avoided		
Water drafting limited to sites approved by agencies		
No de-watering of watercourse channels during construction work		
Equipment fueling and hazardous material use done outside of WLPZs		
<b>Cultural Resources-Related</b>		
Fuel break construction and other heavy equipment use avoids disturbance of significant archaeological or historical sites		
<b>Fuel/Slash Treatment-Related</b>		
Slash treatment designed to reduce fire hazard and potential insect attack in fuel break areas		

## Appendix. Additional Best Management Practices That May be Applicable

This section serves as a source of additional environmental protection actions that CAL FIRE may take to protect sensitive resources. This section may be used by CAL FIRE when resources not identified through the pre-defined environmental compliance process are encountered in the field, or additional protection is desired. The purpose is to provide examples to the public and a guide to the field of potential best management practices that may be implemented during the project in consultation with other agencies. These BMPs are in addition to those developed in the document. They were developed in consultation with regional staff at the Department of Fish and Wildlife and the Regional Water Quality Control Boards.

This library is organized into three sections: General Best Management Practice Recommendations, contains BMPs that may apply to projects and habitat types depending on the actual project description; Erosion Control; Best Management Practice Recommendations by Activity Type are tailored to each project activity type that may occur across all 35 projects, independent of habitat type. Field review of the specific project sites by CAL FIRE Registered Professional Foresters and staff resource professionals will determine the need for additional best management practices. The following list is not intended to be all inclusive and additional site specific BMPs may be developed or omitted on a project by project basis as necessary.

### 1. General Best Management Practice Recommendations

#### Upland Habitat Protection

To avoid impacts to nesting birds and/or raptors:

Remove all temporary flagging, fencing, trash, debris, and/or barriers from the project site upon completion of project activities.

- Habitat elements (nest trees, downed logs and woody debris, cavities and tree hollows, snags, large dead branches, etc.) that provide valuable habitat may be identified and retained where no immediate risk to infrastructure exists.

## Aquatic Habitat Protection

- Avoid removing vegetation from the stream or stockpiling it in the stream bed or on its bank. The sites selected on which to push this material out of the stream should be selected based upon least damaging impacts to resources including sensitive uplands resources. Retain downed woody debris on upland slopes to hold soils.
- Avoid removing living native vegetation from the channel, bed, or banks of the stream.
- If water drafting becomes a necessary component of the proposed subsequent activity, drafting sites should be planned to avoid adverse effects to special status aquatic species and associated habitat, in-stream flows, and depletion of pool habitat. Fit pump intakes placed in stream/lake water with (1/8) inch or smaller mesh screens for January 1, through March 30, and (1/4) inch or small mesh screens thereafter.
- De-watering streams or other aquatic features have the potential for significant impacts to sensitive biological resources that may result in persistent impacts to threatened and endangered species and should not be conducted unless deemed necessary for project implementation. This decision may be made in consultation with CDFW and the relevant RWQCB. Both agencies will provide timely site-specific recommendations and possible alternatives during these consultations.
- When work in a flowing stream is unavoidable, divert the entire stream flow around the work area by a barrier, temporary culvert, new channel, or other means. Begin construction of the barrier and/or the new channel in the downstream area and continue in an upstream direction and divert the flow only when construction of the diversion is completed. Channel bank or barrier construction should be adequate to prevent seepage into or from the work area. Construct diversion berms of onsite alluvium of low silt content, inflatable dams, sand bags, or other similar materials. Avoid making channel banks or barriers of earth or other substances subject to erosion unless first enclosed by sheet piling, rock rip-rap, or other protective material. Remove the enclosure and the supportive material when the work is completed; normally proceed from downstream in an upstream direction.
- Divert flows in a manner that prevents pollution and/or siltation and provides flows to downstream reaches. Provide flows to downstream during all times that the natural flow would have supported aquatic life. Ensure flows are of sufficient quality and quantity, and of appropriate temperature to support fish and other aquatic life both above and below the diversion. Restore

normal flows to the affected stream immediately upon completion of work at that location.

- Contain sediment and reduce stream turbidity when the work area(s) are rewatered. Install an appropriate sediment control device downstream of the work area to filter sediment. Recommended materials include silt fence, straw bales, or other appropriate devices to prevent sediment runoff during rewatering activities. Keep silt control in place only until the water running through the work area is clear of sediment.
- Recommend no direct ignition within the WLPZ or ELZs. However, it is acceptable for a fire to enter or back into a WLPZ's or ELZ's.
- Shade-producing canopy should be retained where waterbodies are 303(d) listed for temperature. CAL FIRE should notice the appropriate Regional Water Board prior to operations.
- Disturbance and/or creation of bare areas should be designed to avoid sediment discharge to waterbodies.
- Recommend seeking advice from the relevant RWQCB prior to operations for project activities with potential to impact waterbodies that are 303(d) listed as impaired due to sediment.
- Water drafting locations associated with surface waters should be designed to prevent overflow from transporting sediment to the waterbody.
- Water drafting locations should be designed to prevent petroleum products from entering the waterbody.
- All in-stream work, including armoring of banks using unanchored wood structures should be completed in accordance with techniques in the California Salmonid Stream Habitat Restoration Manual. The most current version of the manual is available at: <https://www.wildlife.ca.gov/Grants/FRGP/Guidance>. The placement and construction of such in-stream structures to persist when subjected to large flood events.

## **2. Erosion Control**

- No high ground pressure vehicles should be driven through project areas when soils are wet and saturated to avoid compaction and/or damage to soil structure. Indicators of saturated soil conditions may include, but are not

limited to: (1) areas of ponded water, (2) pumping of fines from the soil or road surfacing material during timber operations, (3) loss of bearing strength resulting in the deflection of soil or road surfaces under a load, such as the creation of wheel ruts, (4) spinning or churning of wheels or tracks that produces a wet slurry, or (5) inadequate traction without blading wet soil or surfacing materials.

- Recommend not using heavy equipment on slopes exceeding 65 percent or on slopes greater than 50 percent where the erosion hazard rating is high or extreme.
- Angular, energy dissipating rock slope protection that is properly sized to withstand wash out during peak flows should be installed where appropriate. Only clean material such as rock riprap that is free of trash, debris and deleterious material is to be used as bank stabilization. Asphalt is not an acceptable material.
- Where applicable CDFW recommends the use of bioengineering techniques in the development of stabilization features. The channel should not be narrowed as a result of bank repairs, and features that modify the natural stream gradient (as measured on a longitudinal profile) should not be installed in the channel.
- Non-erodible materials, such as coconut fiber matting, should be used for bank stabilization. Monofilament erosion control materials can trap and kill wildlife.
- Recommend avoid discharging silty/turbid water from dewatering or other activities into the stream. Discharged water should be settled, filtered, or otherwise treated prior to release.
- Recommend avoid placing spoil on the stream side slope where it could enter the stream, or over vegetation.
- Locate permanent spoil storage sites away from a stream/lake, to avoid spoil washing back into a stream/lake, and away from where it should cover aquatic or riparian vegetation, intact upland vegetation, and areas documented with sensitive species.

### Construction of Roads and Crossings

- The following crossings type options are recommended:

<b>Use</b>	<b>Presence of fish or water</b>	<b>Type options</b>
<b>Permanent</b>	Fish Bearing	bridge, plate arch, CMP, rocked ford
	Wet during operations	CMP, vented ford
	Dry during operations	rocked ford
<b>Seasonal</b>	Fish Bearing	bridge, plate arch, CMP, rocked ford
	Wet during operations	bridge, CMP, Vented ford
	Dry during operations	rocked ford
<b>Temporary</b>	Fish Bearing	bridge, CMP with rock fill, Spittler, rocked ford
	Wet during operations	bridge, CMP with rock fill, Spittler
	Dry during operations	rocked ford, Spittler
<b>Tractor/Skid</b>	Fish Bearing	bridge, CMP with rock fill, Spittler
	Wet during operations	Bridge, CMP with rock fill, Spittler, Humboldt
	Dry during operations	rocked ford, Spittler, Humboldt, dipped
<b>Seep/wet area</b>	-	French drain, burrito, rocked ford, CMP

**Definitions:**

CMP = Corrugated metal pipe.

Plate arch = Half metal pipe with concrete footings and natural channel inside.

Vented ford = "Vented ford", Armored ford with CMP to carry low flows.

Entire ford is built to carry 100-year flows over top.

Spittler = Log fill crossing topped with straw layer and native soil for running surface; may include CMP for flow.

Humboldt = Log fill with native soil for running surface.

Dipped = Native dirt fill, use then dip/blade out fill when done.

Burrito = Rock fill surrounded by filter fabric under road base, burrito shape.

Corduroy = Single layer of logs on ground, can have filter fabric layer under logs.

French drain = Perforated pipe surrounded by rock and filter fabric.

- Where new roads are installed, construction should not exceed 600' in length per project. Operational standards provided in the Act and Rules for Forest Fire Prevention Exemption road construction (Title 14 CCR 1038.3) will apply.
- Recommend avoiding work in perennial watercourses during rain events and high flows to protect salmonids and special-status amphibians. Follow the Act



and Rules (or similar design standard, e.g., Pacific Watershed Associates) for rural road sediment control. Recommend avoid work in the winter season.

- When operations require moving of equipment across a flowing stream, conduct such operations without increasing stream turbidity. For repeated crossings, install a bridge, culvert, or rock-fill crossing. Crossings should meet the 100-year flood flow and associated debris standard in the Act and Rules. Crossing installation should not occur during the winter period as defined in the Act and Rules.
- Culverts should be properly aligned within the channel and otherwise engineered, installed and maintained, to resist washout and erosion of the stream bed, stream banks and/or fill; embedded below the natural channel grade to facilitate substrate deposition on the culvert floor; and passable to fish. Culvert backfill material should be free of rocks, limbs or other debris that could dent the pipe or allow water to seep around the pipe.
- It is recommended that culvert fill length, width, and height dimensions not exceed those of the original design/installation or the original naturally occurring topography, contour, and elevation.
- It is recommended that fill within a watercourse be limited to the minimal amount necessary to accomplish the project activities.
- Move structures and associated materials not designed to withstand high water flows to areas above high water before such flows occur.
- Recommend avoid impairing water flow (velocity and low flow channel width) when installing bridges, culverts, or other structures. Place bottoms of temporary culverts at or below stream channel grade, and bottoms of permanent culvert below stream channel grade.
- Size storm drains lines/culverts adequately to carry peak storm flows for the drainage to one outfall structure. Properly align the storm drain lines/culverts and the outfall structure within the stream and otherwise engineer and install to assure resistance to washout, and to erosion of the stream bed, stream banks and/or fill. Dissipate water velocity at the outfall, to reduce erosion.
- Bridges are the preferred crossing type for fish-bearing Class I watercourses. Where bridges are used, they should be constructed as clear span bridges without abutment fills below the ordinary bankfull stage. Abutments within the bankfull stage should be armored with rock rip-rap sized to withstand displacement by expected flows. Bridges should be set high enough to pass the entire 100-year peak flow and floating debris. Log stringer bridges may

be used, but all surfacing material should be clean rock if the surface material is not otherwise planked, plated, or paved. Bridge abutments and slope protection should not constrict the channel.

- Project design may include use flatcars, log stringers, plate, or other clear-span designs as temporary bridges. Temporary bridges should be removed by the end of the work period in each year. Fills for abutments below bankfull stage should be log and/or rock. Log stringer bridges should be surfaced with filter fabric or straw, under a road surface layer of rock, to prevent surface material from entering channel during use.
- Bottomless arch culverts or embedded culvert design methods (i.e., stream simulation or active channel design) in accordance with the “Culvert Criteria for Fish Passage” found as Appendix IX-A of the California Salmonid Stream Habitat Restoration Manual (<https://www.wildlife.ca.gov/Grants/FRGP/Guidance>) are recommended. Bottomless culverts meeting the culvert width criteria in the manual and culvert footings should be deep enough to avoid scour exposure.
- Inspect all crossings appurtenant to proposed operations at least once after October 15th following the first storm event producing bankfull stage prior to completion of operations. The inspection should ensure that crossings are functioning as designed, road approaches hydrologically disconnect the road prism from waters, and the fine sediment present on road approach surfaces is prevented from delivery to streams.
- Culverts designed to pass the estimated 100-year flood flow, including debris and sediment loads, without overtopping or diverting. Culvert sizing factors should include transportation of bedload and the abundance and size of woody debris likely to be introduced to the stream upstream of the culvert crossing.
- Culverts and their outfall structures should be aligned with the stream channel, as wide as or wider than the channel width, and should be placed with the bottom set at or slightly below the natural streambed elevation to the maximum extent feasible.
- If culverts cannot or will not be set to grade, they should have downspouts and/or energy dissipators below the outfall as needed to effectively control erosion. If half-round downspouts (flumes) are used, they should be placed in line with the culvert, sized larger than the culvert and of sufficient size to accommodate entire anticipated stream flow. Downspouts should be securely attached to the culvert and staked or otherwise anchored to the fill slope.

- Culverts should extend lengthwise completely beyond the toe of fill.
- Sediment depositions in the stream channels at the inlets of the culvert should be excavated and disposed of at a location and in a manner where sediment should not enter into the waters of the State.
- During crossing removal, recreate the natural channel grade and orientation, with a channel bed that is as wide as or slightly wider than the original watercourse.

### Pollution

- To the maximum extent feasible confine parking, material storage areas, and equipment storage outside of the river or stream channel and on previously disturbed areas.
- Prevent debris, soil, silt, sand, bark, slash, sawdust, rubbish, construction waste, cement or concrete or washings thereof, asphalt, paint, oil or other petroleum products or any other substances which could be hazardous to aquatic life, or other organic or earthen material from any logging, construction, or other associated project related activity from contaminating the soil and/or entering into or placed where it may be washed by rainfall or runoff into, waters of the State. When operations are completed, remove any excess materials or debris from the work area. Recommend avoid depositing rubbish within 150 feet of the high-water mark of any stream or lake.
- Recommend avoid pouring cement and concrete within 150 feet of a stream if precipitation is predicted within 24-hours. Recommend avoid pouring cement in or near a flowing stream, to reduce the potential for significant adverse impacts to the stream, water, or biota.
- Check and maintain any equipment or vehicles driven and/or operated within or adjacent to the stream/lake daily, to prevent leaks of materials that if introduced to water could be deleterious to aquatic life.
- Position stationary equipment such as motors, pumps, generators, and welders, located within or adjacent to the stream/lake over drip pans. Stationary heavy equipment needs suitable containment to handle a catastrophic spill/leak. Locate clean up equipment such as extra boom, absorbent pads, skimmers, on site prior to the start of activities adjacent to the streambed or lake.

- Install necessary containment structures to control the placement of wet concrete and to prevent it from entering into the channel outside of those structures.

#### Invasive Species

- Where applicable, work should begin in the non-infected area and progress towards the infected area to minimize spread of pests around the activity site.
- To reduce the spread of new invasive plants, use certified weed-free straw and mulch.

### **3. Activity-Specific Best Management Practice Recommendations**

These project-specific BMPs are tailored by CDFW to each project activity type that may occur across all 35 projects, and independent of habitat type.

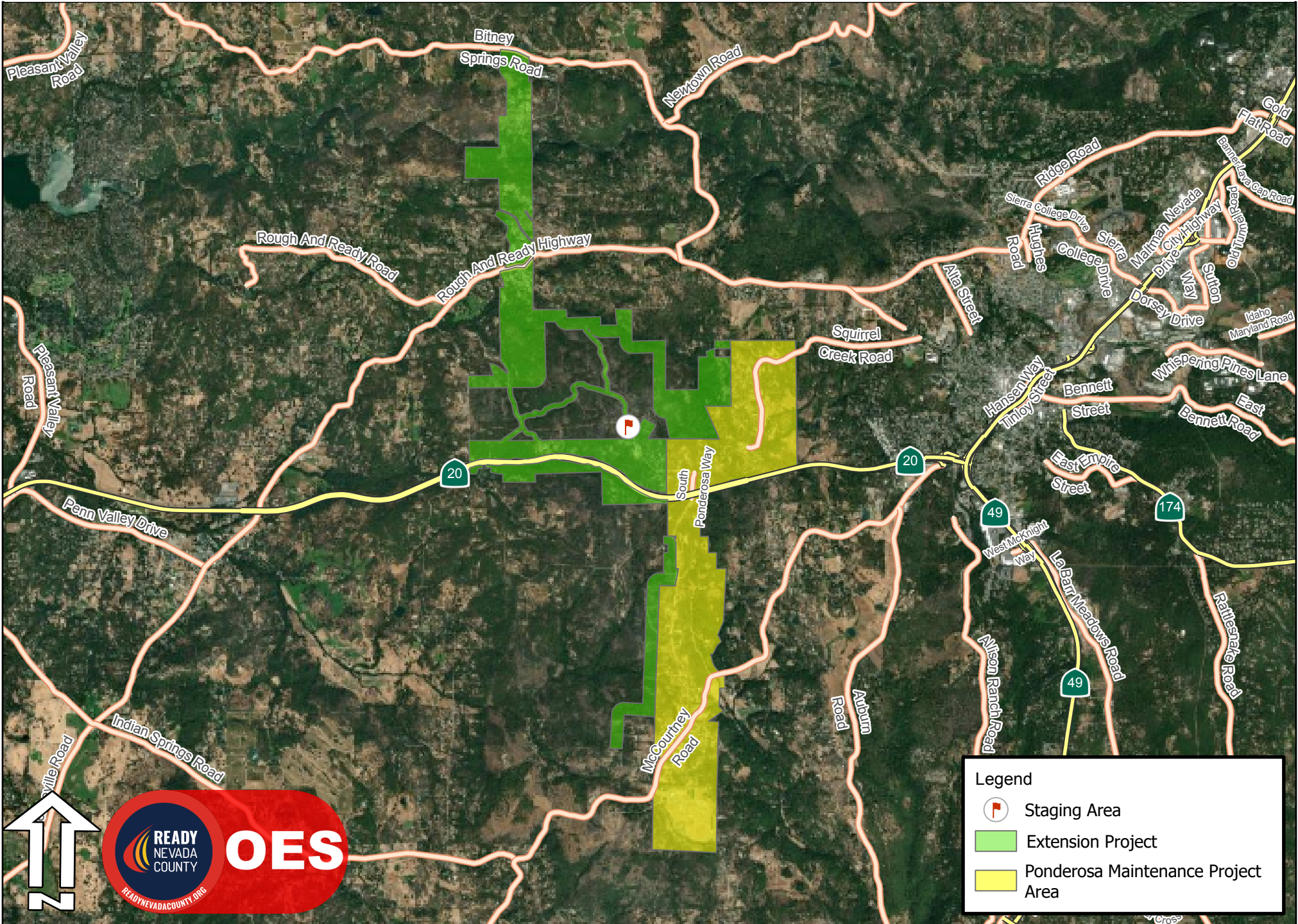
#### Herbicide

- Herbicides should be applied by a certified pest control applicator per the label, following all applicable laws and regulation.

#### Mechanical Removal

- Tractor or heavy equipment operations should not be conducted on slopes greater than 50%.
- Tractor roads should not be constructed on slopes greater than 40%.
- Tractor or heavy equipment operation should not be conducted on known slides or unstable areas.
- Heavy equipment should not be conducted within the standard WLPZs.
- Should operations extend into the winter period, as defined by the Forest Practice Act and Rules, limitations on operations related to using saturated roads, stabilizing erodible soils and installing erosion control measures may be followed.
- Equipment maintenance should occur outside the WLPZ.

# SNC#1513: Ponderosa West Grass Valley Defense Zone Maintenance Project

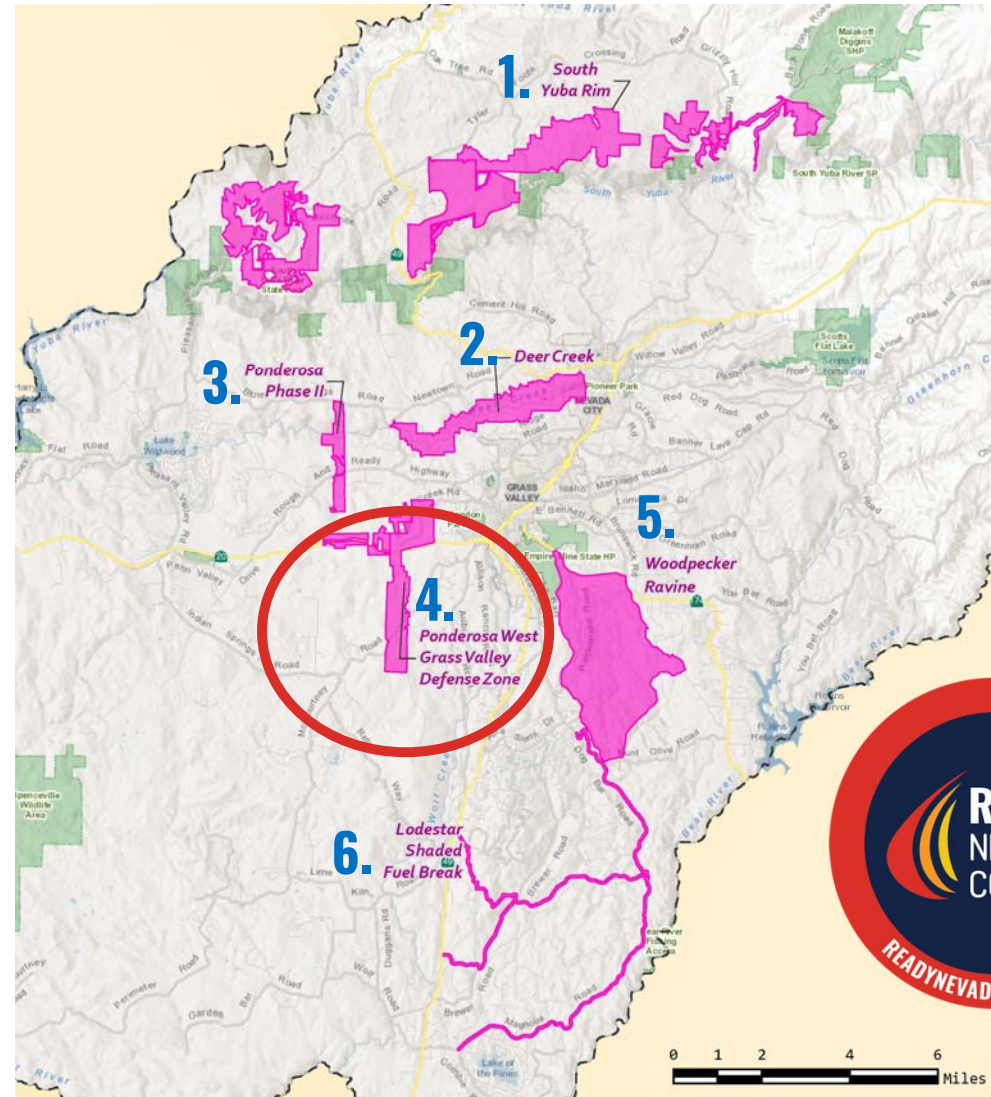


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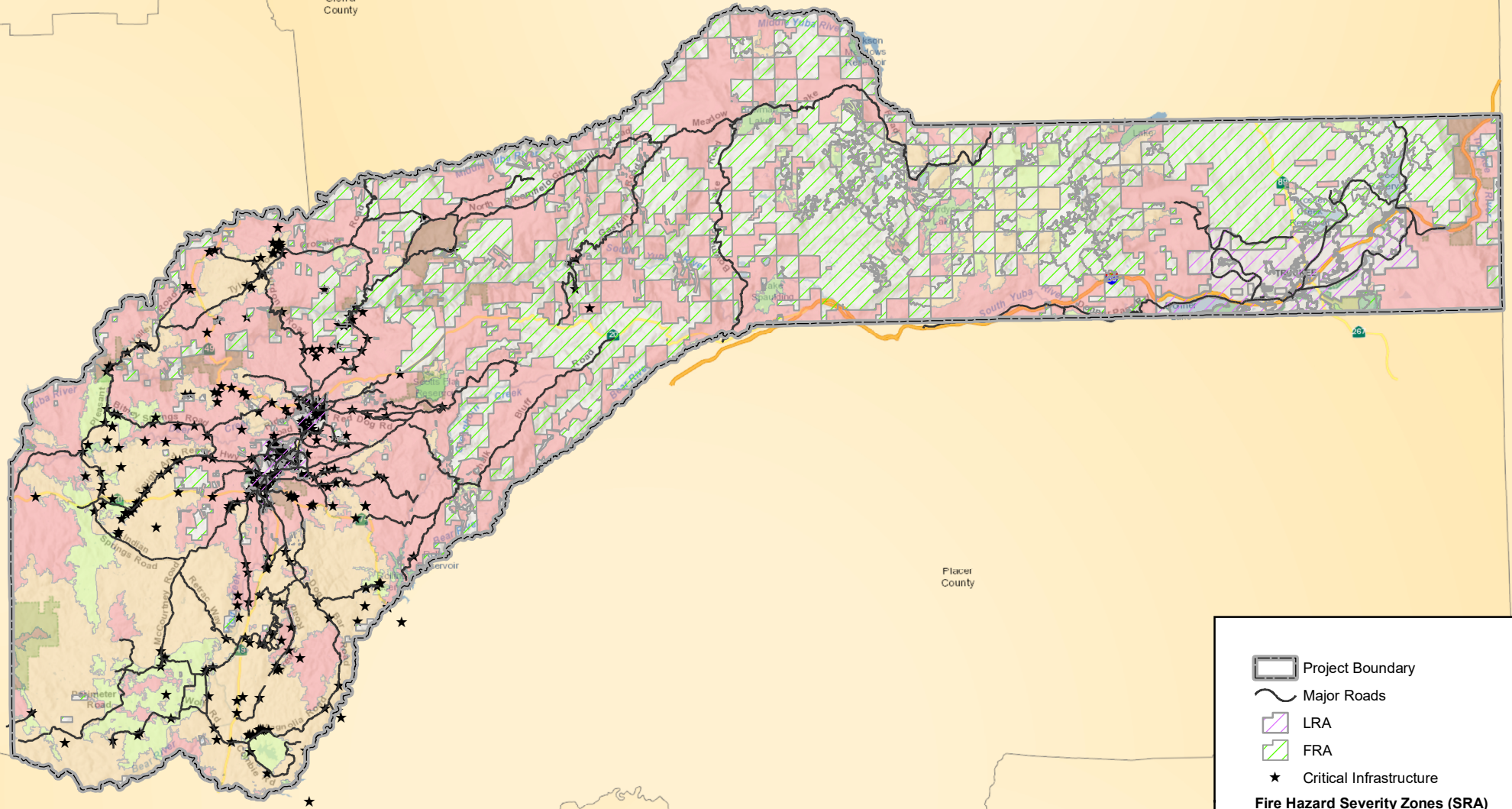
# Fuel Breaks

## Western Nevada County

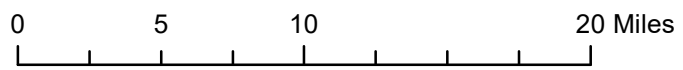
1. **South Yuba Rim:** 6,000 acre planning area, ~800-acre treatment. FEMA proposal under review.
2. **Deer Creek:** 1,600 acres. FEMA Proposal under review (FireSafe Council of Nevada County is the applicant).
3. **Ponderosa Phase 2:** 600 acres. Federal funding and local match are secured.
4. **Ponderosa Phase 1:** 1,087 acres. CAL FIRE grant closed out March 15, 2022.
5. **Woodpecker Ravine:** 414 acres. CAL FIRE funding secured. Estimated start is October 2022.
6. **South County/Lodestar:** 339 acres. CAL FIRE funding secured.



# Fire Hazard Severity Zones and Critical Infrastructure Nevada County



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



- Project Boundary
- Major Roads
- LRA
- FRA
- Critical Infrastructure
- Fire Hazard Severity Zones (SRA)**
- Hazard Class**
- Very High
- High
- Moderate
- No Data Available

Scale 1:425,000 NORTH