



California Department of Forestry and Fire Protection
(CAL FIRE) California Climate Investments
Fire Prevention Grants Program
Project Scope of Work



Project Name: Egress/Ingress Fire Safety Project

Project Tracking Number: 18-FP-NEU-1006

Project Description Summary: The goal of this project is to remove hazardous fuels along 200 miles of County maintained roads (approximately 245 acres) throughout Nevada County in and directly adjacent to State Responsibility Areas including 42 Communities at Risk, homes, critical infrastructure and other highly valued resources. The reduction along County maintained roads will improve the health and resilience of treated areas for increased carbon sequestration, support community wildfire planning efforts and plan implementation, and improve public awareness thereby reduce human ignitions. An intensive treatment prescription will reduce potential greenhouse gas emissions by use of hand and mechanical vegetation removal techniques which will provide prolonged benefits not requiring additional efforts for an extended period of time.

A. Scope of Work

Section 1: Hazardous Fuel Reduction/Removal of Dead or Dying Tree Projects

1. The project is located on approximately 200 miles of County maintained roads throughout Nevada County, California. Nevada County is in the Sierra Nevada mountains with a population just over 98,000 whom reside in 53,186 housing units (US Census v 2016). More than half of Nevada County and most of the County maintained roads are in State Responsibility Area. Over 42 Communities At Risk are in Nevada County and will be positively impacted with the proposed project. The largest of those communities in the unincorporated areas of Nevada County include Penn Valley, Lake of the Pines, Alta Sierra, Cedar Ridge, North San Juan, Washington, Norden and Floriston. Incorporated areas that will also benefit as they abut the unincorporated areas include Grass Valley, Nevada City and Truckee.
2. The primary goal of the project is remove hazardous fuels along both sides of 200 miles of roadway focusing on emergency egress/ingress routes first in order to protect homes, infrastructure and other highly valuable natural resources. Additional goals include improving the health and resilience of treated areas for increased carbon sequestration, supporting community wildfire planning efforts and improving public awareness of human impacts to the environment. Per the prescribed intensive treatment, greenhouse gas emissions will also be minimized during the project itself by the use of mechanical and hand techniques as well as in the long-term since future treatments will be able to be spaced further apart due to the intensive prescription.
3. By removing hazardous fuels along County maintained roads, wildfire risks to habitable structures will be reduced in the WUI since fuel loads will be significantly reduced, egress routes will be improved allowing residents to evacuate quicker thereby allowing firefighters better ingress access to prevent structure fires.

4. Additional assets at risk of damage by wildfire will benefit from the project including wastewater facilities, domestic and municipal water supplies, power lines, communication facilities, drainage facilities, bridges, transit services, road maintenance services, government buildings (local, State and Federal), medical facilities, tribal sites, historical sites, recreational sites and community centers.
5. The scale of the project is appropriate to achieve the stated goals, objectives and outcomes discussed in Item 2 above.
6. Nevada County used waste diversion so biomass and green waste is sent to biomass and composting facilities including the Rocklin Biomass plant.

B. Relationship to Strategic Plans

The proposed project supports the goals and objectives of the California Strategic Fire Plan, the Nevada-Yuba-Placer Unit Fire Plan, a Community Wildfire Protection Plan (CWPP), County Fire Plan, and other long-term planning documents as described below:

1. California Strategic Fire Plan - provides an analysis procedure utilizing, in part, computer based geographical information data that is validated by experienced fire managers to assess fire fuel hazards and risks to design and implement mitigating activities. This information has been used for this proposed project in order to reduce hazardous fuel loads and improve egress and ingress on critical roads.
2. Nevada-Yuba-Placer Unit (NEU) Fire Management Plan - is a product of the implementation of the State Fire Plan. This plan provides background information, fuels and fire data, proposed projects, and individual Battalion reports outlining mitigating activities commonly carried out each year. The NEU Fire Management Plan is our local road map to create and maintain defensible landscapes to protect those assets vital to the state. This information has been used for this proposed project in order to reduce hazardous fuel loads and improve egress and ingress on critical roads.
3. Community Wildfire Protection Plan Nevada County, California (CWPP) - updated in April 2016, there are three priority areas in the CWPP plan that are addressed in this proposal including: access, fuels and protection. The first priority in the plan is fuels reduction stated in the first objective on page 23 focusing on reducing wildfire risk to communities. Also in the list of the top five priorities is reduction of fuels along major roads used for egress/ingress (page 49), which address access, fuels, and protection. A theme throughout the plan is coordination with public agency activities (page 23). This project is all about coordination with the County Road Division to implement roadside vegetation management activities that are more effective at producing fire safe belts along county roads that are critical for suppression, egress/ingress and evacuations.

4. Nevada County Consolidated Fire District Strategic Plan 2016-2021 –The Nevada County Consolidated Fire District strives to meet the National Fire Protection Association (NFPA) 1710 guideline for fire department responses which allows firefighters one minute to don their turnouts once an emergency call for service is received from dispatch and four minutes of drive time. A fire department is to meet this five minute response standard 90% of the time. By maintaining this standard response time, the Nevada County Consolidated Fire District can minimize deaths and injuries associated with fires; minimize the direct and indirect losses due to fires; and minimize deaths for people experiencing sudden illness, accidents, or injuries. However, the fire district needs to have a fuel modification zone of 10 feet on both sides of roads in order to insure proper egress/ingress to an area.
5. Nevada County Fire Safe Council and Neighborhood Evacuation Plans – The Nevada County Fire Safe Council works throughout Nevada County with neighborhoods to create Evacuation Plans (currently have 10 neighborhood plans throughout Nevada County), 22 Firewise communities throughout Nevada County with another 23 in the works. All plans discuss the need to have fuel modification zones along roadways.
6. Nevada County Local Hazard Mitigation Plan Update – completed in August 2017, wildfire is identified as effecting the entire county, is highly likely, would be catastrophic and is of a high significance. Further discussed in the document is the need to have vegetation more intensely cleared from roadway shoulders.
7. California Forest Action Plan 2010 - CALFIRE's Fire and Resource Assessment Program (FRAP) is required by the California legislature to produce periodic assessments of the forests and rangelands of California. Participation of local, state and federal agencies as well as non-governmental organizations and private stakeholders are included in this report. The California Forest Action Plan, also known the 2010 California Forest and Rangelands Assessment and Strategy Reports, identifies landscapes of medium and high priority for preventing wildfire threats in 46 of California's 56 counties.

The 2010 FRAP Strategy Action E-1 specifies supporting proper management to protect and enhance forests in the wildland/urban interface (WUI) which is most of Nevada County pursuant to the CWPP. This includes reducing the occurrence of damaging wildfires to mitigate life, property and natural resource losses through the implementation of effective and efficient fire prevention programs and activities. This project offers defensible space and evacuation route clearing

directly address the protection of life and property from wildfire. This also reduces the impacts of wildfire on ecosystem health, public safety and private property. Nevada County has the fifth highest number of structures in the State Responsibility Area most of it defined WUI in the CWPP. Our project protects the forest from catastrophic wildfire and provides better access for suppression resources to limit the exposure of the fire.

8. Circulation Element - Found in Chapter 4 of Nevada County's General Plan the Circulation Element is intended to address circulation and capacity needs, safety and emergency access, and non-motorized transportation. In addition, the circulation element identifies the functional classification of Nevada County roads and level-of-service requirements. The objective of functional classification is to group roads and streets into classifications that share similar function, purpose, and importance in the roadway network.
 - a. Arterials - Roadways providing primary access from freeways and principal arterials to major origins and destinations (e.g., Brunswick Road and Donner Pass Road);
 - b. Collectors (Major and Minor) - Streets connecting arterials to local roads (e.g., East Bennett Street and Alta Sierra Drive)
 - c. Locals - Streets providing primary access to individual properties (e.g., Jones Bar Road and Hobart Mills Road); and
 - d. Regional Emergency Access - Roadways providing emergency access between arterial or collector roads but are not needed by the County for general circulation purposes.

The following section describes the four primary goals of the Circulation Element as well as the Policies that will implement those goals. The four primary goals sections are to: 1) coordinate the circulation system with the County's land use patterns (Circulation and Land Use); 2) provide for the movement of goods and people (Movement of Goods and People); 3) reduce dependence on automobiles (Reduce Automobile Dependency); and 4) minimize transportation system impacts to the environment (Environmental Protection). The project as outlined in this grant focuses on areas indicated on the Circulation Element. All Proposed Roadside Vegetation Management Program roads are County maintained roads.

9. Little Hoover Commission Report # 242 – 2018 - Little Hoover Commission report *Rethinking Forest Management in the Sierra Nevada* was completed in February 2018, the report indicates the catastrophe-scale fire danger in Nevada County as well as the need to oversee a transformation to more proactive forest management system. The report indicates the immediate public health and safety impact has fallen squarely on the communities in the Sierra Nevada. Dead

and dying trees threaten people, homes, and infrastructure and evacuation routes. The state is working to remove hazard trees from areas under its jurisdiction, while local agencies and homeowners are doing the same but with far less available money. The task force has identified the following High Hazard Zones to guide the state's response to the crisis. The Majority of Nevada County is located in Tier 1 and Tier 2 High Hazard Zones. High Hazard zone Tier 1 is defined by the report as in close proximity to communities, roads and utility lines representing a direct threat to public safety. Tier 2 High Hazard Zones are defined by watersheds that have significant tree mortality, combined with community and natural resource assets. Report focuses immediate community action in the Tier 1 and Tier 2 high hazard zones. The report also lists several recommendations for state and local agencies to complete. As it pertains to the project, the Little Hoover Commission Report hosts a number of recommendations for state and local agency partners. Particularly recommendation #1 includes actions that are included in our grant proposal.

In Recommendation # 1, the Commission states that the State of California must engage in collaborative landscape-level forest management for long-term forest resiliency. The Commission urges that the state must address the disposal of millions of dead trees, provide financial assistance to rural counties and homeowners for hazardous vegetation removal, and develop a public education campaign about the importance of healthy forests in the Sierra Nevada.

10. National Action Plan 2014 - The 2014 National Action Plan – An implementation Framework for the *National Cohesive Wildland Fire Management Strategy* was developed through a collaborative effort by federal, state, local, territorial/tribal governments, non-governmental partners and public stakeholders. The plan provides a framework for implementation actions and tasks necessary at various scales as outlined in the National Strategy. The primary, national goals identified as necessary to achieving this plan are: 1) Restore and maintain landscapes 2) Provide Fire-adapted Communities 3) Improve Wildfire response. Identified challenges found in this plan are: 1) managing vegetation and fuels, 2) protecting homes, communities, and other values at risk 3) managing human-caused ignitions and 4) safely, effectively, and efficiently responding to wildfire. The County of Nevada has implemented many of these actions already and is seeking to expand Fire Mitigation Activities through this project

Goal 3 demonstrates needed improvement in wildfire response with the implementation of safe, effective, efficient, and risk based wildfire management decisions. This includes an investment in wildland fire firefighting workforce at to

meet the increasing complexities and demands of firefighting in the wildland urban interface. Our Community Fire Mitigation Project increases fire fighter safety by actively addressing fuel around evacuation routes. This is conducted through roadside vegetation management.

The project therefore follows in accordance with the 2014 National Action Plan. Our project will assist in mitigating wildfires which threaten our communities and homes. Our project mitigates hazardous fuels, protects communities, reduces human-caused ignitions and helps in responding to wildfire.

11. USDA Wildfire, Wildlands, and People: Understanding and Preparing for Wildfire in the Wildland-Urban Interface 2013 - The report was conducted by the Forests on the Edge project, and sponsored by the U.S. Department of Agriculture. Intention of this report is to amplify awareness of the ecological role and societal costs of wildfire, the causes/impacts of wildfire on human communities, and relationships between increases in housing development and wildfire risk. Changes in U.S. wildland fire management policy are discussed in the report. Building on the momentum and changes in 1910 fires, 1960s/1970s ecological studies and public management policies have all led to today's National Cohesive Wildland Fire Management Strategy. The Strategy indicates need for Federal, State, local non-governmental partners to work together proving management of national resources. Objectives in this strategy include 1) reducing wildfire hazards on lands bordering communities 2) restoring the structure, composition, and function of fire-dependent landscapes 3) improving the overall effectiveness of the wildland fire management organization.

The study shows reducing loss of life, property, infrastructure, and natural resources from wildfires depends on long-term community action. Actions include land use decisions, building codes and standards, and other planning and landscaping choices all influence a community's vulnerability to damage from wildfire. Other actions include increasing public education to mitigate damage by becoming knowledgeable about and engaging in actions to plan and protect homes and neighborhoods from wildfire. Actions should create "fire-adapted" communities which are better prepared for wildfire as a part of their surrounding landscape.

The Nevada County Board of Supervisors adopted a list of objectives and priorities for the county; of these objectives the Board has prioritized the implementation of policies and programs to reduce wildfire and on life, property and the environment. Nevada County has also adopted Ordinance 2411 which supports PRC 4291 defensible space standards and includes defensible space standards for evacuation routes.

C. Degree of Risk

1. The project is located primarily in Very High and High Fire Hazard Severity Zones with small areas in Moderate Zones.
2. The project is on County roads in the WUI, where many of the human caused fires start and spread to wildlands. Treatments along the roads will reduce this likelihood. The county road segments were selected because they occur at the nexus of high density WUI neighborhoods that have particularly high fuel hazard. During a fast moving wildfire, it takes time to reduce fuel hazard along a road, often time that is not available. These areas will be pre-treated to a standard that CAL-FIRE deems safe for their operations, down to a 4 foot flame length during extreme fire weather. This will make it safe for fire resources as well as make resources available to work elsewhere on a fire incident that is critical.

The first priority in the CWPP plan is fuels reduction, particularly in the WUI area (map on page 13). This is stated in the first objective on page 23 focusing on reducing wildfire risk to communities. Also in the list of the top five priorities is reduction of fuels along major roads used for egress/ingress (page 49), which address access, fuels, and protection.

D. Community Support

1. This project includes a 23% match, \$256,955 of Gas Tax funds.
2. Press releases, community meetings, and field tours with the Fire Safe Council of Nevada County and any interested FireWise Communities will be encouraged.
3. Long term maintenance will be addressed through the County's Vegetation Management Plan after the project is complete.
4. The project is a continuation of a partnership with the Fire Safe Council of Nevada County and is in coordination with local fire districts and our local Office of Emergency Services.

E. Project Implementation

1. Assuming funding is available September 1, 2019, the project is anticipated to occur during the fall/winter of 2019/2020 and fall/winter of 2020/2021.
2. Paperwork associated with the project is anticipated to be completed by the end of 2021.
3. Half of the project work should be completed by April 2020 with approximately 100 miles of road receiving treatment at that point. The final half of the work will be completed by April 2021. Project deliverables include completing vegetation management on a per mile basis.
4. The project will is categorically exempt per Section 15301 of the California Environmental Quality Act (CEQA). A determination will be filed prior to the start of work.

F. Administration

1. Nevada County is currently in the process of completing a very similar project titled “Egress/Ingress Fire Safety Paradigm Change” project using funds from the 2017 SFA Clearinghouse, California Fire Safe Council grant. In fact, the prescription for treating roadsides is the same one we propose with this project. In addition, our staff is adept at overseeing approximately \$20 million in grant funded projects per year for a variety of other types of projects.
2. The Public Works Department, under the Community Development Agency of Nevada County will track project expenses and maintain project records in a manner that allows for a full audit trail of any awarded grant funds.

G. Budget

1. Grant funds, if awarded, will be expended by Public Works crews and consultants to complete the proposed project. A registered professional forester will be contracted with to provide specific guidance. Equipment funds are requested for two commercial chippers at approximately \$35,000 each because renting would cost more ($\$35.19 \times 5000 \text{ hours} = \$175,950$ each over the project timespan per Caltrans Labor Surcharge and Equipment Rental Rates April 1, 2018 through March 31, 2019). The chippers will continue to be used to maintain the roadways after the grant ends.
2. The costs for each proposed activity are based on similar projects in our area. No costs are higher than the norm.
3. The total project cost is appropriate for the size, scope, and anticipated benefit of the project. Protecting our community from wildfire is priceless however economically it is much cheaper as well considering the costs to rebuild critical infrastructure and homes.
4. Indirect costs for our Road Maintenance crews include costs for general county administration, fiscal assistance, legal assistance, human resources, etc. These costs are necessary for our County and are applied to every project. This proposed project requests 12% in administration costs although our actual administration costs exceed that percentage and will be paid by Gas Tax funds.
5. Object Costs
 - a. Salaries and wages: costs for all project personnel directly involved with the implementation of the project. All road crews will perform the actual work, the administrative staff will assist with road notifications and the Director of Public Works will provide

H. California Climate Investments

The space provided here is to allow for a narrative description to further explain how the project/activity will reduce Greenhouse Gas emissions.

1. How will the project/activity reduce Greenhouse Gas emissions?
2. Is the project located in a Low-Income or Disadvantaged Community? If not, does the project benefit those communities. Please explain.
3. What are the expected co-benefits of the project/activity (i.e. environmental, public health and safety, and climate resiliency)?
4. When are the Greenhouse Gas emissions and/or co-benefits expected to occur and how will they be maintained?

(Please type in blank space below. Please note there is no space limitations).