

DR-4344-0704 Roadside Vegetation Management Program

County of Nevada

Request for Information, December 8, 2022

Scope of Work

Summary: The objective of the Nevada County Roadside Vegetation Management Program is to provide the public with safe, functional egress through roadside vegetation management to mitigate wildfire threats during evacuation. Nevada County Department of Public Works (DPW) maintains 562 miles of roadway and an additional 50 miles established under various road maintenance districts including Permanent Road Divisions and County Service Areas. DPW has identified 300 miles of roadway that will undergo hazardous fuels treatment as part of this project. Public roads were identified through the County of Nevada Circulation Plan 2009, County of Nevada Emergency Access Route Study 2000, Nevada County Local Hazard Mitigation Plan Update 2017, California Department of Forestry and Fire Protection Regional Severity Zone Map, and Regional Emergency Access Routes Map. This will encompass nearly 20% of the County of Nevada controlled roads and focuses on high traffic areas.

Nevada County will also partner with the Truckee Fire Protection District, which has identified 17.5 miles of roadway and 3.5 acres in 6 subdivisions in need of treatment to create fuel breaks and safety corridors for use in evacuations. These areas have been identified as having the highest risk while providing the most benefit for fires that may start inside the urban area. In addition, these areas provide the best protection from wildland fires starting outside the urban area and encroaching into subdivision areas.

At completion, the Roadside Vegetation Management Program Project will result in improved evacuation outcomes for residents in both Western and Eastern Nevada County in the event of wildfire. It leverages existing roadside vegetation abatement regimes deployed for County roads but increases the pace and scale at which this vital work takes place. This project supports the Nevada County Local Hazard Mitigation Plan (LHMP) Goals and the objectives of the Nevada County Community Wildfire Protection Plan (CWPP).

Due to the size and complexity of the project area and the planning necessary to render this project shovel-ready, this project will be phased. **Phase 1 (Planning)** will consist of Phase 1 project management (*Task 1*), the field surveys and geospatial mapping necessary to digitize the County of Nevada right-of-way (*Task 2*), treatment prescription design (*Task 3*), biological, botanical, and archeological surveys to satisfy environmental permitting (*Task 4*), and finalization and submission of Phase 1 deliverables (*Task 5*). **Phase 2 (Implementation)** will consist of Phase 2 project management (*Task 6*), hazardous fuels reduction and development of a plan for maintenance (*Task 7*), biomass disposal (*Task 8*), and project close-out activities (*Task 9*). NEPA analysis will be a FEMA responsibility and will take place between phases. This mitigation solution is not dependent on other grants or projects. The project will leverage ongoing and planned Nevada County Department of Public Works roadside vegetation management activities in order to improve the success of future maintenance activities.

Nevada County Office of Emergency Services (OES) will partner with Nevada County Department of Public Works (DPW) and Truckee Fire Protection District, who will be responsible for procurement of respective vendors (identifying, engaging) and managing subcontractors. In addition, during Phase 1, staff of the Nevada County Geographic Information System (GIS) department will provide technical support. Nevada County OES staff will administer the grant and provide overarching project management

including being the point of contact with Cal OES and FEMA and communicating project milestones to the public. This will be a 3-year project, with 18 months for Phase 1 and 18 months for Phase 2.

PHASE I (PLANNING): MONTHS 1-18

The Phase I Mitigation Action of the Nevada County Roadside Vegetation Management Program is to conduct the necessary technical planning and permitting to have a shovel-ready implementation project at the end of 18 months. Specific deliverables associated with Phase I are listed by task below.

Task 1: Phase I Project Management

Under *Task 1*, Nevada County Office of Emergency Services (OES) will provide overarching management of the project and the grant, with support from the Department of Public Works for oversight, billing, vendor procurement, and subcontractor management. Upon receipt of the grant award letter, the County of Nevada Board of Supervisors will approve a resolution to accept the FEMA grant funds. After notice of acceptance, Nevada County OES will schedule a kickoff meeting with all partners. Meeting discussions will include work plan review, tasking, responsibilities, scheduling, status reporting, funding, action item reviewing, and Phase I contracting, including issuing requests for proposals for digitized mapping, treatment prescription, and environmental permitting. Nevada County will submit a request for proposals in accordance with state and federal regulations. Once bids for contracted work are thoroughly reviewed by the County, the most competitive applicant will be awarded the contract.

Nevada County OES will be responsible for completing and submitting quarterly financial and performance progress reports to CalOES and FEMA.

Task 1 Deliverables: Progress Reports and Invoices; RFPs/Procurement Materials; Vendor Contracts.

Task 2: Map County Right of Way

Under *Task 2*, Nevada County will contract with a consulting firm in order to meet the requirement to provide FEMA with a georeferenced shape (SHP) file containing the County Road right of way and physical road location within said right of way for the road miles included in this project. Research and analysis will be conducted for all parcels adjacent to the subject roadways to determine the legal status of the right of way. Boundary analysis will be conducted on the public right of way including: (1) building a record right of way drawing to identify gaps in the public record which would indicate possible prescriptive rights; (2) identifying record monuments needed for resolution of the right of way; (3) performing field surveys to locate the roadway and boundary evidence needed for resolution of the public right of way; (4) analysis of boundary evidence for the building of the right of way line work; (5) compiling of roadway and right of way line work and production of the shape file. Nevada County Geographic Information System (GIS) department staff will work under a charter on this project to act as a technical advisor for *Task 2*. This will include attending project management meetings with the consultant, providing the consultant access to County data, evaluating data generated by the consultant to ensure that it conforms to County standards, and integrating the data deliverable back into the County system.

As part of the analysis under *Task 2*, Nevada County will determine if right-of-way documentation on roads crossing through US Forest Service land contain permissions for the County to conduct the proposed vegetation abatement activities. If necessary, Nevada County OES will re-initiate the pre-application discussion with United States Forest Service, Tahoe National Forest that began in March 2022 and file a 299 form for a temporary special use to conduct the work.

Task 2 Deliverables: Digitized Right-of-Way Maps; Form 299 (if applicable)

Task 3: Develop Treatment Prescription

Under *Task 3*, Nevada County will hire a Registered Professional Forester (RPF) to develop the treatment prescription for this project, including activities to assist with environmental compliance (CEQA/NEPA) by identifying sensitive resources (cultural sites, biologically sensitive areas, watercourses) within the proposed treatment area(s): 10 feet of clearance on either side of the road and 15 feet up from the shoulder of the roadway. The RPF will conduct field reconnaissance on the road miles included in the project scope to identify any potential sensitive areas. This information will be used to inform the development of the treatment prescription for this project (see *Task 7* for preliminary details on proposed treatment prescription). Data to be provided as an outcome of field reconnaissance includes:

- Location (road name, milepost or distance from known benchmark, GPS coordinates)
- Resource type (cultural site, sensitive biological resource, watercourse, slope constraint)
- Recommended practice (flag and avoid, directional falling, equipment limitation)

In addition to identifying potentially sensitive resources, the Registered Professional Forester will mark with “NC” and provide location data for roadside trees that in their professional opinion constitute “imminent hazards”. The County may remove these trees at a future date. Finally, the RPF will advise the County on any specialized survey needs to be addressed under *Task 4*.

Task 3 Deliverables: Treatment Prescription, Photo-Documentation.

Task 4: Environmental Permitting

Under *Task 4*, Nevada County will contract with a consulting firm in order to satisfy the requirements for environmental permitting. This will include conducting biological surveys, archeological surveys, and Tribal consultation. These data will be used to prepare the required State environmental permitting elements. In addition, a visual impact survey and environmental justice analysis will be conducted. All applicable data (maps, surveys, analysis) and photos of treatment areas will be provided to FEMA to support the satisfaction of NEPA requirements between Phase 1 and Phase 2 (*Task 5*). In addition, an updated FEMA checklist will be provided to accompany the NEPA documentation along with CEQA. Details on these activities include:

Biological Surveys

A consulting firm will conduct biological surveys for Stebbins morning glory (*Calystegia stebbinsii*), Pine Hill flannelbush (*Fremontodendron decumbens*), California red-legged frog (*Rana draytonii*), and Sierra Nevada yellow-legged frog (*Rana sierrae*). Survey areas for amphibians and plants will be determined using the following criteria:

- *Amphibians:* California Natural Diversity Database (CNDDDB) occurrences are within 2 miles of the treatment area and areas where drainages, wetlands, or other waterbodies, based on National Wetland Inventory and National Hydrologic Database, intersect the treatment area or are within 50 feet of the treatment area.
- *Plants:* CNDDDB occurrences or other known occurrences are within 2 miles of the treatment area and areas where gabbro, mafic volcanic, and serpentinite substrates with secca or dubella

soils, based on the U.S. Geological Survey online spatial data and Natural Resources Conservation District Web Soils, intersect the treatment area.

In addition, any input provided by the RPF (*Task 3*) will be taken into account. Surveys will take place during the blooming period for Layne's ragwort and Pine Hill flannelbush, between April and June. Surveys for Sierra Nevada yellow-legged frog may need to occur later in the season depending on feasible access to higher-elevation survey areas based on snow levels. Surveys for all species will first be conducted by driving and conducting windshield surveys to confirm areas with suitable habitat. In areas where potentially suitable frog habitat is observed, biologists will conduct a more focused (non-disturbance) habitat assessment on foot and take a Global Positioning System point of that location to ensure that the appropriate avoidance and minimization measures can be implemented for the project. Protocol-level surveys will not be conducted for California red-legged frog or Sierra Nevada yellow-legged frog. In areas where potentially suitable plant habitat is observed, biologists will conduct protocol-level rare plant surveys on foot to identify the presence or absence of the target species at these locations.

Archeological Surveys

- *Pedestrian Surveys:* Prior to conducting fieldwork, the contracted archaeologist(s) will conduct a pre-field desktop review to determine the areas that are paved or fully developed and eliminate those areas from the field survey effort. Archaeologists will conduct archaeological pedestrian surveys only of the remaining relevant previously un-surveyed areas within the APE. Field work will be conducted in three phases divided by geographic location, with consideration of elevation, accessibility, and typical field rotation timeframes. Phase I will encompass the western portion of the APE and includes the areas around Penn Valley, Rough and Ready, and western Grass Valley and totals approximately 593.84 acres, of which 492.41 acres have not been previously surveyed. Phase II will encompass the eastern area of Grass Valley, Nevada City, and Willow Valley and totals approximately 535.5 acres, of which 276.32 acres have not been surveyed. Phase III includes the eastern portion of the APE and includes the higher elevation areas north and east of Dutch Flat and totals approximately 250.53 acres, 129.63 of which have not been surveyed.
- *Pre-Field Review and Resource Types:* Prior to the start of fieldwork, archaeologists will prepare an ArcGIS online (AGOL) map and review the record search results data and project components to determine which portions of the un-surveyed APE are suitable for survey (i.e., areas with visible soil [not paved] and/or have potential to present undisturbed soils), as well as areas with higher potential for cultural resources sensitivity based on the archaeological, ethnographic, and historical patterns in the region and patterns of site distribution according to the record search results. Any input provided by the RPF (*Task 3*) will be taken into account. The AGOL map will be uploaded to a tablet to guide the field crew during survey.
- *Survey and Recording:* The archaeological field crew will survey the APE by walking the site area in parallel transects spaced no more than 5 meters apart, or one on each side of the ROW. The crew will use pin flags to mark all surface archaeological features, artifacts, and ecofacts. To prevent drawing attention to sensitive archaeological resources, no flags will remain overnight, or for extended periods of time during the day in areas accessible to the public. Transect spacing may be enlarged or reduced to facilitate the recordation of features and boundaries within sites with dense vegetation (or other ground cover that limits visibility).

- *Reporting:* Upon completion of the fieldwork, a Cultural Resources Technical Report (CRTR) will be prepared. The CRTR will meet the Secretary of the Interior's Standards and Guidelines and will follow *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format* (California OHP 1990) and achieve compliance as it relates to cultural resources with Section 106 of the NHPA and NEPA. The CRTR will contain relevant regulatory setting, context, description of methods, and field survey results.

Built Environment Surveys

- *Pre-Field Review and Resource Types:* Prior to conducting fieldwork, the consultant will conduct a desktop survey of the previously un-surveyed portions of the APE using Google Earth aerial views, historic aerial imagery, and other available data layers. The consultant will prepare a desktop survey database/spreadsheet listing or grouping all built environment improvements observed within the APE. Preliminary research will be conducted where possible to determine an approximate construction date for each built environment improvement or group of improvements (e.g., subdivisions) and will be categorized as more than 45 years of age (historic-era) or less than 45 years of age (contemporary-period) to inform properties and will be photographed and documented as part of field survey efforts. Sources used to obtain year-built dates include County Assessor data, GIS road ownership data, historic USGS topographic maps, and U.S. Department of Agriculture (USDA) aerial photography.
- *Survey and Recording:* Field work will be conducted by an architectural historian in the same phased manner as outlined for the archaeological survey above. The architectural historian will conduct physical inspection only of those built environment improvements identified as likely to be over 45 years of age in the desktop review in areas that have not been previously surveyed. Areas with buildings likely to be less than 45 years of age will be subject to spot/windshield survey to confirm no potentially historic structures are present but will not be documented unless a historic-age property is identified.
- *Reporting:* The consultant will prepare a Historic Resources Inventory Report (HRIR) following the survey. The HRIR will describe the context, methods, and results of the desktop review and field inventory. The report will list previously identified historic built environment resources within the APE, newly identified resources within the APE, and the eligibility status for each property, if known. Due to the low likelihood of project activities (vegetation management) to affect built environment resources, the resources will not be documented at an intensive level; rather, results will be presented in tabular format and DPR 523 Series forms will be attached for those resources that are confirmed to be historic in age and/or have historic significance. Not all resources identified will receive DPR forms. Likewise, formal assessment of built environment resources for inclusion in the NRHP are not a part of the scope of the inventory. Should formal evaluations be required, a separate Historic Resources Evaluation Report (HRER) will be prepared at the request of FEMA.

Tribal Consultation

Tribal Consultation will be conducted in accordance with state and federal guidelines. The Tsi Akim Maidu and United Auburn Indian Community of the Auburn Rancheria have been pre-identified for consultation. Additional contacts from the Nevada City Rancheria Nisenan Tribe, Washoe Tribe of Nevada and California, and Colfax-Todd's Valley Consolidated Tribe shall be included in consultation.

Task 4 Deliverables: Biological Report, Cultural Resources Technical Report (CRTR), Historic Resources Inventory Report (HRIR), CEQA Documentation.

Task 5: Phase I Finalization and Submission

Under *Task 5*, Nevada County will ensure that all appropriate deliverables are provided to FEMA so that Environmental and Historic Preservation (EHP) review can proceed, and Phase 2 can commence.

Task 5 Deliverables: Task 5 deliverables include those listed under Tasks 2-4.

PHASE 2 (IMPLEMENTATION): MONTHS 19-36

The full plan for the Phase 2 Mitigation Action will be informed by Phase 1 deliverables, notably the treatment prescription, the biological and cultural resource surveys, and the Tribal Consultation aspects, which will direct the activities that are appropriate for any given road mile included in the implementation of this project (*Task 7*).

At a minimum, the Phase 2 Mitigation Action will include the following tasks: Phase 2 project management (*Task 6*), hazardous fuels reduction and development of a plan for maintenance (*Task 7*), biomass disposal (*Task 8*), and project close-out activities (*Task 9*).

The Phase 2 Mitigation Actions are anticipated to focus on use of hand crews and hand tools to minimize ground disturbance. Key activities are expected to include removal of brush, small diameter trees, strategic forest thinning, mastication, chipping, scattering of materials or transfer to a suitable biomass facility, and selective application of herbicides. In addition, a maintenance plan will be developed as part of *Task 7* to ensure that project outcomes are maintained. Specific deliverables associated with Phase 1 are listed by task below.

Task 6: Phase 2 Project Management

Under *Task 6*, Nevada County Office of Emergency Services (OES) will provide overarching management of the project and the grant, with support from the Department of Public Works for oversight, billing, vendor procurement, and subcontractor management. Truckee Fire Protection District will be responsible for project management associated with activities under their purview.

Nevada County will submit a request for proposals in accordance with state and federal regulations for roadside vegetation management. Once bids for contracted work are thoroughly reviewed by the County, the most competitive applicant will be awarded the contract. Easements are already in-hand for the Roadside Vegetation Management Program for both County of Nevada and the Truckee Fire Protection District.

Nevada County has a long history of subcontracting with local organizations to leverage skillsets and capacity. Nevada County will contract with the Truckee Fire Protection District to complete the 17.5 miles of roadside vegetation management and 3.5 acres of clearance in densely populated Truckee neighborhoods. Programmatically, the Truckee Fire Protection District will be responsible for managing its own project timelines, budget, and deliverables as will be outlined their (future) contract with County of Nevada. The administration of roadside vegetation treatment for 300 miles of County-maintained roadway will be completed by the Nevada County Public Works Department. Nevada County will comply with 2 C.F.R. §§ 200.317-327 as will all subcontractors.

Nevada County OES will be responsible for completing and submitting quarterly financial and performance progress reports to CalOES and FEMA. Truckee Fire Protection District will submit the same to Nevada County OES so that all project reporting is comprehensive and timely.

Task 6 Deliverables: Progress Reports and Invoices; RFPs/Procurement Materials; Vendor Contracts.

Task 7: Hazardous Fuels Reduction and Maintenance Plan

Under *Task 7*, County of Nevada will treat 300 miles of the County's roadway and Truckee Fire Protection District will treat 17.5 miles of roadway, and 3.5 acres in 6 different subdivisions using a combination of fuels thinning, limbing and vegetation removal. During the hazardous fuels reduction activities project contractors and agencies will provide before and after photos of hazardous vegetation removed. Furthermore, the County will conduct post inspection of hazardous fuels reduction activities to ensure that adequate work has been performed. The specific treatment prescription(s) to be implemented under *Task 7* will be developed as an outcome of *Task 3* (Phase 1), however, it is anticipated that the following prescriptions will apply by vegetation or fuel type:

All vegetation/fuel types:

- Remove all vegetation that is cut or pruned
 - to off-site location, except where it can be piled and burned within one week.
- Scotch broom – pull or spray and remove
 - Do not cut, mow or chip as this increases scotch broom regrowth and makes it harder to remove later.
- Blackberry – mow or weed-whack and then spray
 - County will spray sprouts for an additional two consecutive years after leaves start to emerge.
- Willow or riparian shrubs – mow or cut
 - Cut to keep young but do not spray.
- Remove any chips made by treatments
 - except where necessary for erosion control, to reduce the fuel loading and avoid creating spotting bed for embers or ember makers
- Pile and remove or burn concentrations of dead surface fuels
 - Remove all down, dead branches and duff where continuous and deep (>6 inches), pile and remove or burn.
 - Remove all litter from project areas.
- Keep stub and stump height low, less than 12 inches
 - Tire and walking hazard and reduce likelihood of stump igniting

Oak/chaparral (typically 2500-foot elevation and below)

- Remove all manzanita and non-sprouting shrubs; cut, remove tops
- Cut and spray or remove sprouting shrubs (i.e. buckbrush, Christmas berry)
- Cut and remove tops of ghost or gray pine
- Ponderosa pine, incense cedar, or other conifers
 - Limb lower branches up to at least 12 feet high
 - Trees less than 20 inches dbh, will be thinned (cut) to a spacing of 30 feet between each tree or clumps of trees.
 - Trees more than 20 inches dbh will remain unless a road hazard
 - All Dead trees will be cut and removed
- Hardwoods (oaks)

- Limb lower branches up to at least 12 feet
- Black oak
 - leave unless stems are dense, closer than 12 feet, spray any stumps cut
- Live oak
- Thin to spacing of 30 feet between tree trunks, spray any stumps cut in conifer forest (Pine, Douglas-fir, Mixed) (typically above 2500-foot elevation)
- Cut and remove all manzanita and non-sprouting shrubs
- Cut and spray or remove sprouting shrubs (buckbrush, deerbrush, scotch broom)
- Ponderosa pine, incense cedar, or other conifers
 - Trees less than 20 inches dbh, thin (cut) to spacing of 30 feet between each tree or clumps of trees. Keep in order of preference based on flammability and fire resistance: deciduous hardwoods (maple, dogwood, black oak), ponderosa pine, sugar pine, Douglas-fir, incense cedar, white fir.
 - Trees more than 20 inches dbh will remain unless a hazard (especially fire, but also road visibility, shading for ice, visibility for deer crossing)
 - Limb the lower branches up to 12 feet (for all leave trees, for smaller trees try to leave at least 1/2 crown (total number of branches) if possible and there are no shrubs remaining below them to act as a fire ladder).
 - All dead trees will be cut, and tree trunks and branches will be removed
- Hardwoods
 - Black oak or live oak
 - leave unless stems/trunks are dense, closer than 30 feet, spray any stumps cut
- Maple or dogwood
 - Leave unless trees are dense, closer than 15 feet (clumps of 2 or more treated as single tree), spray any stumps cut. When cutting, retain larger or taller trees.

All waterways will be avoided, and no clearing will be done within 20' of either side of the centerline of a water course or wetland.

The work is anticipated to be completed by County Road (Department of Public Works) crews and/or contractors. All will access the vegetation management areas from existing roads. A typical daily road crew consists of about four pickup trucks and one dump truck.

A final Phase 2 Mitigation Action will be the development of an Operations and Maintenance Plan (OMP) for the treatment area that ensures the project benefits are retained for a minimum of four years following project completion.

Task 7 Deliverables: 317.5 Road Miles Treated; 3.5 Acres Treated; Before and After Photos; Operations and Maintenance Plan.

Task 8: Biomass Disposal

Under *Task 8*, Nevada County and Truckee Fire Protection District will ensure appropriate disposal of biomass generated as an outcome of *Task 7* hazardous vegetation abatement activities. Vegetation removed under Nevada County purview will be transported to the McCourtney Road Transfer Station and then sent to <http://greensolutionsandmore.com/>, where the good material is turned into various soil/bark products and sold and the poor material (pine needles/wood) is sent to a CoGen facility (<http://www.calbiomass.org/facilities/rio-bravo-rocklin/>) located next door. Vegetation removed under Truckee Fire Protection District purview will be transported to the Cabin Creek Landfill.

Task 8 Deliverables: Before and After Photos; Data Quantifying Biomass Disposal Methods.

Task 9: Project Closeout

Under *Task 9*, Nevada County OES will ensure that all appropriate actions for closure of the project take place. This includes providing required documentation for financial and progress reporting and conveying deliverables and other reports required under the grant. Nevada County OES will process final invoices and generate essential financial documentation pertinent to the settlement of accounts. All finalized documents will be submitted to CAL OES and FEMA. Documentation will be saved and maintained per FEMA Hazard Mitigation Grant requirements following grant close-out.

Task 9 Deliverables: Final Project Deliverables; Final Report; Final Invoice; Updated Maintenance and Reporting Commitment, if applicable.

At the conclusion of this project, the County of Nevada will have performed 300 miles of roadway vegetation management and Truckee Fire Protection District will have treated 17.5 miles of roadway, and 3.5 acres near subdivisions.

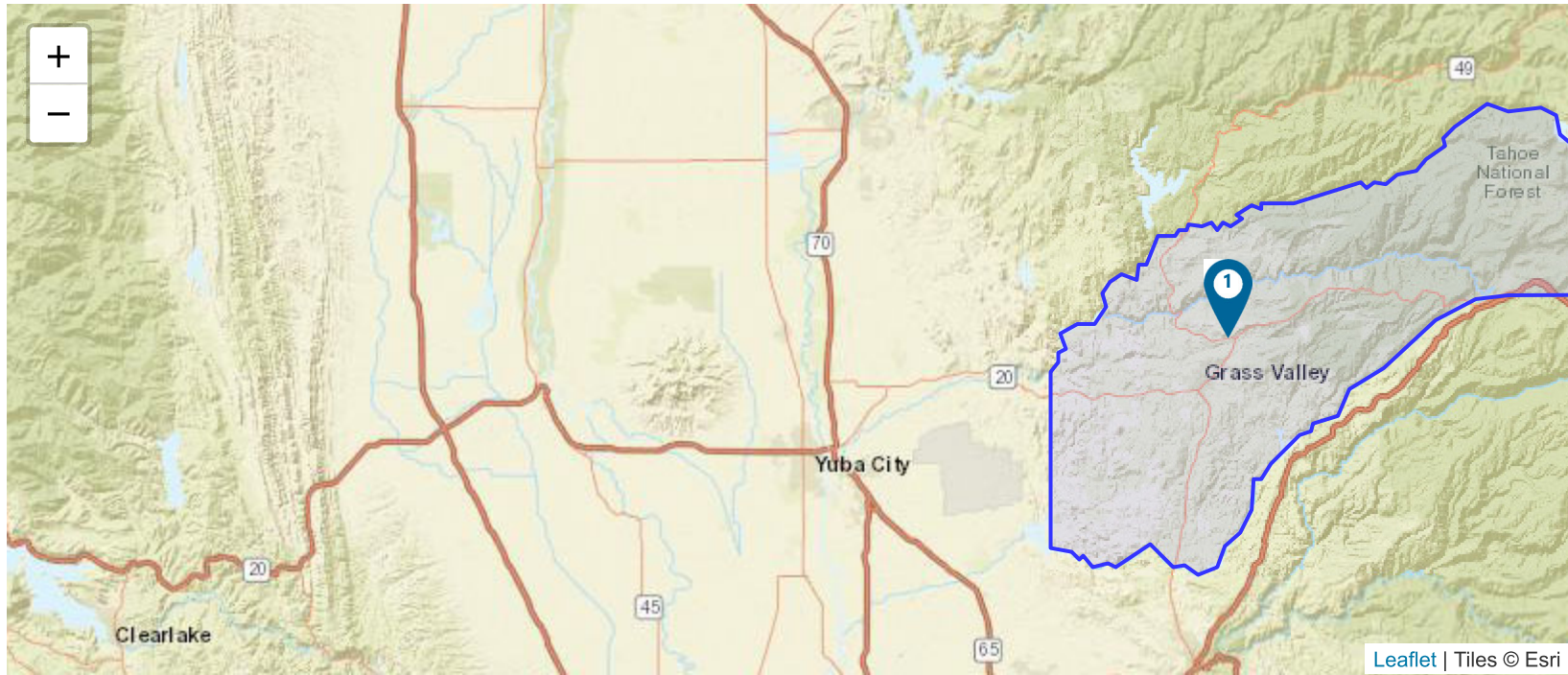


Benefit-Cost Calculator

V.6.0 (Build 20221028.1600 | Release Notes)

Benefit-Cost Analysis

Project Name: Roadside Vegetation Abatement Program



Map Marker	Mitigation Title	Property Type	Hazard	Using 7% Discount Rate			Using 3% Discount Rate (For FY22 BRIC and FMA only)		
				Benefits (B)	Costs (C)	BCR (B/C)	Benefits (B)	Costs (C)	BCR (B/C)
1	Hazardous Fuels Reduction, Ignition-Resistant Construction @ 950 Maidu Ave, Nevada City, California, 95959		Wildfire	\$ 54,220,383	\$ 4,907,507	11.05	\$ 59,501,012	\$ 5,006,473	11.88

Map Marker ▲	Mitigation Title	Property Type	Hazard	Using 7% Discount Rate			Using 3% Discount Rate (For FY22 BRIC and FMA only)		
				Benefits (B)	Costs (C)	BCR (B/C)	Benefits (B)	Costs (C)	BCR (B/C)
TOTAL (SELECTED)				\$ 54,220,383	\$ 4,907,507	11.05	\$ 59,501,012	\$ 5,006,473	11.88
TOTAL				\$ 54,220,383	\$ 4,907,507	11.05	\$ 59,501,012	\$ 5,006,473	11.88

Property Configuration

Property Title: Hazardous Fuels Reduction, Ignition-Resistant Construction @ 950 Maidu Ave, Nevada City, California, 95959

Property Location: 95959, Nevada, California

Property Coordinates: 39.26922404526908, -121.02607421263917

Hazard Type: Wildfire

Mitigation Action Type: Hazardous Fuels Reduction, Ignition-Resistant Construction

Property Type: Residential Building

Analysis Method Type: Modeled Damages

Cost Estimation
Hazardous Fuels Reduction, Ignition-Resistant Construction @ 950 Maidu Ave, Nevada City, California, 95959

Project Useful Life (years): 4

Project Cost: \$3,891,344

Number of Maintenance Years: 4 Use Default:Yes

Annual Maintenance Cost: \$300,000

Hazard Properties
Hazardous Fuels Reduction, Ignition-Resistant Construction @ 950 Maidu Ave, Nevada City, California, 95959

Average Burn Recurrence Interval for 95959: 28 Use Default:Yes

Project Effectiveness: 10

Standard Benefits - Building

Hazardous Fuels Reduction, Ignition-Resistant Construction @ 950 Maidu Ave, Nevada City, California, 95959

Number of Buildings Protected by Proposed Project: 8112

Total building replacement value (BRV) of all building(s) within proposed project area: \$2,920,320,000

Standard Benefits - Contents

Hazardous Fuels Reduction, Ignition-Resistant Construction @ 950 Maidu Ave, Nevada City, California, 95959

Value of Building Contents: \$1,460,160,000 Use Default:Yes

Standard Benefits - Displacement

Hazardous Fuels Reduction, Ignition-Resistant Construction @ 950 Maidu Ave, Nevada City, California, 95959

Lodging Per Diem: \$96 Use Default:Yes

Meals Per Diem: \$59 Use Default:Yes

Population Affected: 19468

Total Residential Displacement Cost: \$973,496

Standard Benefits - Other

Hazardous Fuels Reduction, Ignition-Resistant Construction @ 950 Maidu Ave, Nevada City, California, 95959

Value of Infrastructure vulnerable to fire in project area: \$11,791,005

Value of Timber to be sold within proposed project area: \$0

Fire suppression costs for one typical fire within proposed project area: \$0

Other costs mitigated by proposed project: \$0

Standard Benefits - Volunteer Costs

Hazardous Fuels Reduction, Ignition-Resistant Construction @ 950 Maidu Ave, Nevada City, California, 95959

Number of Volunteers (volunteers/event):	0
Number of Days of Lodging:	0
Expected Annual Volunteer Benefits:	\$0

Standard Benefits - Ecosystem Services

Hazardous Fuels Reduction, Ignition-Resistant Construction @ 950 Maidu Ave, Nevada City, California, 95959

Total Project Area (acres):	0
Percentage of Urban Green Open Space:	0.00%
Percentage of Rural Green Open Space:	0.00%
Percentage of Riparian:	0.00%
Percentage of Coastal Wetlands:	0.00%
Percentage of Inland Wetlands:	0.00%
Percentage of Forests:	0.00%
Percentage of Coral Reefs:	0.00%
Percentage of Shellfish Reefs:	0.00%
Percentage of Beaches and Dunes:	0.00%
Expected Annual Ecosystem Services Benefits:	\$0

Benefits-Costs Summary

Hazardous Fuels Reduction, Ignition-Resistant Construction @ 950 Maidu Ave, Nevada City, California, 95959

Total Standard Mitigation Benefits:	\$54,220,383
Total Social Benefits:	\$0
Total Mitigation Project Benefits:	\$54,220,383
Total Mitigation Project Cost:	\$4,907,507
Benefit Cost Ratio - Standard:	11.05
Benefit Cost Ratio - Standard + Social:	11.05

DR-4344-0704 Roadside Vegetation Management Program										
Project Cost Estimate Narrative, RFI 12/8/2022										
Phase	Cost Type	Item Name	Unit Quantity	Unit of Measure	Unit Cost	Cost Estimate Total	Pre-Award Cost	Description	Grantor	Grantee
Phase 1	Salaries and Wages	County of Nevada Department of Public Works, Project Management	192	Hours	\$76.68	\$14,722.56	\$0.00	Principal Civil Engineer salary for project coordination and management (Tasks 2-4), including meetings, and subcontractor oversight. These costs are based on actual costs for salaries and wages; hours are based on similar projects completed.	\$11,041.92	\$3,680.64
Phase 1	Benefits	County of Nevada Department of Public Works, Project Management	192	Hours	\$45.70	\$8,774.40	\$0.00	Principal Civil Engineer benefits for project coordination and management (Tasks 2-4), including meetings, and subcontractor oversight. These costs are based on actual costs for salaries and wages; hours are based on similar projects completed.	\$6,580.80	\$2,193.60
Phase 1	Internal Departmental Charter	County of Nevada Geographic and Information Systems, Digital Mapping	150	Hours	\$129.00	\$19,350.00	\$0.00	Geographic and Information Systems internal departmental charter for technical advisement under Task 2, including meetings, data coordination and access, data conformity, and data integration. Costs are based on actual rate for internal charters. Hours are based on similar projects completed.	\$14,512.50	\$4,837.50
Phase 2	Salaries and Wages	County of Nevada Department of Public Works, Project Management	192	Hours	\$76.68	\$14,722.56	\$0.00	Principal Civil Engineer salary for project coordination and management (Tasks 7-8), including meetings, and subcontractor oversight. These costs are based on actual costs for salaries and wages; hours are based on similar projects completed.	\$11,041.92	\$3,680.64
Phase 2	Benefits	County of Nevada Department of Public Works, Project Management	192	Hours	\$45.70	\$8,774.40	\$0.00	Principal Civil Engineer benefits for project coordination and management (Tasks 7-8), including meetings, and subcontractor oversight. These costs are based on actual costs for salaries and wages; hours are based on similar projects completed.	\$6,580.80	\$2,193.60
Subtotal Personnel, Phase 1						\$42,846.96	\$0.00	Phase 1 Personnel Costs Total	\$32,135.22	\$10,711.74
Subtotal Personnel, Phase 2						\$23,496.96	\$0.00	Phase 2 Personnel Costs Total	\$17,622.72	\$5,874.24
Phase 1	Contractual	GIS Consultant	1	Contract	\$720,000.00	\$720,000.00	\$0.00	GIS Consultant (TBD) (Task 2) right-of-way (ROW) research and review @ ~\$375/mile; field surveying @ ~\$800/mile; drone aerial flights @ ~\$400/mile; data download and processing @ ~\$800/mile; final ROW maps and documents @ ~\$450/hour; and project management and coordination @ ~\$180/hour. These costs are estimated consultant costs based on similar projects completed.	\$540,000.00	\$180,000.00
Phase 1	Contractual	Registered Professional Forester (RFP)	1	Contract	\$50,000.00	\$50,000.00	\$0.00	RFP (Task 3) to survey and support development of treatment design. Costs are based on similar projects completed.	\$37,500.00	\$12,500.00
Phase 1	Contractual	CEQA/Biological & Archeological Surveys/Tribal Consultation	1	Contract	\$190,000.00	\$190,000.00	\$0.00	Consultant(s) for (Task 4) CEQA documentation @ \$40,000; conduct biological surveys @ \$40,000; conduct archeological surveys (cultural resource records search; site surveys; built environment surveys) @ \$100,000; Tribal Consultation @ \$10,000. These costs are estimated consultant costs based on similar projects completed.	\$142,500.00	\$47,500.00
Phase 2	Contractual or County of Nevada Department of Public Works, TBD	Fuels Reduction & Maintenance Plan (County of Nevada)	300	Miles	\$9,200.00	\$2,760,000.00	\$0.00	Consultant(s) for (Task 7-8). Cost based on per-mile treatment for 300 miles of County maintained roads. These costs are based on similar projects completed.	\$2,070,000.00	\$690,000.00
Phase 2	Contractual	Fuels Reduction (Truckee)	1	Contract	\$105,000.00	\$105,000.00	\$0.00	Consultant(s) for (Task 7-8). Cost based on similar projects completed for 17.5 road miles and 3.5 acres.	\$78,750.00	\$26,250.00
Subtotal Contractual, Phase 1						\$960,000.00	\$0.00	Phase 1 Contractual Costs Total	\$720,000.00	\$240,000.00
Subtotal Contractual, Phase 2						\$2,865,000.00	\$0.00	Phase 2 Contractual Costs Total	\$2,148,750.00	\$716,250.00
PROJECT TOTAL, PHASE 1						\$1,002,846.96	\$0.00	Phase 1 Project Total Cost	\$752,135.22	\$250,711.74
PROJECT TOTAL, PHASE 2						\$2,888,496.96	\$0.00	Phase 2 Project Total Cost	\$2,166,372.72	\$722,124.24
TOTAL						\$3,891,343.92	\$0.00	Total Project Cost	\$2,918,507.94	\$972,835.98

Grant Management Cost Estimate Narrative, RFI 12/8/2022								
Phase	Cost Type	Item Name	Unit Quantity	Unit of Measure	Unit Cost	Cost Estimate Total	Pre-Award Cost	Description
N/A	Salaries and Wages	County of Nevada Office of Emergency Services, Subapplication Development	60	Hours	\$46.45	\$2,787.00	\$2,787.00	Senior Administrative Analyst salary for subapplication development, including RFI's. These costs are based on actual costs for salaries and wages and actual hours spent.
N/A	Benefits	County of Nevada Office of Emergency Services, Subapplication Development	60	Hours	\$29.16	\$1,749.60	\$1,749.60	Senior Administrative Analyst benefits (including health, dental, vision, life, and retirement). These costs are based on actual costs for benefits and actual hours spent.
Phase I	Salaries and Wages	County of Nevada Office of Emergency Services, Grant Administration	192	Hours	\$46.45	\$8,918.40	\$0.00	Senior Administrative Analyst salary for quarterly reporting and reimbursement submission. These costs are based on actual costs for salaries and wages; hours are based on similar projects completed.
Phase I	Benefits	County of Nevada Office of Emergency Services, Grant Administration	192	Hours	\$29.16	\$5,598.72	\$0.00	Senior Administrative Analyst benefits (including health, dental, vision, life, and retirement) for quarterly reporting and reimbursement submission. These costs are based on actual costs for benefits; hours are based on similar projects completed.
Phase I	Salaries and Wages	County of Nevada Department of Public Works, Grant Administration	192	Hours	\$48.17	\$9,248.64	\$0.00	Senior Administrative Analyst salary for quarterly reporting and reimbursement submission. These costs are based on actual costs for salaries and wages; hours are based on similar projects completed.
Phase I	Benefits	County of Nevada Department of Public Works, Grant Administration	192	Hours	\$36.07	\$6,925.44	\$0.00	Senior Administrative Analyst benefits (including health, dental, vision, life, and retirement) for quarterly reporting and reimbursement submission. These costs are based on actual costs for benefits; hours are based on similar projects completed.
Phase 2	Salaries and Wages	County of Nevada Office of Emergency Services, Grant Administration	192	Hours	\$46.45	\$8,918.40	\$0.00	Senior Administrative Analyst salary for quarterly reporting and reimbursement submission. These costs are based on actual costs for salaries and wages; hours are based on similar projects completed.
Phase 2	Benefits	County of Nevada Office of Emergency Services, Grant Administration	192	Hours	\$29.16	\$5,598.72	\$0.00	Senior Administrative Analyst benefits (including health, dental, vision, life, and retirement) for quarterly reporting and reimbursement submission. These costs are based on actual costs for benefits; hours are based on similar projects completed.
Phase 2	Salaries and Wages	County of Nevada Department of Public Works, Grant Administration	192	Hours	\$48.17	\$9,248.64	\$0.00	Senior Administrative Analyst salary for quarterly reporting and reimbursement submission. These costs are based on actual costs for salaries and wages; hours are based on similar projects completed.
Phase 2	Benefits	County of Nevada Department of Public Works, Grant Administration	192	Hours	\$36.07	\$6,925.44	\$0.00	Senior Administrative Analyst benefits (including health, dental, vision, life, and retirement) for quarterly reporting and reimbursement submission. These costs are based on actual costs for benefits; hours are based on similar projects completed.
N/A	Indirect Cost	County of Nevada Indirect Cost @ De Minimis of 10%				\$19,134.39	\$0.00	The County of Nevada does not have a CA so the default de minimis of 10% is used for the indirect costs. The distribution base of the MTDC is salaries and wages (\$48,795.12), fringe benefits (\$17,548.80), and subawards (first \$25,000 of each of 5 awards).
TOTAL						\$85,053.39	\$4,536.60	