

**WaterSMART Grants:
Environmental Water Resources
Projects for Fiscal Year 2022**

Notice of Funding Opportunity No. R22AS00026

PROPOSAL

**Post-Caldor Fire Watershed
Restoration for Securing
Water Supply for the Grizzly
Flats Community**

Applicant:

El Dorado County Water Agency
4330 Golden Center Drive, Suite C
Placerville, CA 95667



**El Dorado
Water Agency**

December 9, 2021

Project Manager:

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Photo on title page by Ethan Swop with Associated Press (<https://insize.org/caldor-fire-grows-quickly-east-of-sacramento-10905.html>)

TECHNICAL PROPOSAL

(1) Executive Summary

Project Details

Date	December 9, 2021
Applicant:	El Dorado County Water Agency
City, County, State:	Placerville, El Dorado County, California

Applicant Type

Category A: El Dorado County Water Agency (Agency) is a special district established under the 1959 El Dorado County Water Agency Act for water resource development and management in El Dorado County with authority to engage federal, state, and other agencies for resource management within and outside of El Dorado County. Under the 1959 Agency Act the Agency can exercise authorized power and legal actions necessary for providing sufficient water for any present or future beneficial use, or for uses of the environment or inhabitants within the Agency. In addition, the Agency can sell, lease, or transfer water within/outside El Dorado County.

Project Summary

El Dorado County Water Agency (Agency) will lead the *Post-Caldor Fire Watershed Restoration for Securing Water Supply for the Grizzly Flats Community* (Project) in partnership with the El Dorado and Georgetown Divide Resource Conservation Districts (RCD). This Project will play a pivotal role in supporting the economically disadvantaged Grizzly Flats community, located in the foothills of the Sierra Nevada in El Dorado County, California, as it struggles to recover from the Caldor Fire through implementing post-wildfire reforestation of approximately 280 acres of burned land. The community was devastated by the Caldor Fire in early fall 2021 which demolished two-thirds of their homes and structures and destroyed their two intakes and the surrounding watersheds which provide their sole water supply. This Project will provide near- and long-term vital support by restoring the community's only water supply source, North Canyon Creek and Big Canyon Creek watersheds. The U.S. Forest Service's (USFS) Burned Area Emergency Responses (BAER) Team, California Department of Forestry and Fire Protection's Watershed Emergency Response Team (WERT), and the El Dorado County Fire Recovery Team marked these two source watersheds as priority watersheds for recovery and that the area is at high risk of debris flow and other erosion hazards. The overall objective of this Project is to begin the process of reversing the ecological, economic, environmental, aesthetic and social impacts of this Federally-declared disaster through strategic watershed reforestation and extensive collaboration with a variety of agencies including the Grizzly Flats Community Services District (GFCSD), U.S. Forest Service (USFS), El Dorado County Fire Recovery Team, American River Conservancy (ARC), and more.

Estimated Duration and Completion Date

The proposed Project activities under this grant are anticipated to kick-off in May 2022 (pending grant award) and continue for three years through April 2025.

Federal Facilities Addressed by the Project

The Project is not on a Federal facility, but restoration will occur on Eldorado National Forest lands which are federally-managed by USFS. The Project will restore portions of the two watersheds shown in **Figure 1**. The Project is located in the headwaters that eventually feed into the U.S. Department of the Interior - Bureau of Reclamation's (Reclamation) Central Valley Project American River Unit, including Folsom Dam and Reservoir.

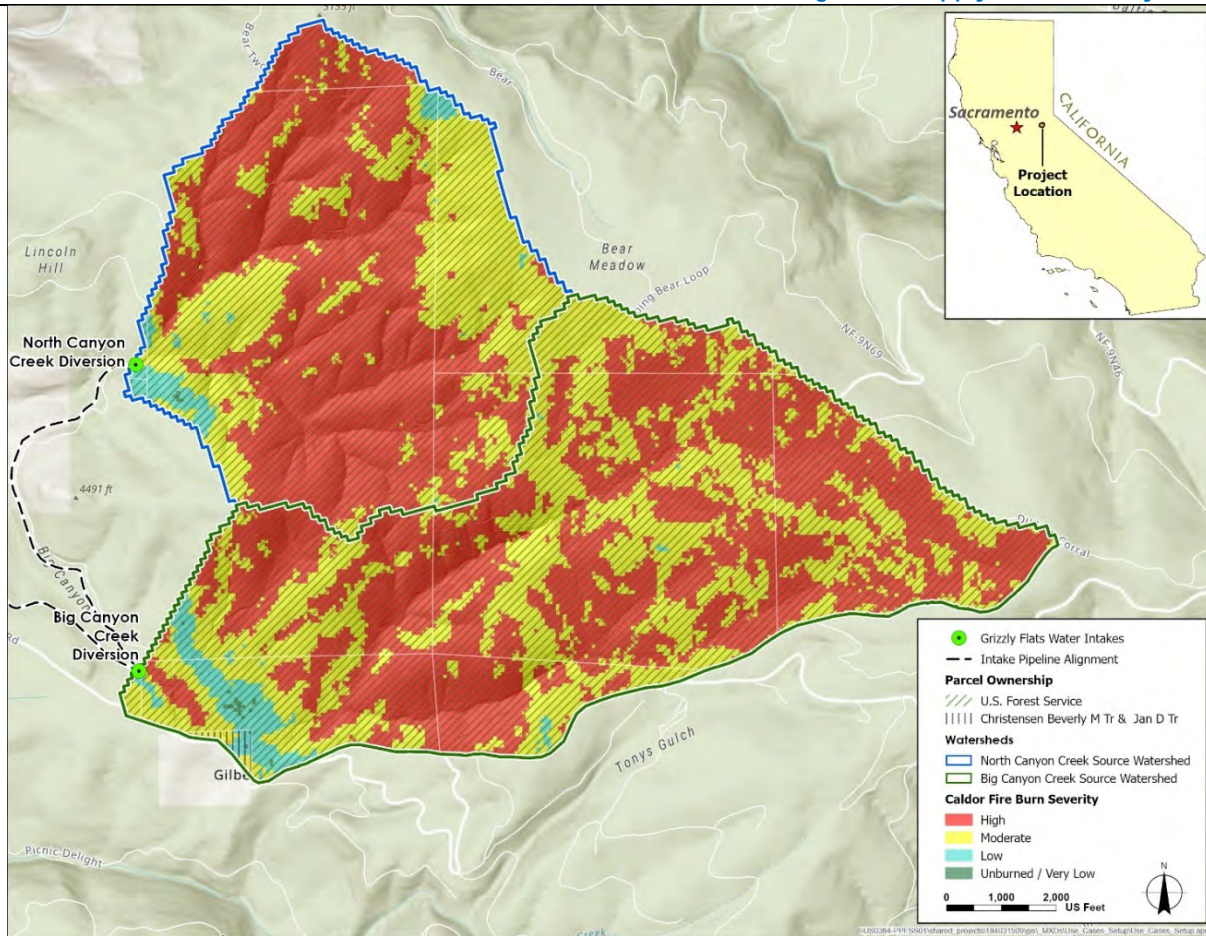
(2) Project Location

The economically disadvantaged community of Grizzly Flats, which was mostly destroyed by the Caldor Fire, is located in the foothills of the Sierra Nevada in El Dorado County, approximately 65 miles southeast of the City of Sacramento, California. The community receives water supplies from two water supply intakes, one located on North Canyon Creek Diversion (38° 39' 23.1" N, -120° 29' 54.6" W) and one on Big Canyon Creek Diversion (38° 38' 27.9" N, -120° 29' 55.1" W). The intakes are fed through the watersheds above them, which were had high burn severity and over 90 percent basal area loss due to the 2021 Caldor Fire.

The total combined watershed areas are nearly 3,000 acres with 1,700 acres in the Big Canyon Creek watershed and 1,300 acres in the North Canyon Creek watershed. The Caldor Fire devastated these watersheds which provide the sole water supply for the Grizzly Flats community, resulting in a majority of the Project area having a high burn severity and a greater than or equal to 90 percent basal area¹ loss (**Figures 1 and 2**). Due to the widespread destruction of the Caldor Fire, the Project will begin the long process of recovery by restoring a portion of the two watersheds shown below. The Project area will be further defined as field assessments and environmental analysis are complete. However, to attain the Project objectives, the Agency's and RCD's efforts will focus on those areas where hazardous trees present the greatest risk to watershed values and water supply reliability.

¹ The average amount of an area, typically in acres, occupied by tree stems

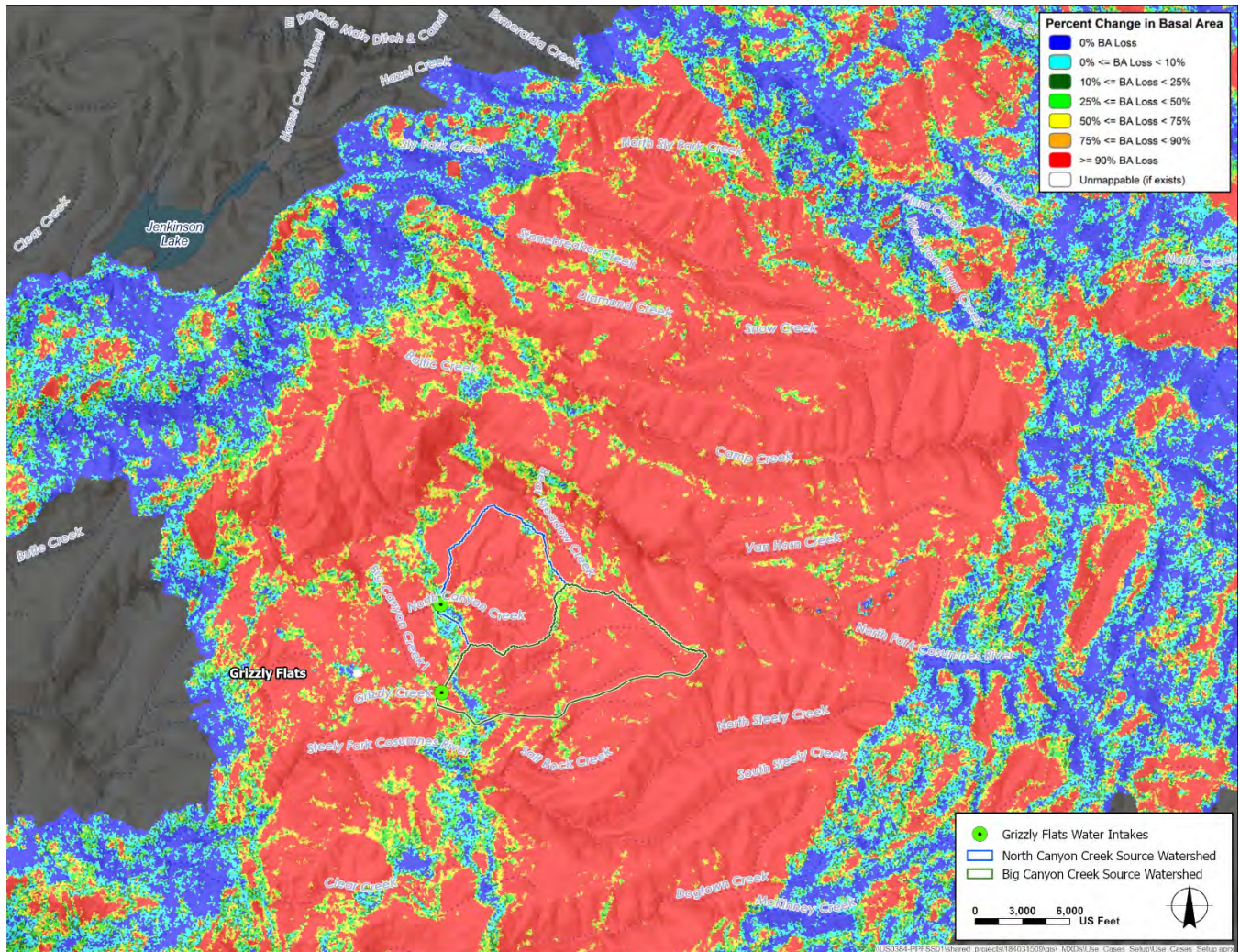
Post-Caldor Fire Watershed Restoration for Securing Water Supply for the Grizzly Flats Community



Source:

1. Parcel data is from El Dorado County's GIS Portal and parcelquest for the ownership information.
2. Caldor Fire Burn Severity: https://tiles.arcgis.com/tiles/SXbDpmb7xQkk44JV/arcgis/rest/services/Caldor_SBS/MapServer

Figure 1. Geographic Location of Watersheds, Parcel Ownership, and Burn Severity due to the Caldor Fire



Source: U.S. Forest Service

Key: BA = Basal Area

Figure 2. Basal Area Loss (in Percent) Due to Caldor Fire

(3) Technical Project Description

The Agency and RCD are partnering to complete the Project which will restore the specified portion of the two watersheds supplying the devastated Grizzly Flats community. The Project will rely on RCD's extensive experience in fire recovery including their successful reforestation activities from the 2014 Kings Fire (also occurred in El Dorado County, California and impacted 97,000 acres.) and their ongoing work under the Caldor Emergency Forest Restoration Team.

The Project will include the following activities.

Task 1. Project Management and Administration

The Agency will lead the administrative management of the award. The Agency will maintain grant reimbursement and payment spreadsheets and documents. If the Agency is awarded an Agreement, the Agency will submit the following required reports electronically during the period of performance of the Agreement:

- Financial reports on at least a semi-annual basis and with final performance report
- Interim performance reports on at least a semi-annual basis
- Final performance report

The RCD will oversee the implementation of the Project. This includes ensuring the Project as described is completed within the budget, performance period, and in accordance with approved procedures, applicable laws, and regulations. RCD shall comply with all applicable laws and regulations regarding securing competitive bids and undertaking competitive negotiations in contracts with other entities for acquisition of goods and services with funds provided by this grant. The RCD will contract for needed services such as Licensed Registered Professional Foresters, environmental consulting specialists, licensed timber operators, and reforestation specialists. Additional duties related to RCD's project management responsibilities include the following:

- Develops and issues request for proposals and contracts for projects, including coordination with USFS.
- Interprets contractor agreement terms and provides general oversight in coordination with project manager/field representative.
- Coordinates with USFS personnel to ensure contractor's work meets project requirements.
- Ensures USFS approval for any modifications to project work specifications.
- Oversees on-the-ground project implementation.
- Ensures all contracts are National Environmental Policy Act (NEPA) compliant as appropriate.
- Conducts pre-operations meeting with project inspector(s) and contractor.
- Communicates with USFS about project status, questions, or concerns.
- Works collaboratively with the USFS for all project implementations.

Task 2. Project Planning

This task will include project mapping, field surveys and development of reforestation prescriptions. Using existing mapping and resource data, the potential areas for watershed restoration for this Project will be identified. Specific criteria for site selection will include:

- Location relative to assets at risk and wild land-urban interface
- Watershed connectivity
- Existing or historic land use and land ownership
- Accessibility from existing roads
- Topographic slope (slopes less than 45 percent)
- Pre-fire vegetation
- Tree mortality
- Timber site class
- Soil type
- BAER and WERT analysis results
- Potential for salvage and utilization

Field investigations will subsequently be conducted to verify the results of the mapping. To properly evaluate project operational needs, site-specific information on debris loads and potential for debris flows, topography and watercourses, presence and sizes of standing dead trees and downed wood will be obtained. This information will inform contract specifications for site preparation and planting and will help determine appropriate equipment for conducting operations.

Reforestation prescriptions will be developed that address: 1) site preparation including removal of standing and down fuels, emphasizing utilization for lumber production, biomass for energy production and/or firewood (note that site-specific standards for leave trees, snags and downed woody debris will be developed as part of the prescriptions); 2) best management practices to be implemented during logging and site preparation; 3) recommended tree species and stocking; 4) planting practices to be performed by contractors or volunteers; 5) post-planting implementation monitoring to confirm that planting was done according to specifications.

Task 3. Environmental Compliance

Using the outcomes from Task 2, the RCD will provide services that meet NEPA requirements, regulations of the Council on Environmental Quality; USFS NEPA Compliance Regulations 36 Code of Federal Regulations (CFR) 218; the National Historic Preservation Act of 1966 (as amended); the Eldorado National Forest (ENF) Land and Resource Management Plan (1988) and the Sierra Nevada Forest Plan Amendment (2001 and 2004). The RCD will acquire an environmental consulting firm to complete the following:

- Prepare NEPA Project Record Reports for Actions on Forest Service Land:
 - Prepare required resource specialist reports such as Biological Assessments and Evaluations (terrestrial wildlife, aquatic wildlife, and botany), Management Indicator species

report, Noxious Weed Risk Assessment, Hydrology and Cumulative Watershed Effects Analysis, fuels analysis and Cultural Resource Report.

- Develop project design criteria that will be sufficient to offset any predicted negative impacts of the project on the basis of specialist findings and recommendations. Incorporate those design criteria into prescriptions as necessary to comply with federal law, regulations, and policy.
- Assist USFS in public scoping and preparing NEPA documents for public review. These will include the draft environmental analysis and decision documents. Participate in the pre-decision administrative review process (objection process).
- Assist USFS in addressing public comments that are submitted during scoping and legal comment periods.
- Assist USFS in preparing the final approved NEPA documents.

While depending on final selection of areas to be reforested, it is not anticipated that work will occur on private lands. Hence, California Environmental Quality Act (CEQA) and state regulations would not be applicable.

Task 4. Implementation

Task 4a. Site Preparation

For lands with substantial merchantable timber, the option of salvage logging, including whether it would provide value to restoring this watershed, will be evaluated. The feasibility of utilization for lumber production, biomass for energy production, or other products will be considered during the planning phase. The timber sale process may include cutting and decking logs for sale by USFS or cutting, decking, and delivering logs to user outlets following all requirements of USFS and/or Forest Practice Regulations on private land. Any positive returns from salvage logging will accrue to USFS and/or logging contractor and will not be retained by the grantee.

In areas where merchantable trees do not exist or remain after salvage logging or where salvage logging is not feasible, the goal of site preparation for planting will be to clear standing dead and downed wood. Site preparation may include: 1) harvesting with a masticator, feller buncher, or other methods, 2) yarding the material to piles for burning, or 3) other treatment methods (e.g., chipping). Material that is masticated will be left in place at prescribed depths to ensure that planting is not impaired. Machine operations will be limited to slopes less than 45 percent and conducted on the contours to minimize ground disturbance and potential for erosion and sediment delivery. All design criteria incorporated into NEPA and CEQA documents will be followed and will include flagging sensitive areas and watercourse protection zones and imposing limited operating periods (LOP) if sensitive wildlife species are present or expected to be present. The Registered Professional Forester (RPF) will supervise all work in the field. The RPF will also mark all living and dead trees that are to be retained. RPF supervision during site preparation is essential if contract requirements and environmental protection measures are to be guaranteed. It is common for practices to change during implementation because of unforeseen issues. Adaptation will only be allowed with consent from the USFS.

The time, that has elapsed since the fire, has created some areas with vegetation that will compete with planted trees. Based on site-specific prescriptions, where necessary, chipping/mastication of competing vegetation and/or hand treatments including brush cutting will be implemented prior to planting. The most cost efficient and effective treatment for each area to be planted will be chosen based on timing, equipment availability, and desired post treatment results.

Task 4b. Seedling Procurement and Planting

On federal land, planting prescriptions will be developed in consultation with USFS to meet project objectives in terms of species, density, and location. If private land is involved in the project, landowner objectives will be considered in the development of prescriptions. In the Project area, it is expected that associated species such as black oak and white fir will naturally recruit into the stands. Therefore, prior to planting, a mix of other species will be prescribed which will include the species characteristic of the Sierra mixed conifer type at project area locations and latitude (e.g., ponderosa pine, sugar pine, Douglas fir, and incense cedar). Planting stock appropriate to the planning area (seed zone and species mixes) will be procured, and planting will be conducted by a contractor under the supervision of the RPF. Obtaining planting stock is facilitated by the contract that the RCD has with the USFS Placerville Nursery to grow seedlings for non-industrial landowners. Seedling procurement will include assessing the availability of suitable seed at the Placerville Nursery. In the event that suitable seed is not available at the Nursery, the L.A. Moran seed bank or an alternative place will be used as the source of seed. An order form specifying the number of seedlings will be prepared and submitted to the nursery.

Planting contractors will be competitively obtained by the RCD. The timing of tree planting will occur during the spring months between February and April or fall and early winter between November (after first precipitation event exceeding one inch) and January, when soil moisture conditions are adequate to support seedling root growth.

Boundaries of areas to be planted will be verbally designated or marked with flagging. Plantings will be monitored during and immediately after completion to determine if they were properly implemented. Permanent photo-points will be established so that reforestation progress can be monitored over time. Planting contracts will remain open so that any disclosed deficiencies can be corrected.

Task 4c. Stocking Surveys

The RCD will conduct stocking surveys one year after completion of planting to assess survival and management needs. Stocking surveys will be designed based on Forest Service monitoring requirements and/or State Forest Practice Regulations.

Task 4d. Competition Control

Based on common reforestation practices and results, it is assumed that competition control measures will be needed to ensure survival of planted seedlings and enhance their growth. If confirmed by the stocking surveys and consistent with the environmental analysis, the RCD will oversee steps to manage competing vegetation. Either or both manual and chemical methods may be used. For purposes of budget estimates, it is assumed that herbicide application will be needed a year after planting.

(4) Performance Measures

This Project will provide imperative recovery efforts for the economically disadvantaged Grizzly Flats whose community and surrounding watersheds were destroyed by the Caldor Fire by beginning the process of reversing the ecological, economic, environmental, aesthetic, and social impacts of the Caldor Fire in the Project area. Specific objectives include: 1) treating up to 280 acres of the watersheds feeding into the Grizzly Flats community affected by the Caldor Fire to reduce the potential for wildfire in the future by removing accumulated debris and dead trees; 2) conducting site preparation and planting to re-establish forest cover on up to 280 acres; 3) increasing potential carbon sequestration and achieve greenhouse gas emissions reduction through the reforestation of the burned area; and 4) identifying measures that may be required to protect watershed values and water quality in watersheds that are important sources of domestic water supply.

To measure these objectives, the following performance measures will be used:

- **Recovery of forest health** through forest restoration as measured by tree diversity, growth, size and mortality
- **Increase in greenhouse gas sequestration and storage** through the reforestation of the burned Project area using above metrics.
- **Facilitate vital water supply recovery from the Caldor Fire** for the Grizzly Flats community as measured by reduction in increased maintenance costs due to the Caldor Fire, flow rate at the diversion intakes, and water quality at the water treatment plant

(5) Evaluation Criteria

Sub-Criterion A.1—Benefits to Ecological Values that have a nexus to water resources or water resources management

The Caldor Fire devastated the Big Canyon Creek and North Canyon Creek watersheds which provide the sole water supply for the Grizzly Flats community (**Figures 1 and 2** above). The Caldor Fire left behind debris and resulted in loss of habitat, loss of vegetation cover, and water quality impairments by bringing down extensive ash, sediment, and nutrient (mainly nitrate and organic carbon) loads from the burned area.

The Project will provide benefits to ecological values and water resources management as described below.

Recovery of forest health

As stated above, this Project will help begin the process of reversing the ecological, economic, environmental, aesthetic and social impacts of the Caldor Fire. Through the recovery efforts of this Project, we will begin to re-establish a healthy forest as part of the recovery efforts from the Caldor Fire as follows:

- **Support native plant community recovery and reduce non-native plant invasion in burned areas** – By planting native trees according to detailed prescriptive requirements and performing competition control, this Project will support the native plant community and thereby reduce non-

native plant invasion.

- **Support wildlife habitat** - Reforestation makes the land more hospitable to wildlife by providing food and shelter and creating better connectivity to other forested areas.
- **Reduce long-term level of hazardous fuel** – By following prescriptive tree planting procedures, biodiversity will increase, and a more favorable tree density will be established, both of which reduce the level of hazardous fuel.

Increase in greenhouse gas sequestration and storage

Increasing tree density helps to sequester carbon. Through loosening soils and strategically planting trees, trees can grow more vigorously, which increases the rate of carbon accumulation in plants and soil. This Project will reestablish trees that were destroyed by the Caldor Fire.

Facilitate vital water supply recovery from the Caldor Fire

Due to the Caldor Fire, a large portion of this economically-disadvantaged community's water system was destroyed and almost all of their water source (i.e., these watersheds) is at risk due to the high burn severity. Without actions to recover these watersheds, such as this Project, the community's near- and long-term water supply reliability is at risk. This Project will support vital recovery for Grizzly Flats community through the following:

- **Improve water quality** – Without this Project, the USFS BAER Team and California Department of Forestry and Fire Protection's WERT project high debris flows due to the Caldor Fire. Debris flows are commonly triggered by short duration, high intensity rainfall events. Activities such as site clean-up, revegetation, and dozer ripping are all effective to reduce the surface fuels and wildfire hazards in such a fire-prone area, reduce amount of soil loss, increase water infiltration rates, and more thereby reduce debris flows. Planting trees also provide protective cover for erosion-prone soil, both by shielding it from the impact of raindrops that move soil particles and by intercepting rain and snow before it infiltrates into the soil downstream. This helps reduce inflow of metals and minerals into streams that pose water quality concerns.
- **Reduce water supply system maintenance costs** – By reducing debris flows, there will be less maintenance needed, such as reducing the frequency or degree of cleaning screens at the diversion intakes from debris.

Additionally, the Project is anticipated to provide some reduction in flooding risks due to increasing infiltration rate and reducing debris flow, and support water supply reliability in the face of climate change by providing conditions that support a healthier snowpack of which the community relies on in lieu of large reservoirs or frequent precipitation.

Sub-Criterion A.2—Quantification of Specific Project Benefits by Project Type

As described in **Sub-Criterion A.1** the proposed Project will provide multiple benefits. These benefits cannot be fully quantified until post-planting implementation monitoring occurs as described in **Criterion E-Performance Measures**. Anticipated benefits described below are based on past reforestation outcomes

throughout the West coast and lessons learned by the RCD from completing restoration efforts after the 2014 Kings Fire that scorched over 97,000 acres of land also in El Dorado County, California.

Recovery of forest health

- **Support native plant community recovery and reduce non-native plant invasion in burned areas** – Per the 2019 completion report for the 2014 Kings Fire Restoration and Reforestation Project, the RCD reported that shrub and herbaceous competition with planted trees can contribute to seedling mortality and/or impair seedling growth by 30 to 85 percent. The prescriptions to be developed for this Project include post-planting stocking surveys and potential herbicide application to help limit any competition. As a result of these prescriptions it is anticipated that seedling growth will improve by up to 30 to 85 percent. Also, presently there is limited vegetation that is alive. Hence it is imperative to strategically reforest before substantial non-native plant invasion can occur and to plant native species at densities and variations known to best result in a healthy forest.
- **Support wildlife habitat** – Currently, with the high burn severity in the Project area, there are no suitable habitats for wildlife. This Project will create habitats across the entire 280-acre Project area.
- **Reduce long-term level of hazardous fuel** – The USFS agrees that current active forest management techniques to regenerate, replace, and grow more resilient forests in the future, help reduce the likelihood of severe wildfire. By using novel planting techniques, forests can be created with more resilience to future wildfires. Following the prescriptive plan for this Project, trees will be planted such that they can grow at a more favorable tree density, have higher tree crowns, and support a variety of tree structures and native species to thrive. These characteristics help reduce fuel loads. In addition, this makes the forest more resilient to drought and disease which also subsequently reduces fuel loads.

Increase in greenhouse gas sequestration and storage

Reforestation will contribute to carbon dioxide (CO₂) sequestration. As described in the **Technical Project Description**, planting will include a mix of species characteristic of Sierra mixed conifer (ponderosa pine, sugar pine, Douglas fir, incense cedar). Based on the information provided in **Table 1** for the Pacific Coast Douglas fir and Pacific Coast ponderosa pine, in years 0 to 5 after planting, 1.34 metrics tons of CO₂/year/acre sequestered can be anticipated on average and up to 2.1 metrics tons of CO₂/year/acre on average can be anticipated by years 16 to 20 after planting. Assuming about 280 acres of restoration with dense planting of more than 250 stems/acre, this equates to 1,876 metric tons of CO₂ that will be sequestered by the fifth year.

Facilitate vital water supply recovery from the Caldor Fire

As discussed, a large portion of this economically disadvantaged community's water system was destroyed due to the Caldor Fire, and their entire water source (i.e., these watersheds) was obliterated. Without these forest recovery efforts, the community's sole water source is at risk. This Project will support recovery and for Grizzly Flats community through the following:

Table 1. Reforestation Carbon Accumulation Tables Dense Planting (>250 stems per acre)

US Region and Species*	Metric tons CO2 per acre per year			
	Years Since Planting			
	0-5	6-10	11-15	16-20
SE Loblolly	1.51	1.86	6.99	6.17
SE Slash	1.51	1.75	6.52	5.83
SE longleaf pine	1.40	1.51	5.24	4.78
Delta loblolly	2.21	2.80	7.81	7.92
Delta slash pine	2.10	2.68	7.69	7.69
Southern plains loblolly	2.10	2.45	6.87	6.87
South Central Bottomland hardwoods	0.23	1.63	2.56	3.49
Appalachian loblolly	1.63	1.98	7.11	6.41
Appalachian shortleaf pine	1.51	1.75	6.52	5.71
Northeast white/Norway spruce	1.28	1.28	1.40	2.56
Northeast red pine	2.68	3.38	3.50	3.50
Lake States, white spruce	3.61	4.78	4.66	5.01
Lake States, red pine	2.10	2.45	2.56	4.31
Corn Belt mixed hardwoods	3.50	4.54	4.66	4.78
Corn Belt mixed softwoods	3.96	5.13	5.36	3.50
Central States Bottomland Hardwoods	1.16	2.80	3.03	1.63
Northern Plains, mixed hardwoods	1.98	2.45	2.45	2.45
Rocky Mountains, ponderosa pines	1.40	1.40	1.51	2.33
Pacific Coast Douglas fir	1.05	1.40	1.28	3.26
Pacific Coast ponderosa pine	1.63	0.70	0.82	0.93

* If the species and region combinations do not match your project, apply the carbon accumulation values for the species you have that are applicable to a climatically similar climate.

Region Definitions:
 SE (Southeast): AL, FL, GA, SC
 Delta: AR, LA, MS
 Southern Plains: OK, TX
 Appalachian: KY, NC, VA, TN, WV
 NE (Northeast): CT, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VT
 Lake States: MI, MN, WI
 Corn Belt: IA, IL, IN, MO, OH
 Northern Plains: KS, ND, NE, SD
 Rocky Mountains: AZ, CO, ID, MT, NM, NV, UT, WY
 Pacific Coast: CA, OR, WA

Source:

A Landowner's Guide to Carbon Sequestration Credits,

https://www.cleanenergyresource teams.org/sites/default/files/publication_files/LandownersCarbonSequestration_CentralRSDP.pdf

- **Improve water quality** – While the effect on water quality has not yet been quantified by Grizzly Flat's water supplier (i.e., GFCSD), Project implementation will reduce debris loads and erosion which are known to impair water quality. In a study regarding the benefits of reforestation to water quality, it shows that nutrient (nitrogen, potassium, carbon) release to streams may be lowered up to 12 percent by reforestation.² By following proven reforestation practices and considering local conditions, this Project is anticipated to provide similar levels of benefit to water quality.
- **Reduce water supply system operation and maintenance costs** – After a wildfire, water managers are concerned with changes in the magnitude, frequency, and timing of water discharge and sediment because most water systems are not built to accommodate that after a wildfire. The unpredictable nature of a wildfire can make it challenging to develop specific strategies for treating source water degraded by a wildfire. It is estimated that a large and severe wildfire can significantly increase the cost of water production. Since the Caldor Fire, and after reestablishing use of their diversion intakes, GFCSD has had to send maintenance crews out twice a week for longer than pre-fire durations to clean screens of debris and the volume of debris have significantly increased based on maintenance crew observations. This level of maintenance is expected to decrease with Project implementation and has not yet been quantified by GFCSD but is estimated to halve the level of current post-fire costs.

As mentioned above, the Project is also anticipated to provide some reduction in flooding and improved water supply reliability. Due to the small footprint of the Project, it is not possible to quantify benefits, but reforestation activities are known to provide these benefits. Specifically, increasing infiltration rate and planting trees to catch/slow precipitation will help reduce the likelihood of flashfloods that are more common in post-fire areas. Flashfloods are already more likely to occur statewide due to more frequent occurrence of more extreme events due to climate change, but paired with the effects of the devastating fire, as anticipated by the BAER and WERT findings described above, the Grizzly Flats community is at very high flash flooding risks. Hence, the watershed improvements to be implemented by this Project will help reduce this risk.

In terms of water supply, this Project will promote a healthy tree canopy and tree density that will improve snowpack conditions which are already declining due to climate change. Planting trees will help protect winter's snowfall (the main source of water in the county and for this community) which is partially hidden under the forest canopy, thus slowing melting and sustaining stream flows later into the summer.

² Keller AA, and Fox J (2019). "Giving credit to reforestation for water quality benefits." PLoS ONE 14(6): e0217756. DOI: 10.1371/journal.pone.0217756. PMID: 31163057; PMCID: PMC6548385.

Evaluation Criterion B—Collaborative Project Planning

The Project was developed collaboratively.

Watershed management has long been identified as an important strategy throughout El Dorado County and after the Caldor Fire, numerous agencies have come together to support watershed recovery for all affected areas. Successful watershed recovery and management integrates and coordinates activities that affect a watershed's natural resources and water quality in a comprehensive manner. It requires the expertise, authorities, engagement, and actions of multiple agencies and organizations involved in land use, water management, and related efforts, meaning that no one entity can accomplish it alone.

This Project is no exception. It was developed collaboratively between the Agency, RCD³, ARC⁴, and the small water system providing water to the Grizzly Flats community (GFCSD). It also included coordination with the USFS as the Project is located in the Eldorado National Forest. Additionally, the Project was coordinated with the El Dorado County Fire Recovery Team which is led by the RCD with members from the National Resource Conservation Service, CalFire, BAER, WERT, County of El Dorado, Office of Emergency Services, and others. The Project will continue this collaboration throughout project planning and implementation.

Overview of Planning Efforts Supporting this Project

This project is supported by the Agency's 2019 Water Resources Development and Management Plan (WRDMP). It is a county water plan for integrated water management that evaluates present and future water resource-related challenges under climate change, identifies 11 inter-related RMS for collective implementation, and describes the Agency's specific action plan for implementation. The 2019 WRDMP lays the groundwork to identify resource management strategy (RMS) to counter droughts, wildfires, deteriorated headwaters, limited groundwater resources, and fragmented water management. Through integrated and collaborative implementation, the RMS will proactively address changing water resources needs, regulatory requirements, and climate variability. The focused and defined role and responsibility in implementing actions for advancing these strategies ensure effectiveness and efficiency in achieving anticipated outcomes.

It is also supported by the above-mentioned El Dorado County Fire Recovery Team. Because of the emergency and unplanned nature of the Caldor Fire planning is ongoing, but these watersheds are one of three priority areas identified for emergency recovery. Recovery efforts by this team in these watersheds are being coordinated with this Project and will provide the local cost-share for the Project. Because of the RCD's lead role as Incident Commander for the El Dorado County Fire Recovery Team, the RCD will be leading implementation of this Project to maximize efficiency and effectiveness.

³ The RCD advises and assists individual landowners and public agencies in planning and implementation of conservation practices for the protection, restoration, or development of land, water, and related natural resources.

⁴ The ARC is an environmental stakeholder that ensures that ecosystems are healthy within the Upper American and upper Cosumnes River Watersheds through land conservation, stewardship, and education.

The Planning Efforts are developed collaboratively.

The 2019 WRDMP is the result of nearly a year of collaboration with advisory groups consisting of over two dozen individuals from public water agencies, key County of El Dorado staff, and stakeholders representing the rural and agricultural interests of El Dorado County. The Agency believes that El Dorado County's long-term vision can be realized through collaboration, so it formed three advisory groups for the 2019 WRDMP development and established a foundation for long-term collaborative forums for countywide water management issues. For plan development, the Agency organized a Plan Advisory Group to provide plan content and recommendations. This group met monthly and included representatives from El Dorado County departments and commissions as well as local public water agencies. An Agricultural Advisory Group was organized to provide input on the economics of agricultural water use. It included participation from the growers and the El Dorado County Agricultural Commissioner. A Municipal and Industrial (M&I) Advisory Group was also organized to provide input on demand projections and consistency and include the public water agencies and County of El Dorado staff. Additionally, topic-specific consultations were made as needed.

As stated above, the El Dorado County Fire Recovery Team includes members from the RCD, National Resource Conservation Service, CalFire, BAER, WERT, County of El Dorado, Office of Emergency Services, and others. Since the team's formation on September 22, 2021, they have been meeting frequently to identify areas for emergency restoration and are preparing to begin implementation.

The Planning Efforts Support the Project.

The 2019 WRDMP contains RMS 9 that specifically focuses on improving watershed management for water resource-related benefits. Additionally, the 2019 WRDMP identifies five Agency-led implementation programs, one of which is the Watershed Management Program that involves participating in actions that meaningfully contribute to long-term water supply reliability and water quality protection for El Dorado County, in the areas of headwater management, water quality management for rural and agricultural communities, and habitat and other ecosystem function enhancement. This Project falls under this implementation program and RMS-9. This Project addresses watershed restoration needs by improving water retention and water quality management and collaborating with a diverse range of stakeholders to promote sustainable forest management with long-term benefits to water supply, biodiversity, and ecosystem functions.

As stated above, the El Dorado County Fire Recovery Team identified the Project area as one of three priority areas for them to focus initial recovery efforts at. This Project proposes the same activities, as applicable, proposed in the work plan for the El Dorado County Fire Recovery Team. By leveraging other group efforts and input, this Project will maximize efficiency and effectiveness.

Evaluation Criterion C—Stakeholder Support

Level of stakeholder support

The Project has three letters of support. The letters of support are from the following entities:

- RCD, which will provide the cost share of the proposed Project as specified in their financial commitment letter. The RCD also developed and will help implement the proposed Project.
- ARC, which helped developed the technical project description for this Project and may support monitoring efforts
- GFCSD, the public water agency that provides water supplies to the Grizzly Flats community.

Supported by a diverse set of stakeholders

As demonstrated by the range of support letters above and the list of collaborators described under **Evaluation Criterion B**, the Project is supported by public water agencies, environmental non-profits, local government, resource management, State of California agencies, Federal agencies and more. Watershed restoration and fire recovery work throughout the area affected by the Caldor Fire are already ongoing. The activities proposed in this Project are consistent with those being proposed throughout the affected fire areas county-wide. The Agency and RCD are actively collaborating with these entities, including the El Dorado County Fire Recovery Team, to implement this Project.

Support by entities responsible for the management of land, water, fish and wildlife, recreation, or forestry within the project area

The Project is located in the USFS-managed lands of Eldorado National Forest. This Project, including its location, scope, schedule, and potential environmental/permitting requirements, were discussed with a program manager for USFS during development of this application. Strong support was given for this work. The County of El Dorado, Agency, and GFCSD also support this project. Similar recovery efforts throughout the Caldor Fire burn area are also under development through the El Dorado County Fire Recovery Team of which the USFS, County of El Dorado, Agency, and others participate in.

The Project complements other ongoing water management activities by state, Federal, or local government entities, non-profits, or individual landowners within the project area.

The Project supports the Caldor Fire recovery efforts in El Dorado County being undertaken by the El Dorado County Fire Recovery Team of which RCD is the Incident Commander of. The Project is in alignment with ongoing restoration efforts from the Caldor Fire but will not duplicate or complicate ongoing efforts at the Project location. Having the RCD play a pivotal role in both the El Dorado County Fire Recovery Team and this Project allows for continuity in implementation leadership to improve efficiencies and effectiveness in Project implementation.

The Project is located on Federal land.

The two watersheds are predominately located within USFS-managed lands (Eldorado National Forest). The USFS and the State of California are providing funds to support restoration in other areas in El Dorado County, but due to the extensive damage from the Caldor Fire, their funds and staffing capabilities are insufficient to restore all areas devastated by the fire. As such, this Project is requesting funds through this

grant to supplement further restoration efforts. Those Federal funds will not be used as cost-share for this Project.

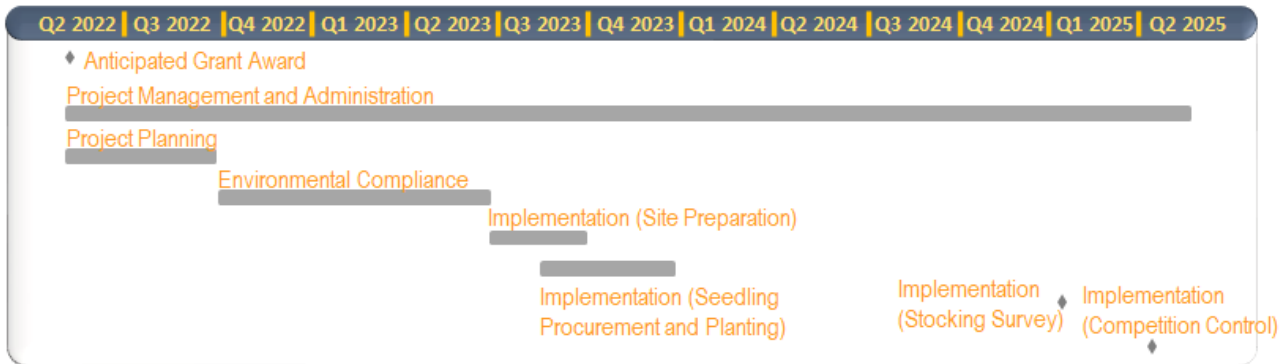
There is no opposition to the Project.

No opposition has been identified to date, nor is it anticipated. This Project is recognized as an imperative activity to provide near- and long-term recovery from the devastating Caldor Fire for both the ecosystem and residents.

Evaluation Criterion D—Readiness to Proceed

The Project is ready to proceed upon entering into a financial assistance agreement. The Project will follow the tasks detailed in the **Technical Project Description**. To ensure the successful execution of the proposed activities under this Project, the RCD plans to acquire support from qualified professional consultants as later described in the **Project Budget**. The proposed tasks will be completed within the required three-year timeframe as shown in **Figure 3**. **Figure 3** includes an estimated project schedule that shows the stages and duration of the proposed work, including any major tasks, milestones, and dates.

Note that the assumed start date of Quarter 2 of 2022 will vary pending award of the grant, but the overall three-year duration for executing the proposed activities after the fully executed grant agreement will remain the same.



Note: Schedule is subject to change pending date of grant award but will occur within the three-year implementation timeframe.

Figure 3. Project Timeline

Permitting Requirements

No permits are anticipated for the Project. No work will be completed within the public right of way or stream zones. However, NEPA will be completed to implement watershed restoration efforts on USFS federally managed land. NEPA is anticipated to be completed during the first year of the Project as shown in **Figure 3**.

Engineering and Design Work

There is no anticipated engineering or design work specifically in support of the proposed Project, or that will be performed as part of the Project. Project planning including development of reforestation prescriptions will be performed as part of this Project. Reforestation prescriptions were developed for another portion of forested lands in El Dorado County due to the Kings Fire and may be used to inform

prescriptions for this Project. New prescriptions will be developed in collaboration with this Project as part of other Caldor Fire recovery efforts to improve efficiency and effectiveness.

Easements and Access

Easements are not required for the Project. The Project will have access to the land. While specific Project locations are yet to be confirmed as part of Task 1, the Project will occur within striking distance of public roads and no additional access roads will need to be constructed.

Compliance Costs

The local Reclamation office has not been contacted to discuss the potential environmental and cultural resource compliance requirements for the Project and the associated costs. Anticipated environmental compliance and permitting needs were discussed with a local USFS program manager. A line item has been included in the budget for a contractor to perform this work, as shown in **Project Budget**.

Policies and Administrative Actions

To implement the Project, the only administrative actions required are by the Agency and RCD. No new policies are needed.

Criterion E—Performance Measures

As described in the **Technical Project Description**, the reforestation prescriptions will include a plan for post-planting implementation monitoring to assess the Project's benefits to ecological values. As such, specific activities to be performed to monitor benefits over a 5-year period after project completion has not yet been determined. Permanent photo-points will be established immediately after planting so that reforestation progress can be monitored over time, and stocking surveys will be performed one year after completion of planting to determine the effectiveness of the reforestation and assess any survival and management needs. Long-term monitoring may include quarterly photo monitoring at specified photo-points to visually monitor the success of the restoration project including tree growth. The ARC has an extensive system of volunteers who may be able to be leveraged to perform this photo monitoring. Regardless of the specific monitoring method(s) that will be identified as part of the reforestation prescriptions, the monitoring will look at key data related to forest health such as tree diversity, growth, size and mortality.

To assess water supply reliability improvements to the community of Grizzly Flats, stream flow data from their two gages at their diversion intake structures, number of staff hours to maintain the two intakes, and water quality data from their water treatment plant may be used to inform benefits to water supply reliability. GFCSD already regularly collects this data and it can be used to analyze and demonstrate water supply recovery benefits to the Grizzly Flats community.

Criterion F—Presidential and DOI Priorities

The proposed Project supports the Biden-Harris Administration's priority, Executive Order 14008: *Tackling the Climate Crisis at Home and Abroad* and Executive Order 13985: *Advancing Racial Equity and Support for Underserved Communities Through the Federal Government*.

Climate Change

As stated above, this Project will support healthy forests by reforesting areas with high burn severity from the Caldor Fire. It will plant new trees in an otherwise currently decimated area that support biodiversity. Establishing healthy forests will sequester carbon to reduce greenhouse gas emissions. Reclamation's nearly completed American River Basin Study, of which the Agency is one of the local cost-share partners, projects that climate change through 2100 is expected to reduce snowpack (the primary source of water in El Dorado County) and increase "flashier" hydrology through more frequent and severe precipitation events. This Project reduces flooding hazards by increasing infiltration and reducing erosion potential as described above. Additionally, it is known that healthy forests such as appropriate tree densities and biodiversity reduce the potential of large-scale and uncontrollable wildfires. This Project will help establish healthy forests and thus reduce wildfire hazards.

Disadvantaged or Underserved Communities

The Project provides direct benefits to the Disadvantaged Community of Grizzly Flats as defined by the applicable State of California criteria. A Disadvantaged Community is defined as a community with a median household income less than 80 percent of the statewide average per the California Public Resources Code Section 75005. Based on the latest U.S. Census information available on the California Department of Water Resources, the community of Grizzly Flats is part of the 2018 Disadvantaged Community (2018 Census Block data, **Figure 4**) which means that the Grizzly Flats median household income is less than \$56,982 or less than 80 percent of the statewide average of \$71,228 in 2018. In 2018, the annual median household income in Grizzly Flats was \$49,981. The watersheds to be restored under the Project provide the sole water supply to the Grizzly Flats community. As a result of the Caldor Fire, the community is at high risk losing their sole water supply and also at high risk of debris flow which may destroy critical water infrastructure and/or reduce water quality. Hence, implementing this Project will help reestablish and protect the water supply source, reduce debris flow risks, and provide public health and safety benefits to this Disadvantaged Community. The Project outcomes also align with Assembly Bill (AB) 685, signed into law by Governor Jerry Brown in 2012 to affirm that every person in the State of California has the right to clean, safe, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes.

Tribal Benefits

The Project is not anticipated to provide Tribal benefits.

Post-Caldor Fire Watershed Restoration for Securing Water Supply for the Grizzly Flats Community

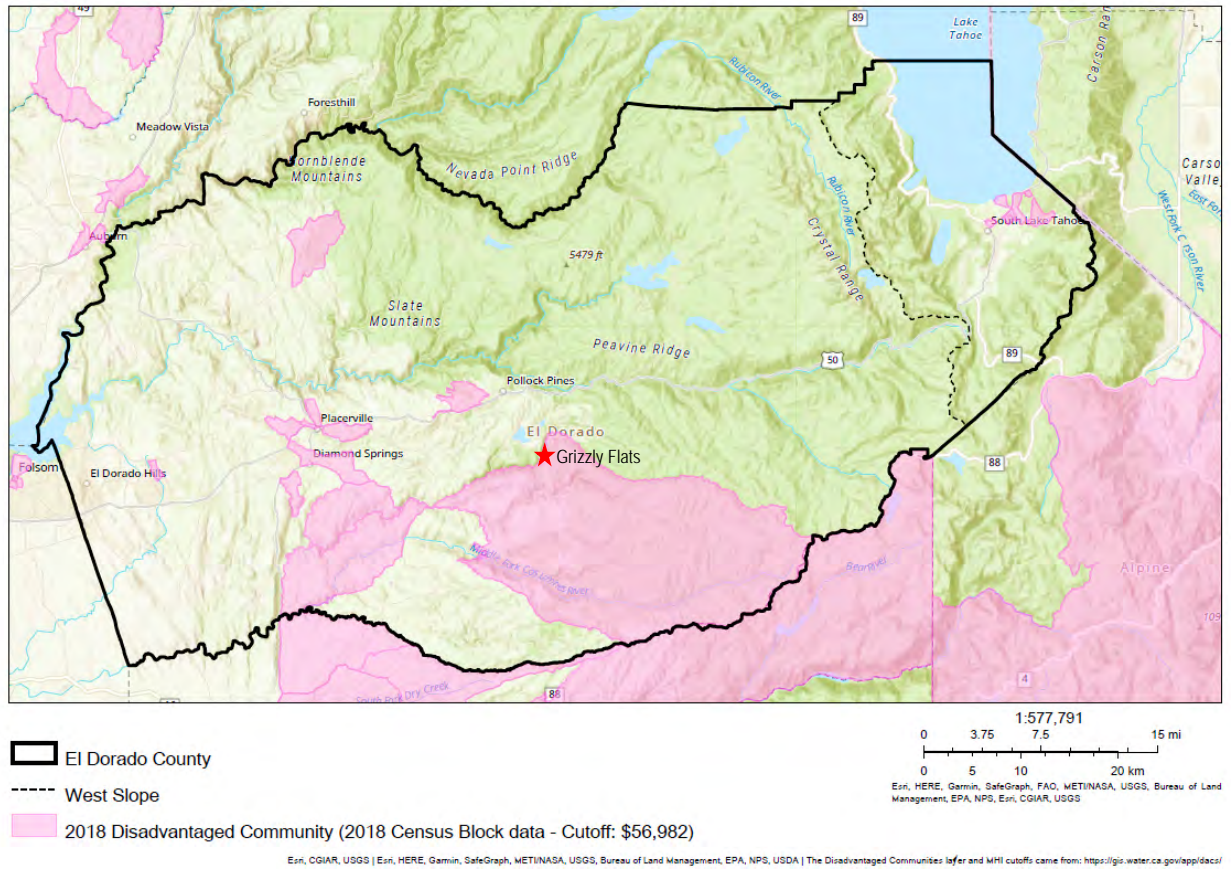


Figure 4. 2018 Disadvantaged Community (2018 Census Block Data)

PROJECT BUDGET

(1) Funding Plan

As described previously, the Agency is acting as the Applicant for WaterSMART funding. As summarized in **Table 3** and described in more detail in **Table 6**, the source of non-Federal funds will be the Agency, RCD, and ARC. All non-Federal funds will be through direct participation and other in-kind contributions.

All local-cost share funding has been approved and letters of funding commitment are included in **Appendix B**.

(2) Budget Proposal

The total program cost is estimated at \$2,500,000 with \$1,875,000 to be reimbursed with the requested Federal funding under the Environmental Water Resources Projects for Fiscal Year 2022. **Table 2** provides the total project cost. **Table 3** provides a summary of the non-federal funding sources, with details as to each non-federal contribution provided in **Table 6**. **Table 4** provides the budget proposal, including salaries and wage, fringe benefits, and contractor costs. **Table 5** provides the cost by task.

Table 2. Total Project Cost Table

SOURCE	AMOUNT
Costs to be reimbursed with the requested Federal funding	\$1,875,000
Costs to be paid by the applicant	\$0
Value of third-party contributions	\$625,000
TOTAL PROJECT COST	\$2,500,000

Table 3. Summary of Non-Federal and Federal Funding Sources

FUNDING SOURCE	AMOUNT
Non-Federal Entities	
El Dorado & Georgetown Divide Resource Conservation District	\$625,000
REQUESTED RECLAMATION FUNDING	\$1,875,000

Note: Refer to Table 5 for details on non-federal funding contributions.

Post-Caldor Fire Watershed Restoration for Securing Water Supply for the Grizzly Flats Community

Table 4. Budget Proposal

BUDGET ITEM DESCRIPTION	COMPUTATION		Quantity Type	TOTAL COST*
	\$/Unit	Quantity		
Salaries and Wages				\$56,300
Executive Director, El Dorado County Water Agency	\$96.15/hour	60	hour	\$5,769
Financial Analyst, El Dorado County Water Agency	\$55.00/hour	100	hour	\$5,500
District Manager, El Dorado & Georgetown Divide Resource Conservation District	\$59.98/hour	300	hour	\$17,994
Project Coordinator, El Dorado & Georgetown Divide Resource Conservation District	\$33.76/hour	800	hour	\$27,008
Fringe Benefits				\$33,100
Executive Director, El Dorado County Water Agency	\$21.02/hour	60	hour	\$1,261
Financial Analyst, El Dorado County Water Agency	\$23.25 /hour	100	hour	\$2,325
District Manager, El Dorado & Georgetown Divide Resource Conservation District	\$33.26/hour	300	hour	\$9,978
Project Coordinator, El Dorado & Georgetown Divide Resource Conservation District	\$24.38/hour	800	hour	\$19,504
Travel				\$0
Not applicable for this project.				
Equipment				\$0
Not applicable for this project.				
Supplies and Materials				\$0
Not applicable for this project.				
Contractual/Construction Cost				\$1,785,600
Planning Contractor	\$225,000	1	each	\$225,000
Environmental Compliance Contractor	\$171,400	1	each	\$171,400
Site Work Contractor	\$1,389,200	1	each	\$1,389,200
Other – In-Kind Contributions (see Table 5)				\$625,000
TOTAL DIRECT COSTS				\$2,500,000
Indirect Costs				\$0
Not applicable for this project.				
TOTAL ESTIMATED PROJECT COSTS				\$2,500,000

Note:

* Subtotal costs rounded to nearest hundred dollar.

Table 5. Hours and Cost by Task

Description	Quantity	Unit	Unit Price	Cost	Total*
Task 1. Project Management and Administration (see staff costs from Table 3 above)	1	each	\$89,400	\$89,400	\$89,400
Task 2. Project Planning	1	each	\$225,000	\$225,000	\$225,000
Task 3. Environmental Compliance	1	each	\$ 171,400	\$ 171,400	\$ 171,400
Task 4. Implementation					\$ 1,334,600
Task 4a. Site Preparation	280	acre	\$4,100	\$ 1,148,000	
Task 4b. Seedling Procurement and Planting	280	acre	\$150	\$ 42,000	
Task 4c. Stocking Surveys	3	1 survey per 100 acres	\$30,000	\$ 90,000	
Task 4d. Competition Control	280	acre	\$195	\$ 54,600	
Subtotal					\$ 1,820,400
Project mobilization/bonding @ 3.0% of subtotal					\$ 54,600
Contractual/Construction Total					\$ 1,875,000

Note: (*) = Values rounded to nearest hundred dollars. It is recognized that the grantee has no control over the costs of materials, equipment, labor, or the contractor's method of determining bid prices. Prices may vary from this preliminary opinion of probable cost.

(3) Budget Narrative

Salaries and Wages

Salaries and wages are included for Agency and RCD staff. Only the names of key personnel are provided. Salary increases are projected to increase in a manner consistent with the Office of Personnel Management annual salary table which is estimated to be between 1 percent and 5 percent annually. For each position, the primary role of each staff person is described with respect to the primary tasks list above. Salaries and wages are calculated in Table 4 above. Proposed hours and costs for each task are calculated in Table 5 above.

Executive Director, El Dorado County Water Agency, Mr. Ken Payne will serve as the project manager for the Agreement with Reclamation. Mr. Payne and his staff are also responsible for project management and reporting tasks.

Financial Analyst, El Dorado County Water Agency, Ms. Tami Scowcroft will assist Mr. Payne with project management tasks related to invoicing; reporting; and communications with Reclamation and contractor staff. Ms. Scowcroft will primarily work on the administrative tasks.

Post-Caldor Fire Watershed Restoration for Securing Water Supply for the Grizzly Flats Community

District Manager, El Dorado & Georgetown Divide Resource Conservation Districts, Mr. Mark Egbert will serve as the project manager overseeing design and construction of the Project. Project Management will be the responsibility of the RCD and includes technical and administrative services needed for project completion; supervision and review of all work performed; assurance the project is completed within the budget, performance period, and in accordance with approved procedures, applicable laws, and regulations. RCD shall comply with all applicable laws and regulations regarding securing competitive bids and undertaking competitive negotiations in contracts with other entities for acquisition of goods and services.

Project Coordinator, El Dorado & Georgetown Divide Resource Conservation Districts, Ms. Brittney Burke will be at the Project site during implementation to oversee work performed by the contractors.

Fringe Benefits

Fringe benefits for full time permanent employees and their families include medical insurance, vision insurance, dental insurance, PERS retirement contributions, workers compensation, and a limited life insurance policy in some instances. The value of hourly fringe benefit will vary by the employee. The actual calculation for the hourly fringe benefit rate for each assigned employee is shown in the detail in **Table 4** above.

Travel

Contractor will include any travel requirements within their bid.

Equipment

Contractor will supply any equipment needs within their bid.

Materials and Supplies

Contractor will provide any materials and supplies within their bid. This includes materials and supplies such as trees and herbicide spray.

Contractual

The majority of the Project will be completed by a contractor. The RCD will be responsible for procuring qualified contractors and overseeing contractor work. At this time, no contractors have been selected. In accordance with the Notice of Funding Opportunity, all procurements with an anticipated aggregate value that exceeds the Simplified Acquisition Threshold (\$10,000) will undergo a competitive procurement method. Refer to **Table 4** for contractual tasks and associated costs.

Third-Party In-Kind Contributions

The RCD will be providing in-kind services to support the Project scope and supplement the work being conducted as shown in the **Table 6**.

Table 6. Sources of In-Kind Contributions to the Proposed Project

Item	Lead	Contribution to Proposed Project	Related Project Task	Non-Federal Cost Share	Date of Incurrence
Caldor Emergency Fire Recovery Team	El Dorado & Georgetown Divide Resource Conservation District	Restores additional portions of land affected by the Caldor Fire in the same watersheds as the Project, specifically the portions near the water supply intakes feeding the Grizzly Flats community. This effort and the Project will coordinate efforts to maximize recovery efficiency and effectiveness.	Task 4	\$625,000	2022 - 2023
TOTAL Non-Federal Cost Share				\$625,000	

Environmental and Regulatory Compliance Costs

The budget assumes environmental and regulatory compliance costs in order to meet the NEPA requirements, regulations of the Council on Environmental Quality; the Forest Service NEPA Compliance Regulations 36 CFR 218; the National Historic Preservation Act of 1966 (as amended); the ENF Land and Resource Management Plan (1988) and the Sierra Nevada Forest Plan Amendment (2001 and 2004). Refer to Task 3 under the **Technical Project Description** for additional information on environmental and regulatory compliance.

Other Expenses

There are no assumed other expenses for the Project.

Indirect Costs

There are no assumed indirect costs for the Project.

ENVIRONMENTAL AND CULTURAL RESOURCES COMPLIANCE

The Project will adhere to environmental and cultural resources compliance requirements. The below responses are based on best available knowledge at the time of this grant application but will be confirmed during Task 3, Environmental Compliance.

Will the proposed Project impact the surrounding environment (e.g., soil [dust], air, water [quality and quantity], animal habitat)? Please briefly describe all earth-disturbing work and any work that will affect the air, water, or animal habitat in the project area. Please also explain the impacts of such work on the surrounding environment and any steps that could be taken to minimize the impacts.

It is not anticipated that the Project will have significant negative impacts on the surrounding environment given that the fire was very severe in this area and destroyed the previously existing environments. If any impacts are identified, they will be mitigated in accordance with NEPA requirements.

Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the area? If so, would they be affected by any activities associated with the proposed Project?

The Project activities are not anticipated to affect any a Federal threatened or endangered species, or designated critical habitat. This will be confirmed during the NEPA evaluation. Hé-yey of Big Canyon Creek are within a subpopulation of the Snake River Basin Steelhead distinct population segment (DPS) listed as threatened under the Endangered Species Act. The Big Canyon Creek drainage is considered critical habitat for this DPS as well as for the threatened Snake River Nacó'x, or fall Chinook (*Oncorhynchus tshawytscha*), evolutionarily significant unit (ESU).

Are there wetlands or other surface waters inside the Project boundaries that potentially fall under Clean Water Act (CWA) jurisdiction as "Waters of the United States?" If so, please describe and estimate any impacts the proposed project may have.

Within the Project area, there are no wetlands or surface waters that fall under Clean Water Act (CWA) jurisdiction as "Waters of the United States".

When was the water delivery system constructed?

The Project will restore a portion of the watersheds feeding the Grizzly Flats community but will not modify the water delivery system that the watersheds feed into. The oldest parts of the Grizzly Flats' system were developed around the time when the community of Grizzly Flats was founded and obtained its first water rights in the 1850's.

Will the proposed project result in any modification of or effects to, individual features of an irrigation system (e.g., headgates, canals, or flumes)? If so, state when those features were constructed and describe the nature and timing of any extensive alterations or modifications to those features completed previously.

It is not anticipated that the Project will result in any modification of, or effects to, individual features of an irrigation system.

Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places?

There are no known buildings, structures, or features in the Project listed or eligible for listing on the National Register of Historic Places.

Are there any known archeological sites in the proposed area?

There are no known archeological sites within the Project area. Should any previously unrecorded cultural resources be encountered during implementation of this Project, all work should immediately cease in that area (within 150 feet) and an archeologist be notified immediately. Work may resume after approval by an archeologist, provided that any recommended standard protection measures are implemented.

Will the proposed Project have a disproportionately high and adverse effect on low income or minority populations?

It is not anticipated that the Project will have a disproportionately high and adverse effect on low income or minority populations. Instead, the Project will benefit the economically-disadvantaged Grizzly Flats community by performing vital recovery actions to secure its sole water supply.

Will the proposed Project limit access to, and ceremonial use of, Indian sacred sites or result in other impacts on tribal lands?

It is not anticipated that the Project will limit access to or ceremonial use of Indian sacred sites or result in other impact on tribal lands.

Will the proposed Project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area?

It is not anticipated that the Project will contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the project area. The Project will instead lay out a detailed plan for planting native species to promote a healthy forest and limit competition of non-native invasive species.

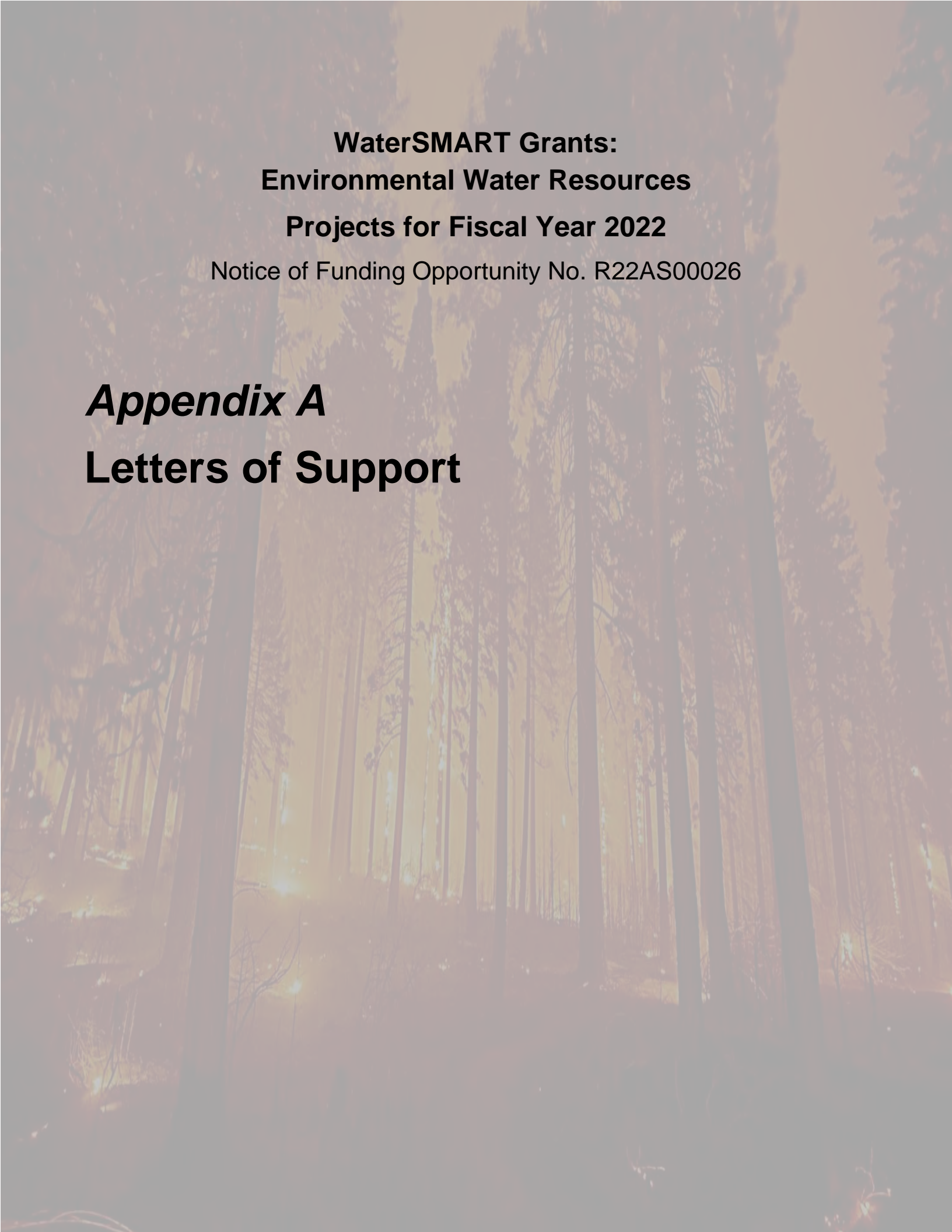
REQUIRED PERMITS OR APPROVALS

No permits or approvals beyond those needed for compliance with NEPA are anticipated for the Project. No work will be completed within the public right of way or stream zones.

APPENDIX A: LETTERS OF SUPPORT AND PARTNERSHIP

The Project received letters of support and partnership from various entities in the region. The entities are presented in alphabetic order and the letters of support are provided below.

- American River Conservancy
- El Dorado and Georgetown Divide Resource Conservation Districts
- Grizzly Flats Community Services District



**WaterSMART Grants:
Environmental Water Resources
Projects for Fiscal Year 2022**

Notice of Funding Opportunity No. R22AS00026

Appendix A
Letters of Support



December 8, 2021

Mr. Ken Payne
El Dorado County Water Agency
4330 Golden Center Drive, Suite C
Placerville, CA 95667

Subject: Support for Watershed Restoration Project near Grizzly Flats: Notice of Funding Opportunity No. R22AS00026

Dear Ken:

I am writing on behalf of American River Conservancy (ARC) to confirm our support for the El Dorado Water Agency's WaterSMART Environmental Water Resources Grant application. American River Conservancy is a local non-profit watershed conservation organization that focuses on land conservation, stewardship, and environmental education within the Upper American River and Upper Cosumnes River watersheds. We understand that the watershed restoration project under this grant will improve water supply reliability for both ecological values and the community of Grizzly Flats. We also understand that El Dorado County Water Agency is acting as the lead grant applicant in our collaborative effort in seeking assistance for the proposed project.

The project will help restore a portion of the watersheds feeding into the Grizzly Flats community from the recent Caldor Fire which ravaged over 220,000 acres across El Dorado, Alpine and Amador counties. Not only will this project reduce erosion and debris flow, but it will also improve water quality and water supply reliability for both the environment and its downstream residents by strategically clearing and revegetating the area with native trees to promote a health forest in collaboration with other ongoing watershed management efforts throughout El Dorado County.

We advocate the importance of promoting this project to benefit the ecological values of the watershed and protect the surrounding water resources by aiding in the recovery of the Grizzly Flats community from the Caldor Fire and providing long-term water reliability improvements. This project complements ARC's Cosumnes River Water Quality Monitoring Program, which is currently entering its seventh year of collecting water quality data in the Upper Cosumnes River watershed. As a land trust, American River Conservancy has protected over 9,000 acres of wildlife habitat and riparian lands within the Cosumnes River watershed. This project will benefit not only the community of Grizzly Flats, but the entire Cosumnes River watershed.

Sincerely,

A handwritten signature in black ink that reads 'Elena DeLacy'. The signature is written in a cursive style with a large, flowing 'E' and 'L'.

Elena DeLacy, Executive Director
American River Conservancy



November 28, 2021

Mr. Ken Payne
El Dorado County Water Agency
4330 Golden Center Drive, Suite C
Placerville, CA 95667

Subject: Support for Watershed Restoration Project near Grizzly Flats: Notice of Funding Opportunity No. R22AS00026

Dear Ken:

I am writing on behalf of the El Dorado Resource Conservation District to express support for the El Dorado Water Agency's WaterSMART Environmental Water Resources Grant application. We understand that the watershed restoration project under this grant will improve water supply reliability for both ecological values and the community of Grizzly Flats.

The Caldor Fire started on August 14, 2021, about two miles east of Omo Ranch and four miles south of Grizzly Flat. The fire burned approximately 166,808 acres on the Eldorado National Forest (ENF), 9,885 acres on the Lake Tahoe Basin Management Unit (TMU), 2,076 acres on Bureau of Land Management (BLM) land, 40,183 acres of private or state lands, and in three counties (Eldorado, Alpine, and Amador). As of October 19, 2021, the Caldor Fire had burned 221,835 acres.

Coordination of the fire suppression repair and emergency stabilization and hazardous materials removal phases have been initiated by a variety of federal, state and local agencies and include the Burned Area Emergency Response (BAER) Team, California State Watershed Emergency Response Team (WERT), State Debris Task Force, and the El Dorado County Fire Recovery Team.

Additional emergency actions are also underway to protect public roads, utility lines, and mitigate burned structures hazardous materials. This work includes removal of fire destroyed tree hazards that are a threat to the infrastructure and related woody debris that is an unacceptable fire hazard. These actions are being implemented by contractors for California Office of Emergency Services, utility companies, Cal Recycle, Cal Trans, and USFS. These emergency actions occur on a relatively small portion of the non-industrial private forests (NIPF) in the Caldor Fire area.

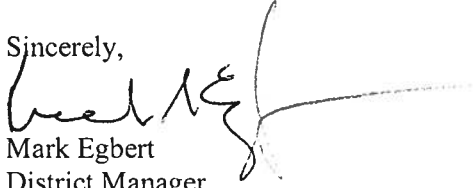
Forest-Recovery and Restoration includes public safety woody debris fire hazard reduction actions, non-emergency actions to improve fire-damaged lands that are unlikely to recover naturally, and to repair or replace facilities damaged by the fire that are not critical to life and safety. This phase may include removal of excess fire-destroyed trees and brush, restoring burned habitat, reforestation, other planting or seeding, monitoring fire effects, replacing burned fences, interpreting cultural sites, treating noxious weed infestations, and installing interpretive signs. These actions have traditionally had long delays in implementation as they are generally considered "non-emergency actions", have had significant issues with insufficient funding from public agency programs, and are often not completed at comprehensive scale to achieve optimum restoration goals.

The project will help restore a portion of the watersheds feeding into the Grizzly Flats community from the recent Caldor Fire. Not only will this project reduce erosion and debris flow, but it will also improve

water quality and water supply reliability for both the environment and its downstream residents by strategically clearing and revegetating the area with native trees to promote a health forest in collaboration with other ongoing watershed management efforts throughout El Dorado County.

We advocate the importance of promoting this project to benefit the ecological values of the watershed and protect the surrounding water resources by aiding in the recovery of the Grizzly Flats community from the Caldor Fire and providing long-term water reliability improvements.

Sincerely,



Mark Egbert

District Manager

CPESC#6350, QSD, QSP

El Dorado & Georgetown Divide Resource Conservation Districts

100 Forni Road, Suite A

Placerville, CA 95667

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www.georgetowndividercd.org



November 28, 2021

Mr. Ken Payne
El Dorado County Water Agency
4330 Golden Center Drive, Suite C
Placerville, CA 95667

Subject: Letter of Intent for Watershed Restoration Project near Grizzly Flats: Notice of Funding Opportunity No. R22AS00026

Dear Ken:

I am writing on behalf of the El Dorado Resource Conservation District (RCD) to express support for the El Dorado Water Agency's WaterSMART Environmental Water Resources Grant application. We understand that the watershed restoration project under this grant will improve water supply reliability for both ecological values and the community of Grizzly Flats.

Issued in January 2021, the Governor's "California's Wildfire and Forest Resilience Action Plan," included eight Actions Items to increase assistance to small private forest landowners. Action Item 1.14 stated "Establish Emergency Forest Restoration Teams (EFRT): CAL FIRE and other state agencies will explore the potential for developing emergency forest restoration teams to assist small landowners impacted by wildfires with funding and expertise to restore their properties and help prevent further damage to life, property and natural resources...". The focus of the EFRT is to provide rapid assessments of post fire forest conditions on NIPF and provide funding to implement necessary forest recovery work. The Wildfire Resilience Task Force – Private Landowner Work Group (WFRTF PLO WG) is responsible for implementing the EFRT Action Item. The PLO WG recommended and was endorsed to implement a "pilot EFRT project" to test the concept. The PLO WG selected the Caldor Fire as a pilot project and RCD as the partner.

Funding under the EFRT program is pending as of the time of this letter. However, if funding is received the RCD would allocate 50% of the anticipated \$1,250,000.00 towards this project as matching funds.

Sincerely,

Mark Egbert
District Manager
CPESC#6350, QSD, QSP
El Dorado & Georgetown Divide Resource Conservation Districts
100 Forni Road, Suite A
Placerville, CA 95667
Mark.Egbert@ca.usda.gov
Office: 530-303-5328
Cell: 530-957-3472

Grizzly Flats Community Services District

4765 Sciaroni Road / P.O. Box 250

Grizzly Flats, CA 95636

Ph: 530/622-9626 Fax: 530/622-4806

www.grizzlyflatscsd.com



December 6, 2021

Mr. Ken Payne
El Dorado County Water Agency
4330 Golden Center Drive, Suite C
Placerville, CA 95667

Subject: Support for Watershed Restoration Project near Grizzly Flats: Notice of Funding Opportunity No. R22AS00026

Dear Ken:

I am writing on behalf of the Grizzly Flats Community Services District to express support for the El Dorado Water Agency's WaterSMART Environmental Water Resources Grant application. We understand that the watershed restoration project under this grant will improve water supply reliability for both ecological values and the community of Grizzly Flats.

The project will help restore a portion of the watersheds feeding into the Grizzly Flats community from the recent Caldor Fire which ravaged over 220,000 acres across El Dorado, Alpine and Amador counties. Not only will this project reduce erosion and debris flow, but it will also improve water quality and water supply reliability for both the environment and its downstream residents by strategically clearing and revegetating the area with native trees to promote a health forest in collaboration with other ongoing watershed management efforts throughout El Dorado County.

We advocate the importance of promoting this project to benefit the ecological values of the watershed and protect the surrounding water resources by aiding in the recovery of the Grizzly Flats community from the Caldor Fire and providing long-term water reliability improvements.

We have already begun a parallel effort to remove hazardous trees and debris which could otherwise impact water quality at one of our water intake structures, and to restore our raw water conveyance so that we can uphold our District's mission of providing quality water to the community of Grizzly Flats.

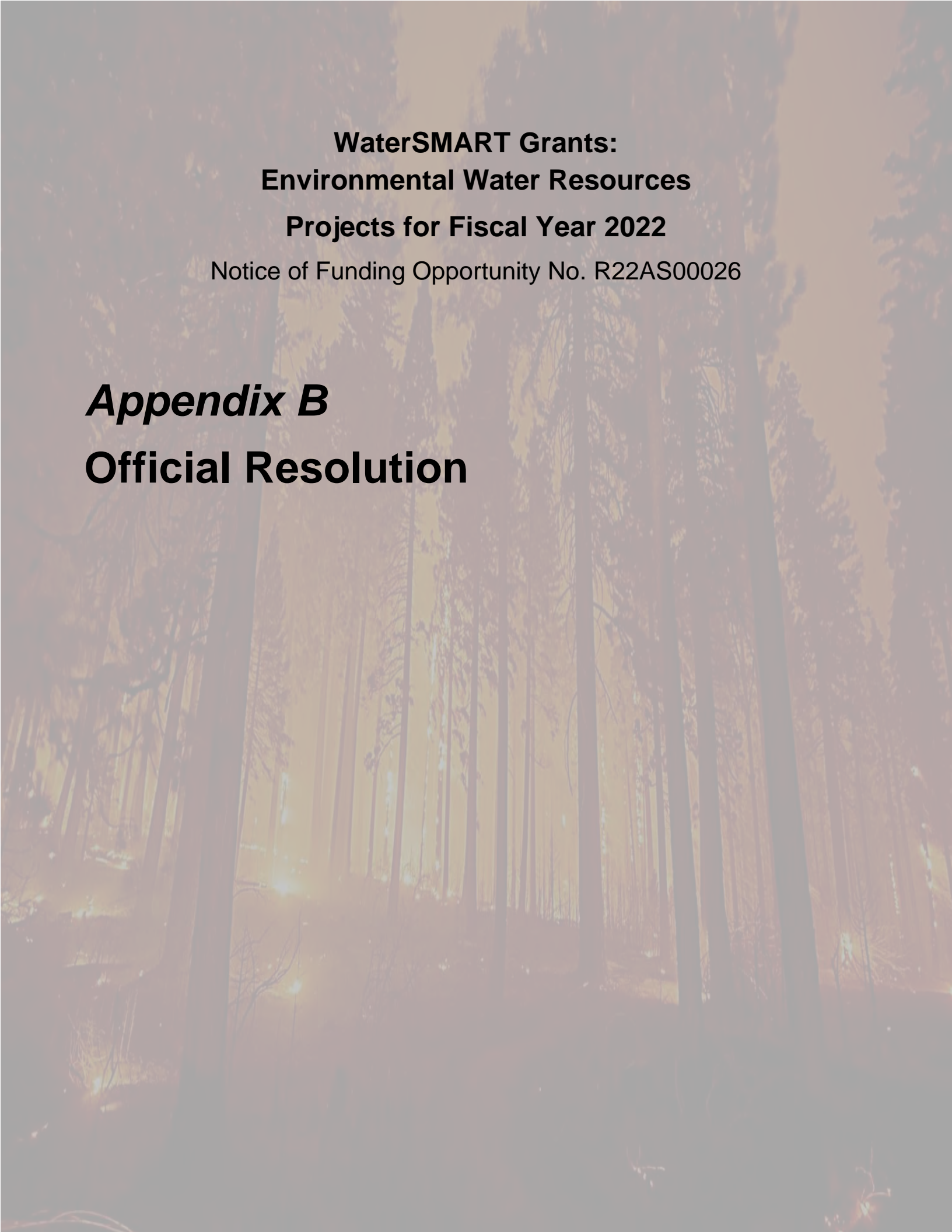
Sincerely,

A handwritten signature in black ink, appearing to read "Jodi Lauther", is written over the typed name and title.

Jodi Lauther
General Manager
Grizzly Flats Community Services District

APPENDIX B: OFFICIAL RESOLUTION

The Agency's Board of Directors voted to adopt a resolution authorizing the Agency to commit to the financial and legal obligations associated with receipt of a financial assistance award under this Notice of Funding Opportunity on **Wednesday, November 10, 2021**.



**WaterSMART Grants:
Environmental Water Resources
Projects for Fiscal Year 2022**

Notice of Funding Opportunity No. R22AS00026

Appendix B
Official Resolution



RESOLUTION No. WA-9-2021

OF THE BOARD OF DIRECTORS OF THE
EL DORADO COUNTY WATER AGENCY
AUTHORIZING AN APPLICATION FOR FUNDING ASSISTANCE THROUGH U.S.
DEPARTMENT OF THE INTERIOR, BUREAU OF RECLAMATION'S GRANTS:
ENVIRONMENTAL WATER RESOURCES PROJECTS FOR FISCAL YEAR 2022

WHEREAS, the El Dorado County Water Agency ("EDCWA") recognizes that watershed management and restoration is imperative to protecting water supply reliability and ecologic values throughout El Dorado County.

WHEREAS, EDCWA recognizes that the recent Caldor Fire destroyed over 221,000 acres of predominately forested lands and devastated many communities and several small water systems, including Grizzly Flats Community Services District ("GFCSD).

WHEREAS, the U.S. Forest Service's Burned Area Emergency Responses (BAER) Team and California Department of Forestry and Fire Protection's Watershed Emergency Response Team (WERT) completed their assessments and identified human life and infrastructure value at risk (VAR) for potential debris flows and erosion hazards for emergency mitigation actions, including the two intakes of GFCSD; and

WHEREAS, EDCWA recognizes that GFCSD's water supply and two intakes can be subject to long-term erosion hazards if the upstream watersheds are not properly restored; however, long-term watershed restoration is beyond the scope of emergency assistance and requires significant resources and coordination with federal agencies as the watersheds are completely within federal lands; and

WHEREAS, the U.S. Department of the Interior, Bureau of Reclamation ("Reclamation") has implemented the WaterSMART Program to work cooperatively with states, tribes, and local entities as they plan for and implement actions to increase water supply through investments to modernize existing infrastructure and attention to local water conflicts; and

WHEREAS, Reclamation has established WaterSMART Environmental Water Resources Projects ("EWRP") as a new category of funding to support projects focused on environmental benefits and has been developed as part of a collaborative process to help carry out an established strategy to increase the reliability of water resources; and

WHEREAS, Reclamation has solicited projects for grant funding under the Fiscal Year 2022 WaterSMART EWRP, for which applications are due on or before December

9, 2021; and

WHEREAS, the Board of Directors of EDCWA has identified itself as an eligible applicant under Reclamation's WaterSMART EWRP Grant; and

WHEREAS, EDCWA is pursuing grant funding assistance under the WaterSMART EWRP Grant in an amount of up to \$2,000,000 to conduct the initial phase of restoration efforts on GFCSD's source watersheds (Project).

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors as follows:

1. The Board finds that the proposed project will serve both the mission of the EDCWA and satisfy the goals of the WaterSMART Program and, on that basis, supports staff's submittal of the financial assistance application to Reclamation.
2. The Board hereby ratifies the action of its General Manager, or his designee, of EDCWA in applying for financial assistance from Reclamation's WaterSMART Cooperative Watershed Management Program and authorizes the General Manager or his designee to execute any related documents, including a cooperative financial assistance agreement with Reclamation.
3. The General Manager and staff are directed to take all other actions necessary to secure funding for the Project under the WaterSMART EWRP Grants, including working with Reclamation to meet established dates for entering into a cooperative financial assistance agreement.

PASSED AND ADOPTED by the Board of Directors of the El Dorado County Water Agency at a regular meeting of said Board, held on November 10, 2021, by the following vote of said Board:

Ayes: Turnboo, Thomas, Peterson, Thornbrough,
Parlin

Noes:

Abstain:

Absent:

ATTEST:

By Jan Stewart
Deputy Clerk of the Agency

By Kori Parlin
Chair, Board of Directors