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Research and Development Office
WaterSMART Small-Scale Water Efficiency Grants for Fiscal Year (FY) 2024 and FY 2025
Funding Opportunity Announcement No. R24AS00059
Category A Applicant

Wholesale Meter Upgrade; A Municipal Metering Upgrade Project

STUDY27

Applicant:
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El Dorado Irrigation District

Table of Contents

Section 1: Technical Proposal: Executive Sumary

Date: January 16, 2024

Applicant: El Dorado Irrigation District (EID)

Applicant Category: Category A

Project Summary: El Dorado Irrigation District (EID), located in El Dorado County, California is a Special District that provides potable and recycled water to retail customers including providing wholesale potable water to the City of Placerville (City) in its approximately 220 square mile service area boundary. EID requests $100,000 from U.S. Bureau of Reclamation (Reclamation) to help fund the upgrade of three old and obsolete large wholesale water meters with more accurate meters and updated automated meter read (AMR) technology to improve inefficiencies and prevent water loss in the distribution system. The region has experienced longer and more intense periods of drought in recent years, and the Project will help the community become more resilient to climate change through accurate reporting, efficient water use and conservation. The Project is supported in EID's 2020 Urban Water Management Plan (UWMP); 2013 Integrated Water Resources Master Plan (IWRMP); and Capital Improvement Plan (CIP) 2024—2028 as well as regionally in El Dorado County's Upper American River Basin (UARB) Regional Drought Contingency Plan (RDCP); Cosumnes, American, Bear, and Yuba (CABY) Integrated Regional Water Management Plan (IRWMP); and *Reclamation's* American River Basin Study (ARBS).

Duration and Estimated Completion Date: The anticipated start date for this project is February 2025 and the anticipated completion date for this is February 2026.

Federal Facility: This project is not located on a Federal facility.

Section 2: Technical Proposal: Project Location

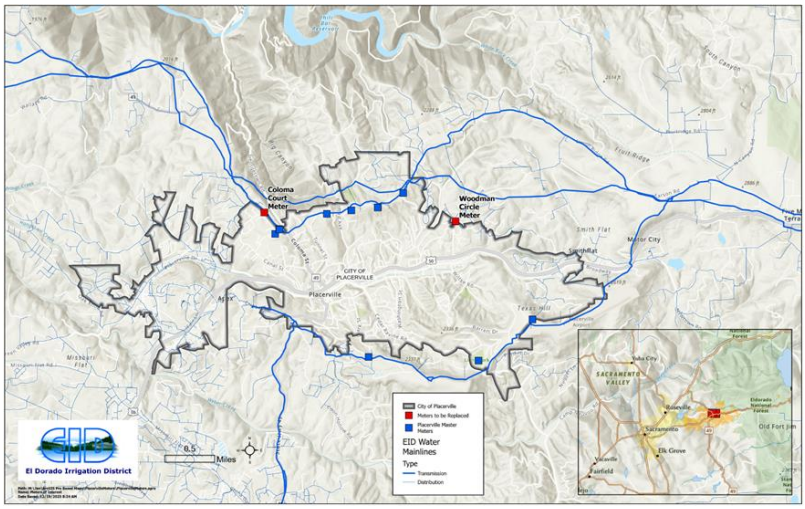

Figure 1 Project Location Map

The Wholesale Meter Upgrade; A Municipal Metering Upgrade Project is located in the City of Placerville in El Dorado County, California within the South Fork American River watershed. The latitude and longitude for the two, meter replacement sites are 38° 44' 17.74" N 120° 46' 44.22" W for the Woodman Circle Meter, and 38° 44' 23.85" N 120° 48' 51.92" W for the Coloma Court (Combellack Road) Meters. Please see Figure 1 to view these project locations.

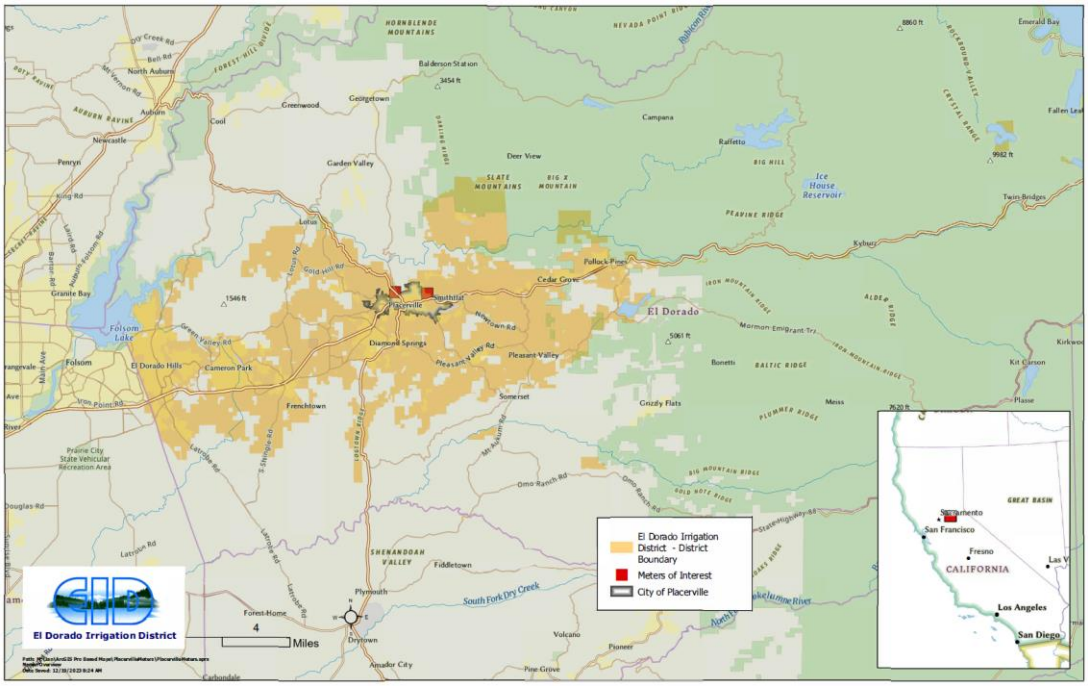

Figure 2 Project Location Map

Section 3: Technical Proposal: Project Description

About EID: EID was organized in 1925 and created to protect water filings, ensure a secure water supply, and increase the value of agricultural lands. EID provides retail potable, irrigation, and recycled water services to municipal and agricultural customers throughout a large area of El Dorado County and also provides wholesale treated water to the City of Placerville, which receives approximately 1,100 acre-feet (AF) annually. Specifically, they serve nearly 130,000 people and nearly 150,000 acres of agricultural needs, urban communities, and rural residences. The service area covers approximately 220 square miles, including the City, unincorporated communities, and others.

Due to climate change, EID and the surrounding areas have experienced more frequent and prolonged periods of drought in recent years, which impacts EID's primary water supply as it is derived from the natural rainfall and snowpack that falls upon the upper elevations of the Sierra Nevada mountains. EID does not utilize groundwater as a source but does capture and treat wastewater from many of the local communities, producing recycled water for irrigation to supplement its potable supplies.

About the Project: EID's latest estimate of water loss from the 2020 UWMP was approximately 6,500 AF of water over the year, or about 18.1 percent of the water entering the distribution system, in 2020. This value reflects real losses as well as apparent losses, such as from meter inaccuracies, and was derived from calculating the total billed and unbilled water compared to the total diverted supplies.

EID's water loss is slightly above the average 16 percent loss by public water systems nationally, according to the Environmental Protect Agency's report, Water Audit and Water Loss Control

for Public Water Systems, and EID is actively working to reduce transmission and distribution system losses through pipeline and conveyance replacement and meter upgrades.

Water meter accuracy deteriorates with age. Factors such as wear, buildup of deposits, water quality, water velocities, amount of throughput, environmental issues and effects of installation and repair contribute to meter accuracy degradation.

EID has identified a total of three wholesale water meters one at Woodman Circle and two at Coloma Court in the City of Placerville in need of replacement. The City of Placerville's population was 10,747 as of the 2020 census, up from 10,389 in 2010. The City of Placerville operates and maintains approximately 45 miles of water main pipelines and approximately 2,700 water meters within the City limits. The three meters in need of replacement are more than 20 years old, obsolete and parts for necessary repairs are no longer available. Additionally, due to their age and technology they are less accurate than newer meters. Current meter specifications include:

- Woodman Circle 6" Sensus single register high-performance compound meter. Approximately 20 years old, the meter was updated to AMR technology in 2009.
- Coloma Court 2" Sensus displacement type magnetic drive cold water meter. The meter was installed in 2001and updated to AMR in 2009.
- Coloma Court 8" Sensus Series "W" Turbo-meter, bronze magnetic drive, flanged ends. Approximately 20 years old, the meter was updated to AMR technology in 2009.

EID will replace these failing meters with new Automated Meter Reading (AMR) Sensus OMNI+ Turbo (T^2) Water Meters. The meters exceed American Water Works Association (AWWA) most recent version of Standard C701 class II standards and are National Sanitation Foundation/American National Standards Institute Standard 61, Annex F and G approved. The AWWA C701 standard provides minimum requirements for meter design, accuracy, and installation.

Installation will occur during a 10-month period and be completed by contractors through a competitive bidding process. No site preparation is necessary. The Project replaces existing infrastructure with upgraded infrastructure in a built environment.

Section 4: Technical Proposal: Responses to Evaluation Criteria

4.1 Evaluation Criterion A: Project Benefits (35 point)

Benefits to the Category A Applicant's Water Delivery System

Will the project result in more efficient management of the water supply? EID tracks water losses annually, and real and apparent losses are estimated to be 18.1 percent overall (2020 UWMP), which is slightly above the average 16 percent loss by public water systems nationally, according to the Environmental Protect Agency's report, Water Audit and Water Loss Control for Public Water Systems. The typical useful life for a water meter is 15 to 20 years, and older meters tend to be less accurate and more prone to maintenance issues. Additionally, technology upgrades over time allow for advances in data acquisition. The meters targeted for upgrade in the Project are more than 20 years old. Parts are no longer available for

maintenance and repair as the models are now obsolete. Additionally, the existing meters have poor accuracy curves in lower flows as compared to the meters that will be installed with the project (See Appendix C).

The project will result in more efficient water supply management as replacing the aging meters with newer more accurate meters and improved AMR technology will allow for better overall data collection and analysis of water consumption and improve the efficiency of meter reading and billing so that leaks and other water loss may be identified more quickly. The new meters also include programmable features that allow interrogation of historic water use for specific time periods. The new meters will ensure the City is aware of its water usage, has accurate information to engage in water savings and conservation efforts, is billed accurately and may investigate and accurately report on water loss, such as in the case of a water line break. Additionally, less water will be lost in the system, energy savings will occur as EID will need to pump less water from its supplies to customers.

Where any conserved water as a result of the project will go and how it will be used? The Project will allow EID to withdraw less water from the area's vital river system in the American River and Cosumnes Watersheds and ensure water supplies remain plentiful for all dependent on the rivers, including residential customers, farmers, tourists, recreationists, plants, animals, and others. Because EID has been experiencing prolonged and more severe periods of drought in recent years – leading to customer water conservation alerts – efforts to ensure that the community has ample water supply are more important than ever.

Are customers not currently getting their full water right at certain times of year? During periods of drought that require water restrictions, EID has implemented Water Alerts as directed in its Drought Action Plan. The most recent Stage 1 Water Alert within the District's Main System, which includes it feeds to the City of Placerville, was issued from June 28, 2021, to April 24, 2023. The alert targeted a 15 percent demand reduction compared to 2020 levels through the implementation of voluntary customer actions, which included changing irrigation run times to evening and early morning hours, inspections for leaks and adjustment of sprinkler run times to avoid runoff.

EID has also experienced several periods of state-ordered curtailments of water rights due to drought within EID's Outingdale Satellite System. During the severe drought of 2012-2016, direct diversion from the Middle Fork Cosumnes River that serves the Outingdale Satellite System, a small community about 15 miles southeast of Placerville, was curtailed. EID had to meet limited consumptive demands of the Outingdale Satellite System from September 9, 2014, to October 7, 2014, by trucking treated water from EID's main system due to the physical unavailability of water and water quality concerns in the Middle Fork Cosumnes River. A similar curtailment was ordered by the State Water Resources Control Board the following year in 2015, which again resulted in trucking of treated water to Outingdale from late April to early August 2015.

Does this project have the potential to prevent lawsuits or water calls? Yes, this project has the potential to prevent water calls. The project will replace wholesale water meters that

supply water to the City of Placerville. The new meters will ensure the accurate measurement of water being supplied to the wholesale customer, which will help prevent water calls and inquiries about water usage and water billing.

What are the consequences of not making the improvement? Not making these improvements would result in continued water use inefficiencies, water losses above the average 16 percent loss by public water systems nationally, and unnecessary strain on EID resources. The water conserved through this project will allow water resources to stretch further and expand the scale of benefit beyond the local region. In addition, the expected energy savings associated with not having to pump as much water would not be realized.

Because older meters tend to be less accurate and more prone to maintenance issues, not replacing the meters will potentially result in lost revenue due to inaccurate billing to the City and charges related to extensive repairs. The City will also be affected as they will not have accurate data about their water use, making decisions about water management, water loss, and conservation more difficult.

Are customer water restrictions currently required? There are no current required restrictions. EID adopted a resolution declaring a drought emergency and Stage 1 Water Alert, which requested voluntary 15 percent water conservation efforts from customers, on June 28, 2021. Coming out of a winter of heavy precipitation and snowpack, the Stage 1 alert was rescinded by the Board on April 24, 2023.

Broader Benefits

Will the project improve broader water supply reliability at sub-basin or basin scale? The Project will improve water management and efficiency at EID's wholesale meters, thereby decreasing water waste and allowing EID to withdraw less water from its sources to meet demand. This will help improve reliability of water supplies in the American River and Cosumnes River Basins and help prevent overdraft that negatively affects the environment. Increased urban water use efficiency is listed as an adaptation strategy to address water supply reliability stressors in *Reclamation*'s ARBS.

Will the proposed project increase collaboration and information sharing among water managers in the region? Please explain. The Project will allow EID to share more accurate and detailed information with the City about their water usage, which will enable them to make data-driven decisions about their water use, water loss, and conservation efforts.

Is the project in an area that is experiencing, or recently experienced, drought or water scarcity? Will the project help address drought conditions at the sub-basin or basin scale? Yes, the project is in El Dorado County which is now experiencing periods of drought that are more pronounced, occur more frequently, and last longer than in previous years. The effects of the drought are felt tangibly in the region with wildfire damages growing more severe each year, according to the UARB RDCP, published in 2021. Drought may also affect the water quality of surface supplies in the area with reduced stream and river flows during drought periods increasing the concentration of pollutants or contaminants present. Reservoirs in forested areas are also susceptible to water quality impacts from wildfires, which reduces potable water quality via erosion events, increases runoff rates, and increases reservoir sedimentation.

As seen in Figure 2, between 2000 and today, the County experienced abnormally dry to exceptional drought conditions in every year except 2006 and 2011, according to the U.S. Drought Monitor. Between 2014 to mid-2016, the region was in a moderate to exceptional drought period continuously. From May 2021 to January 2023, drought conditions were again categorized as severe to exceptional, according to the U.S. drought monitor website.

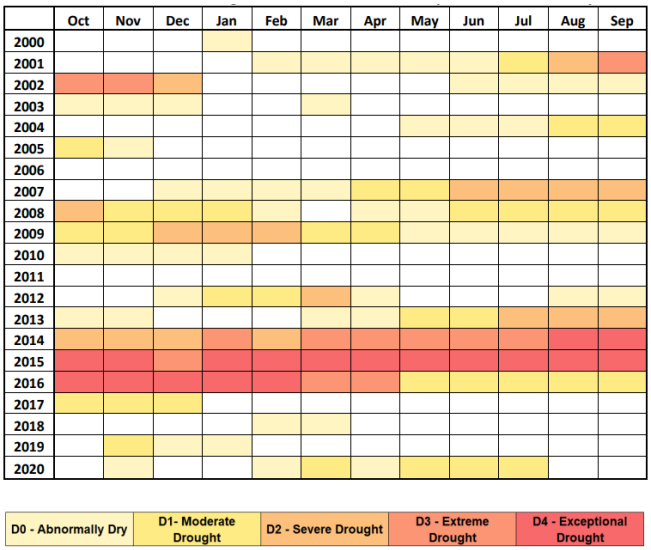

Figure 3 El Dorado County Drought Monitor

In addition, the District monitors Jenkinson Lake, its 41,000-AF water supply reservoir, to indicate potential drought actions. Jenkinson Lake is considered a two-year supply, and it is EID's goal to maintain a minimum of 25,000 AF year-round to guard against multiple year drought conditions. Between 2000 and 2020, drought conditions were indicated in nine years – 2000, 2001, 2006, 2011, 2012, 2014, 2015, 2017, and 2019 – because reservoir storage levels decreased, according to the UARB RDCP.

The Project will help EID to better monitor and efficiently use its resources, allowing EID to withdraw less water from its supply sources. As stated in *Reclamation*'s ARBS, an increase in urban water use efficiency is an effective adaption action to take to address the supply issue vulnerabilities of the American River Basin.

Will the project benefit species? The river system is home to 43 fish species, including federally threatened steelhead and struggling fall-run Chinook salmon, according to *Reclamation*'s ARBS. Only a few hundred steelhead spawn annually in the Lower American River, and the Federal government listed steelhead as a threatened species in 1998. Fall-run Chinook salmon populations have been at historical lows in the past decade. Conditions in the Lower American River are often unhealthy for these anadromous fish due to high water temperatures.

In addition, drought conditions reduce the amount of water supplies and refuge for native wildlife whose life cycles require water to survive. The County contains areas of habitat for the federal Endangered Species Ac-listed California red-legged frog and Sierra Nevada yellow-legged frog.

Decreasing waste and efficient water supply would allow EID to consume less water from the area's rivers and lakes, including *Reclamation's* Folsom Reservoir, giving these threatened species more water in which to flourish.

Will the proposed project positively impacts/benefit various sectors and economies within the applicable geographic area? According to El Dorado Water Agency's UARB RDCP, agricultural acreage in the County and West Slope has been slowly growing over the last several decades, and the value of the industry has been increasing in response to strong domestic and export market conditions, growing agritourism demand, and expansion of direct-to-consumer fresh produce markets. Crops produced support significant economic activity in associated industries including livestock and fruit processing. Agritourism has also become a successful economic use of land, bringing tourists to the area from the Sacramento metropolitan area, San Francisco Bay Area, Reno, and other areas. It is estimated that the impact of agriculture on the economy of El Dorado County totaled $565.8 million in 2022, according to the 2022 Agricultural Crop and Livestock Report from the El Dorado and Alpine Counties Department of Agriculture.

Agriculture is dependent on water supply, and drought associated with climate change may have a negative impact on agriculture and agritourism, according to the RDCP. Decreased water supply and increased water demands for certain soil conditions could result in diminished crop production and reduced forage/water for livestock, leading to revenue losses for the agricultural and ranching industry. This could also lead to fewer employment opportunities for agricultural workers, farm closures, decreased visitors, and a reduction in agritourism revenue. Worsening drought conditions may reduce new agricultural planning, investment, and expansion.

Similarly, El Dorado County is often identified by its many recreational opportunities. It is estimated that over 898,000 people visit the Eldorado National Forest annually to engage in recreation such as camping, hiking, and fishing and hunting, according to the Climate Vulnerability Assessment published by the El Dorado County's Planning and Building Department in 2023. These visitors contribute an estimated $116.3 million to the local economy. Drought conditions may limit recreational opportunities through reduced snowpack, river flows, and reservoir storage levels that disrupt fishing, rafting, swimming, camping, and other recreational activities, leading to a loss of recreational revenue.

Water conservation of the area's limited resources is essential to maintaining revenue created by agriculture, agritourism and recreation in the region. Sufficient water supply must be available to these industries to continue their sustainability and growth. EID's Project will assist in this effort by improving overall data collection and accuracy of water use to assist in the analysis of water consumption and ensuring water loss is identified quickly at the wholesale meters, thereby making more water available for EID's other customers.

Will the project complement work being done in coordination with National Resources Conservation Resources in the area. Not applicable.

4.2 Evaluation Criterion B: Planning Efforts Supporting the Project (25 Points)

Plan Description and Objectives

Is your project supported by a specific planning document or effort? The Project has been discussed specifically and broadly in several planning documents created by both the District and its regional partners. Featured planning documents include:

- EID's 2020 UWMP – EID's long-term resources management plan updated every five years to ensure that adequate water supplies are available to meet existing and future water needs.
- EID's 2013 IWRMP – EID's comprehensive program to optimize the use of potable water and recycled water resources. The plan provides a roadmap for development of future infrastructure and maintenance of existing water facilities.
- EID's CIP 2024—2028 – EID's five-year plan that details projects and estimated expenditures for necessary improvements to ensure the safety and reliability of EID's infrastructure. The plan was approved on October 23, 2023.
- El Dorado Water Agency's UARB RDCP – A regional collaborative project aimed at increasing the resiliency of water resources in the face of future climate change conditions and droughts for the El Dorado County area west of the Sierra Nevada Crest (i.e., the West Slope). The RDCP was finalized in March 2023.
- CABY's IRWMP – A planning document that identifies broadly supported goals, objectives, strategies, actions, and projects within the CABY region to address long-term water supply needs, protection of water quality, and enhancement of environmental and habitat resources. The plan was updated in 2021.
- *Reclamation's ARBS* – The *Reclamation's* holistic examination of water management practices in the American River Basin. The ARBS examined strategies to integrate or better coordinate local and federal water management to improve regional water supply reliability, while enhancing *Reclamation*'s flexibility in operating Folsom Reservoir to meet flow and water quality standards in the Sacramento-San Joaquin Delta (Delta) and to protect endangered fishery species in the lower American River. The ARBS was published in August 2022.

Plan Development

Who developed the planning effort? What is the geographic scope of the plan? EID prepared it's UWMP, IWRMP, and CIP with Board approval during public hearings that foster community input, and the plans address the water needs of the District's 220-square mile service area boundary.

The RDCP is a regional project led by the El Dorado Water Agency and developed in close collaboration with *Reclamation* and EID along with other public water agencies, Tribes, land use authorities, resource managers and other interested parties. As a collaborating partner, EID is a

member of the project's Executive Committee, which provided guidance for development, local consistency, and implementation. The RDCP was funded by the Drought Response Program of *Reclamation's WaterSMART grant program*, and its geographic scope was the West Slope, including a diverse landscape of headwaters, national forests, and predominantly rural-agricultural surroundings with some urbanization.

The IRWMP includes the water managers in the CABY watersheds. EID is one of the four central water agencies involved in the CABY Regional Water Management Group that developed the plan. The other agencies include El Dorado County Water Agency (EDCWA), Placer County Water Agency (PCWA), and Nevada Irrigation District.

Reclamation's ARBS was developed in collaboration with PCWA, City of Roseville, City of Sacramento, EDCWA, City of Folsom, and the Regional Water Authority, of which EID is a member. The study area was bounded by the ridge of the Sierra Nevada to the east, the Feather and Sacramento Rivers to the west, the Bear River to the north, and the Cosumnes River to the south.

Support for the Project

Describe to what extent the proposed project is supported by the identified plan. The Project is listed by name and location in the CIP, and replacement of old and outdated meters are discussed as a drought mitigation planning priority in the UWMP, IWRMP and RDCP. The IRWMP identifies investing "in upgrading infrastructure to maximize efficiency and reduce waste" as an adaptation measure addressing the region's vulnerability to climate change for all water purveyors represented by the planning group. *Reclamation's* ARBS focuses on an increase in "urban water use efficiency" as a specific strategy to curb waste and address the region's vulnerability to drought and climate change impacts. Upgraded infrastructure is one of several important measures that each plan lists as a tool to decrease water waste.

The potential effects of a changing climate have introduced significant uncertainty in long-term water supply reliability for EID and other water purveyors in the region. The UWMP, RDCP, and other referenced planning documents share a common objective of addressing the region's growing imbalance of water demands versus water supplies due to continued economic development, regulatory updates, and effects from climate change. The Project directly speaks to this objective by focusing on EID's comprehensive water efficiency and conservation strategy to reduce water loss in the system and ensure that clean, healthy water is available not only for EID customers but all those in the area.

4.3 Evaluation Criterion C: Implementation and Results (20 Points)

Describe the implementation plan for the proposed project. Please include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates.

Task 1: Environmental/Cultural Compliance and Permitting (February 2025 – March 2025)

The purpose of this task is to perform environmental review and cultural compliance work necessary to complete the meter replacement project and apply and receive all applicable permits. Work includes but is not limited to:

1.1 Working with *Reclamation* to meet federal and state environmental and regulatory compliance requirements, including National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) compliance.
1.2 City of Placerville Encroachment Permit.

Expected Deliverables: [1] Environmental Permitting, [2] City of Placerville Encroachment Permits.

Task 2: Design, Procurement of Equipment and Materials, and Contracting (March 2024 – July 2025)

The purpose of this task is to solicit quotes and purchase all equipment necessary to complete the project. Work includes but is not limited to:

2.1 Perform design of project.
2.2 Solicit quotes for purchase of 1 meter vault and lid, and 1 meter vault lid.
2.3 Solicit Contractor quotes in compliance with state laws.

Expected Deliverables: [3] Full Design Set (Drawings and Specifications), [4] Procurement and purchase records, [5] Contractor Quote Records, [6] Construction Contract.

Task 3: Project Installation (August 2025 – November 2025)

The purpose of this task is to perform all necessary installation work. Work includes but is not limited to:

3.1 Meter installation.
3.3 Testing and evaluating data transmission.

Expected Deliverables: [7] Installation records, [8] Contractor invoices.

Task 4: Administration and Technical Support (February 2025 – February 2026)

The purpose of this task is to perform grant administration, periodic reporting, and technical work necessary to complete the project. Work includes but is not limited to:

4.1 Developing Performance and Final Reports and SF-425 Federal Financial Reports for work performed from October 2024 through July 2025, or as specified in a resulting award contract from *Reclamation*.

Expected Deliverables: [9] Executed grant agreement, [10] Requests for reimbursement, [11] completed SF-425 reports, [12] Interim performance reports, [13] Final performance report.

Figure 4 Project Schedule

	2025											2026	
ACTIVITY	F	M	A	M	J	J	A	S	O	N	D	J	F
Environmental/ Cultural Compliance													
Design, Procurement and Contracting													
Project Installation													
Administration and Technical Support													

Describe any permits and agency approvals that will be required along with the process and timeframe for obtaining such permits or approvals. EID will submit an encroachment permit to the City to perform the work. Permit application and processing is expected to take approximately one month.

EID will submit a CEQA Notice of Exemption (NOE) with the State Clearinghouse (SCH) within the Governor's Office of Planning and Research. The project is exempt from CEQA as it meets the requirements of Section 15302(c) "Replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity." No expansion of capacity is part of the Project.

The Project is anticipated to fall within a NEPA - Categorical Exclusion as the scope of Project construction is entirely within previously disturbed area.

Identify and describe any engineering or design work performed. Only preliminary engineering has been performed for this project. This effort identified the meter sites in need of upgrade, and the replacement meters with more accuracy and upgraded AMR technology have been identified. No design work has been completed.

Does the applicant have access to the land or water source where the project is located? Has the applicant obtained any easements that are required for the project? If the applicant does not yet have permission to access the project location, describe the process and timeframe for obtaining such permission. Both locations of the meters are in right of way within the City of Placerville.

Identify whether the applicant has contacted the local Reclamation office to discuss the potential environmental and cultural resource compliance requirements for the project and the associated costs. Has a line item been included in the budget for costs associated with compliance? The proposed Project upgrades existing infrastructure in a built environment. The project will not cause impacts to the surrounding environment. No buildings eligible for listing on the National Register of Historic Places or of cultural significance are near the meter replacement locations. The project is anticipated to fall within a NEPA - Categorical Exclusion and a CEQA categorical exemption. Upon the *Reclamation*'s review, EID will adhere with any environmental and cultural resource compliance terms and conditions.

4.4 Evaluation Criterion D: Nexus to Reclamation (5 points)

Does the applicant have a water service, repayment, or operations and maintenance contract with Reclamation? EID relies on 7,550 AF annually from *Reclamation's* Folsom Reservoir through Central Valley Project Water Service Contract No. 14-06-200-1357A-LTR1 with *Reclamation*. Additionally, EID receives 4,560 AF from the ditch/Weber Reservoir Warren Act Contract. *Reclamation* and EID entered into a Warren Act contract in 2016 for 17,000 AF per year of EID's Project 184 supplies (Water Rights Permit 21112) from *Reclamation's* Folsom Reservoir. The contract will be in effect through February 2030.

Will the proposed work benefit a Reclamation Project area or activity? Upgrade of the meters will allow EID to decrease overall water consumption through efficient, accurate use and leak detection. This will benefit *Reclamation* by allowing EID to draw less water from the American River Watershed, which feeds *Reclamation's* Folsom Dam and Reservoir and its work in supplying water for other communities, wildlife preserves, producing hydroelectricity, maintaining water quality in the Bay Delta, and providing recreation.

Reclamation's ARBS examined ways to improve regional water supply reliability while enhancing *Reclamation*'s flexibility in operating its Folsom Reservoir. "Urban water use efficiency" is an adaption strategy listed in the document, and the Project is an example of this strategy.

4.5 Evaluation Criterion E: Presidential and Department of Interior Priorities (15 points)

Sub-Criterion No E1. Climate Change

Please provide specific details and examples on how the project will address the impacts of climate change and help combat the climate crisis. EID's water supply reservoirs are designed based on historical water shed hydrology. The hydrology above EID's reservoirs is changing with the climate. Water management in EID's area is facing the combined climate pressures of warming temperatures, shrinking snowpack, shorter and more intense wet seasons, more volatile precipitation, and rising sea levels. *Reclamation's* ARBS found that maximum temperatures in EID's area are projected to rise, with the most significant increase of 7.3 degrees Fahrenheit during the summer months by the end of the century. While projections of average annual precipitation are uncertain, forecasts indicate a change in precipitation timing and variability. Precipitation is projected to be increasingly variable with the timing of the moisture shifting. Fall and spring precipitation is expected to decline and winter and summer precipitation will increase. In addition, the snowpack will decrease due to warming, moving the peak runoff by more than a month by the mid to late century.

Climate change has complex and connected effects: it reduces the share of precipitation falling as snow, causes earlier snowpack melting and higher runoff, and raises water temperatures. Warming also amplifies the severity of droughts and floods. Warmer, more intense droughts increase pressure to draw water supplies and warmer, more intense storms add stress to surface reservoirs—making it harder for water purveyors to meet competing objectives.

Water supplies in EID's region are inextricably tied to the Sierra snowpack runoff. *Reclamation's* ARBS indicates that the snow water equivalent (SWE) is projected to decrease significantly due to higher average surface temperatures and precipitation variability. SWE is a key indicator of water supplies for EID, where runoff is largely influenced by snowmelt. The increasing variability in precipitation combined with increases in surface air temperatures are key drivers in projections of a reduction in annual average SWE. Average SWE is forecasted to decrease by 50 to 85 percent across all climate scenarios and future time periods. In addition, areas that accumulate snow above *Reclamation's* Folsom Reservoir are also projected to have up to a 12-inch decrease in maximum snowpack by end of the century. This will place strain on summer and fall water supplies in the EID service area due to earlier runoff. Peak runoff is expected to shift by more than a month earlier within the mid-to-late century. Increased evapotranspiration would also accompany the intensification of hotter extreme temperatures.

With increasing variability in precipitation predicted for the future, among other aforementioned climate pressures, it is essential for EID to conserve water wherever possible to ensure supplies are available for residents, businesses, livestock, and all those who rely on the UARB for water. The Project will allow EID to more efficiently use its water resources, decrease opportunities for waste, and promote conservation measures, thereby allowing EID to draw less water from its limited supplies.

Does this proposed project strengthen water supply sustainability to increase resilience to climate change? Does the proposed project contribute to climate change resiliency in other ways not described above? The Project will improve water management and efficiency at EID's wholesale meters, thereby decreasing water waste and allowing EID to withdraw less water from its sources to meet demand. This will help EID become more resilient against the variable snowpack and rainfall amounts that are predicted in the future due to climate change, ensuring water is available for community use throughout the year. The Project will also help EID decrease its carbon footprint by allowing EID to pump less water from its supply sources, reducing energy expenditures.

Sub-Criterion No. E2 Disadvantaged or Underserved Communities

Please use the White House Council on Environmental Quality's interactive Climate and Economic Justice Screening Tool (CEJST), available online at Explore the map – Climate and Economic Justice Screening Tool (https://screeningtool.geoplatform.gov) to identify any disadvantaged communities that will benefit from your project. Placerville is not identified in a disadvantaged tract on the CEJST tool. The City does, however, have a median household income (MHI) that is three-quarters the amount of California (Placerville HMI is $68,640 versus the state's MHI of $91,905), according to the U.S. Census Bureau (2022) American Community Survey five-year estimates. Approximately 16 percent of residents live below the poverty line, nearly double the rate of the County as a whole (8.6 percent).

Although, Pollock Pines, a small community about 12 miles east of Placerville within the EID service area, and receives water from the same source as Placerville, is identified as a disadvantaged community on the CEJST tool. Tract 06017031302 is 70th percentile low income,

93rd percentile for expected building loss rate resulting from natural disasters, 96th percentile for projected wildfire risk and 91st percentile for housing cost for households making less than 80 percent of the area median family income and spending more than 30 percent of income on housing. Any water savings from this project makes more water available for other EID customers, including those in Pollock Pines.

If applicable, describe how the project benefits those disadvantaged or underserved communities identified using the tool. Issues of water quality and supply disproportionally affect disadvantaged communities and people of color. These populations pay a larger percentage of their incomes for water bills, are not able to afford or do not have access to bottled water during times of emergency such as drought and may lack transportation to escape natural disasters among other issues.

The Project will help improve efficiencies in EID's distribution system and save water, which will help all customers – including the Pollock Pines community identified by the CJEST tool - by ensuring that water supply always remain plentiful, especially during periods of drought and other emergencies. In addition, the Project will improve EID's billing accuracy to the City, confirming that the City is billed accurately for their usage and has the information it needs to make decisions about water use and conservation efforts.

Sub-Criterion No. E3 Tribal Benefits

Does the proposed project directly serve and/or benefit a Tribe? Will the project improve water management for a Tribe? This project will upgrade old, inaccurate wholesale meters in the City of Placerville, which is home to Shingle Springs Band of Miwok Indians, a federally recognized Tribe, and an EID customer. While the Project does not directly affect the Tribe, it will assist EID's entire customer base by improving inefficiencies and preventing waste so that water in the environment is not overdrafted and supply remains available for community needs. Makes more water available for all EID customers, including the tribe.

Does the proposed project support Tribal resilience to climate change and drought impacts or provide other Tribal benefits such as improved public health and safety by addressing water quality, new water supplies, or economic growth opportunities? The Project addresses the impact of climate change and drought on EID's whole community, including Shingle Springs Band of Miwok Indians, by better ensuring that water meters are accurately recording water use and ensuring water is conserved. In addition, the Project's purpose is consistent with the Tribe's environmental goals as stated on its website (https://www.shinglespringsrancheria.com/) of "maintaining our natural resources" and "protecting our waters, habitats and wildlife."

Does the proposed project support Reclamation's Tribal trust responsibilities or a Reclamation activity with a Tribe? The Project does not address *Reclamation*'s trust responsibilities.

Section 5: Project Budget

The total estimated cost for this planning project is $246,579. EID anticipates spending $146,579 and are requesting $100,00. Please see the Budget Narrative Excel included in the application submission for a complete breakdown of project costs.

Budget Object Category	Total Cost
a. Personnel	$61,682
b. Fringe Benefits	$50,197
c. Travel	$0
d. Equipment	$0
e. Supplies	$0
f. Contractual	$20,700
g. Construction	$114,000
h. Other Direct Costs	$0
i. Total Direct Costs	$246,579
i. Indirect Charges	$0
Total Costs	**$246,579**

Table 1 Project Budget

Section 6: Environmental and Cultural Resources 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. The proposed Project replaces existing infrastructure in a built environment. The project will not cause impacts to the surrounding environment.

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 project area? If so, would they be affected by any activities associated with the proposed project? No threatened species are in Project area.

Are there wetlands or other surface waters inside the project boundaries that potentially fall under Clean Water Act jurisdiction as "Waters of the United States"? If so, please describe and estimate any impacts the proposed project may have. No.

When was the water delivery system constructed? EID was formed in 1925. EID purchased the water storage and distribution system from the El Dorado Water Corporation, which had completed facilities and infrastructure in the 1924. Sly Park reservoir, originally owned by *Reclamation*, now known as Jenkinson Lake, was completed in the mid-1950s.

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. No.

Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? *A cultural resources specialist at your local Reclamation office or the State Historic Preservation Office can assist in answering this question.* While there are several properties in the City of Placerville that are listed on the National Register of Historic Places, none are in the proposed Project area.

Are there any known archeological sites in the proposed project area? No.

Will the proposed project have a disproportionately high and adverse effect on low income or minority populations? No.

Will the proposed project limit access to, and ceremonial use of, Indian sacred sites or result in other impacts on tribal lands? No.

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? No.

Section 7: Required Permits or Approvals

EID will submit an encroachment permit to the City to perform the work. Permit application and processing is expected to take approximately one month.

EID will submit a CEQA NOE with the SCH within the Governor's Office of Planning and Research. The project is exempt from CEQA as it meets the requirements of Section 15302(c) "Replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity." No expansion of capacity is part of the Project.

The Project is anticipated to fall within a NEPA - Categorical Exclusion as the scope of the project construction is entirely within previously disturbed area.

Section 8: Overlap or Duplication of Effort Statement

The proposed project does not overlap with any other active or anticipated projects in terms of funding, activities, costs, or commitment of key personnel.

Section 9: Conflict of Interest Disclosure Statement

EID has no conflicts of interest to disclose.

Section 10: Uniform Audit Reporting Statement

EID was required to submit a single audit for the most recently closed fiscal year (12/31/2022). The audit is available through the Federal Audit Clearinghouse, Tax ID number 94-6036480.

Section 11: Disclosure of Lobbying Activities

EID has not made, or agreed to make, payments to any lobbying entity.

Section 12: Letters of Support

The project is supported by the following agencies:

- El Dorado Water Agency
- El Dorado County Board of Supervisors

Letters are included in Appendix A of this application

Section 13: Letter of Partnership

EID is a Category A applicant. There are no Category B partners for this project.

Section 14: Official Resolution

The El Dorado Irrigation District Board of Directors approved a resolution authorizing an application for funding assistance for this grant on Dec. 11, 2023. Resolution No. 2023-027 is included Appendice B.

Section 19: Letters of Commitment

There are no third-party cost shares for this project.

Note: Required Federal Forms are submitted separately at Grants.gov portal.

Appendix A

El Dorado Water Agency

December 12, 2023

Camille Calimlim Touton
Commissioner
Bureau of Reclamation
1849 C Street NW
Washington DC 20240-0001

SUBJECT: Support for the El Dorado Irrigation District WaterSMART Small-Scale Water Efficiency Projects R24AS00059 Grant Application for the Wholesale Meter Replacement Project

Dear Commissioner Touton,

I am writing to express my support for the El Dorado Irrigation District's (District) application to the U.S. Department of the Interior, Bureau of Reclamation, for the WaterSMART Small-Scale Water Efficiency Projects grant opportunity. The District is requesting $100,000 in funding for its Wholesale Meter Replacement Project.

The District provides retail potable, irrigation, and recycled water services to municipal and agricultural customers throughout a large area of El Dorado County, California and delivers wholesale treated water to the City of Placerville (City). The City and the region served by the District have experienced periods of drought for decades, and drought conditions have worsened and lengthened in recent years with the effects of climate change. Water conservation and management have been long-term goals of the District even in years without drought, and the District continues to implement water savings measures in anticipation of future droughts and other climate-related events to preserve the vital resource for the benefit of our community.

Replacement of its old and inaccurate wholesale meters with new automated read meters will allow the District and ultimately the City to more accurately track water loss in its system, identify leaks for repair at a faster rate, and better account for water within the system. With more timely and precise readings of water use through automated meters, the District and City will be able to better assess its system's losses and ensure its water conservation efforts are fully achieved.

El Dorado Water Agency, as the water resources planning agency for El Dorado County, works to ensure the county has adequate and affordable water to maintain economic prosperity, protect the environment, and support the rural–agriculture way of life for today and in the future. We recognize that the District's Wholesale Meter Replacement Project will help position their customers to become

(530) 621-5392
1107 Investment Blvd, Suite 240, El Dorado Hills, CA 95762
edcwa@edcgov.us
EDWaterAgency.org

more resilient to drought and better ensure that clean, healthy drinking water is available to their community for generations.

Sincerely,

Rebecca Guo, P.E.
General Manger

COUNTY OF EL DORADO

330 Fair Lane
Placerville, CA 95667
(530) 621-5390
(530) 622-3645 Fax

KIM DAWSON
Clerk of the Board

December 15, 2023

Camille Calimlim Touton
Commissioner
Bureau of Reclamation 1849 C Street NW
Washington DC 20240-0001

Dear Commissioner Touton,

I am writing to express my enthusiastic support for the El Dorado Irrigation District's application to the U.S. Bureau of Reclamation for the WaterSMART Small-Scale Water Efficiency Projects grant opportunity. The District is requesting $100,000 in funding for its Wholesale Meter Replacement Project.

The District provides retail potable, irrigation, and recycled water services to municipal and agricultural customers throughout a large area of El Dorado County, California and delivers wholesale treated water to the City of Placerville (City). The City and the region served by the District have experienced periods of drought for decades, and drought conditions have worsened and lengthened in recent years with the effects of climate change. Water conservation and management have been long-term goals of the District even in years without drought, and the District continues to implement water savings measures in anticipation of future droughts and other climate-related events to preserve the vital resource for the benefit of our community.

Replacement of its old and inaccurate wholesale meters with new automated read meters will allow the District and ultimately the City to more accurately track water loss in their systems, identify leaks for repair at a faster rate, and better account for water within the system. With more timely and precise readings of water use through automated meters, the District and City will be able to better assess system's losses and ensure its water conservation efforts are fully achieved.

Water is one of our most precious resources. Through conservation of our existing supplies, the District's Wholesale Meter Replacement Project will help position our County and region to become more resilient to drought and better ensure that clean, healthy drinking water is available to our community for generations.

The El Dorado County Board of Supervisors supports EID's application for the Wholesale Meter Replacement Project as it preserves vital resources for the benefit of our county. We believe that EID's project is consistent with ours and the county's long-term goals to provide safe, healthy and vibrant communities, while respecting our natural resources and historical heritage.

Sincerely,

Wendy Thomas

Wendy Thomas
Chair, Board of Supervisors

Appendix B

Resolution No. 2023-027

RESOLUTION OF THE BOARD OF DIRECTORS OF EL DORADO IRRIGATION DISTRICT AUTHORIZING AN APPLICATION FOR FUNDING ASSISTANCE THROUGH THE UNITED STATES BUREAU OF RECLAMATION's WATERSMART SMALL-SCALE WATER EFFICIENCY PROJECTS PROGRAM

WHEREAS, the United States Bureau of Reclamation ("USBR") has implemented the WaterSMART Program to leverage Federal and non-Federal funding to support stakeholder efforts to stretch scarce water supplies and avoid conflicts over water; and

WHEREAS, the USBR has solicited proposals from eligible organizations, including irrigation districts, for a new round of grant funding in fiscal years 2024 and 2025, Proposals for Small-Scale Water Efficiency Projects are due on January 16, 2024, July 9, 2024, January 14, 2025, and July 8, 2025; and

WHEREAS, the Board of Directors of El Dorado Irrigation District ("EID") has previously identified EID as an eligible applicant under USBR's WaterSMART Small-Scale Water Efficiency Projects Program; and

WHEREAS, EID is now pursuing grant funding assistance under the WaterSMART Small-Scale Water Efficiency Projects Program for the replacement of large, wholesale and water treatment plant meters; and

WHEREAS, procedures established by USBR require applicants to submit a Board resolution identifying an official authorized to commit the applicant to the financial and legal obligations associated with receipt of a financial assistance award under the notice of funding opportunity.

NOW, THEREFORE, BE IT HEREBY RESOLVED by the Board of Directors of the EL DORADO IRRIGATION DISTRICT that this Board:

1. Authorizes the submittal of a grant application for projects under the USBR's WaterSMART Small-Scale Water Efficiency Projects Program; and
2. Directs the General Manager or his designee(s) to review and support the application to be submitted; and
3. Authorizes the General Manager or his designee(s) to execute any documents necessary to complete the grant application.

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The foregoing Resolution was introduced at a regular meeting of the Board of Directors of the EL DORADO IRRIGATION DISTRICT, held on the 11th day of December 2023, by Director Dwyer who moved its adoption. The motion was seconded by Director Osborne and a poll vote taken which stood as follows:

AYES: Directors Dwyer, Osborne, Veerkamp, Anzini and Day

NOES:

ABSENT:

ABSTAIN:

The motion having a majority of votes "Aye", the resolution was declared to have been adopted, and it was so ordered.

Brian K. Veerkamp
Board of Directors
EL DORADO IRRIGATION DISTRICT

ATTEST:

Jennifer Sullivan
Clerk to the Board
EL DORADO IRRIGATION DISTRICT

(SEAL)

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I, the undersigned, Clerk to the Board of the EL DORADO IRRIGATION DISTRICT hereby certify that the foregoing resolution is a full, true and correct copy of a Resolution of the Board of Directors of the EL DORADO IRRIGATION DISTRICT entered into and adopted at a regular meeting of the Board of Directors held on the 11th day of December 2023.

Jennifer Sullivan
Clerk to the Board
EL DORADO IRRIGATION DISTRICT

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