

**Project Title**

Timberland Municipal Water Meter Installation Project

**Applicant**

Tahoe City Public Utility District  
221 Fairway Drive, P.O. Box 5249  
Tahoe City, CA 96145

**Project Manager**

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**Timberland Municipal Water Meter Installation Project  
Tahoe City Public Utility District  
Table of Contents**

<b>Section</b>	<b>Page</b>
1. Executive Summary	1
2. Background Data	2-3
3. Project Location	4-5
4. Technical Project Description	6
5. Evaluation Criteria	7-9
6. Budget	
a. Funding Plan	10
b. Proposal	11
c. Narrative	12
7. Environmental and Cultural Resources Compliance	13
8. Required Permits or Approvals	13
9. Unique Entity Identifier and System for Award Management	13
10. Official Resolution	14-15

**Timberland Municipal Water Meter Installation Project  
Tahoe City Public Utility District  
Executive Summary**

July 15, 2018

Tahoe City Public Utility District  
221 Fairway Drive, P.O. Box 5249  
Tahoe City, CA 96145  
Placer County

The Tahoe City Public Utility District (District) is committed to implementing water efficiency projects as a matter of addressing drought conditions in California as well as addressing important environmental sustainability benefits, including reduced energy use and reduced pressure on water resources. This project seeks to install 100 water meters servicing residential properties located within the District's newly acquired Timberland Water Service area, and subsequently producing an estimated water savings of 10.22 AFY. These water meters will bring this small service area to 100% fully metered and District-wide this brings water metering to 77% of full metering. The District operates within the delicate environment of Lake Tahoe and is subject to a high level of regulatory and environmental compliance and mandates. In addition, the District must meet the California State Drinking Water and Sewer Treatment requirements, some of the most stringent in the country. As the District provides services in designated disadvantaged communities (U.S. Census Bureau), staff must also be more mindful of the financial impacts of all capital projects on the ratepayers it serves. This funding makes possible the District's desire to implement water meter installation in this newly acquired water system and invest in existing, but aging, water delivery infrastructure. In addition, this Project contributes to the goals of the Bureau of Reclamation FOA by installing municipal water meters to increase water supply and reliability, promote conservation and use water more efficiently.

The estimated length of time to complete this project is 5 months with a start date of May 15, 2019 and a construction completion date of September 30, 2019. This Project is not located on a Federal facility.

**Timberland Municipal Water Meter Installation Project**  
**Tahoe City Public Utility District**  
**Background Data**

The Tahoe City Public Utility District (District) is a California Special District authorized under the State of California Public Utility District Act with all powers and functions of a utility district. The District's jurisdiction encompasses 31 square miles on the west and north shore areas of Lake Tahoe in unincorporated portions of Placer and El Dorado Counties. The District owns and operates 7 distinct and separately licensed water service areas serving over 5,700 municipal water connections. Within the District service area, there are thirteen (13) groundwater supply wells and one (1) summer surface water source, fifteen (15) water storage tanks, and six (6) booster pump stations. In total, the District manages 105 miles of water main which distribute approximately 1,647 acre-feet-per year (AFY) of quality drinking water annually. The District does not have any industrial or agricultural water users within its jurisdictional boundaries.

The Timberland Water System was acquired by the District in 2018. While this system has been incorporated into the District's entire water delivery system, it is discrete, and is served by a groundwater well capable of supplying approximately 100 gallons per minute (gpm). The current quantity of water supply managed and produced is approximately 60 AFY, with projected water demand at 70 AFY. A total of 2.8 miles of distribution lines service this system and is fed by one (1) 30,000 gallon storage tank and the groundwater well. The service area includes 137 municipal water connections, of which 37 are currently metered. This project will complete the installation of an additional 100 municipal water meters, bringing the service area to 100% fully metered with an annual water savings of 10.22 AFY. The AFY water savings is calculated as the percentage of newly installed meters divided by the total service connections ( $100/137 = .73\%$ ); this percentage is multiplied by projected AFY demand ( $.73 * 70 = 51.1$  AFY); the AFY of newly metered connections is multiplied by an assumed 20% reduction of water use due to metering ( $51.1 * .2 = 10.22$  AFY).

Many small water systems, such as our Timberland Water System, lack the customer base to address significant infrastructure needs such as sufficient storage, redundant sources, and fire suppression ability. As the District acquires these small water systems with aging infrastructure, the costs for capital projects must be identified, prioritized, and overtime be sufficient to support replacement. The District is accomplishing this by phasing in a new water rate structure. Other challenges that complicate prioritizing and addressing aging infrastructure include drought, power outages, climate change, and new mandates and regulations.

Most communities utilize new residential and commercial developments as opportunities to finance upgrades to local infrastructure. However, in North Lake Tahoe there has been a lack of new development for a variety of reasons and this reduces the amount of private capital invested into the water systems. This funding assistance will relieve funding pressures and allow the District to address additional

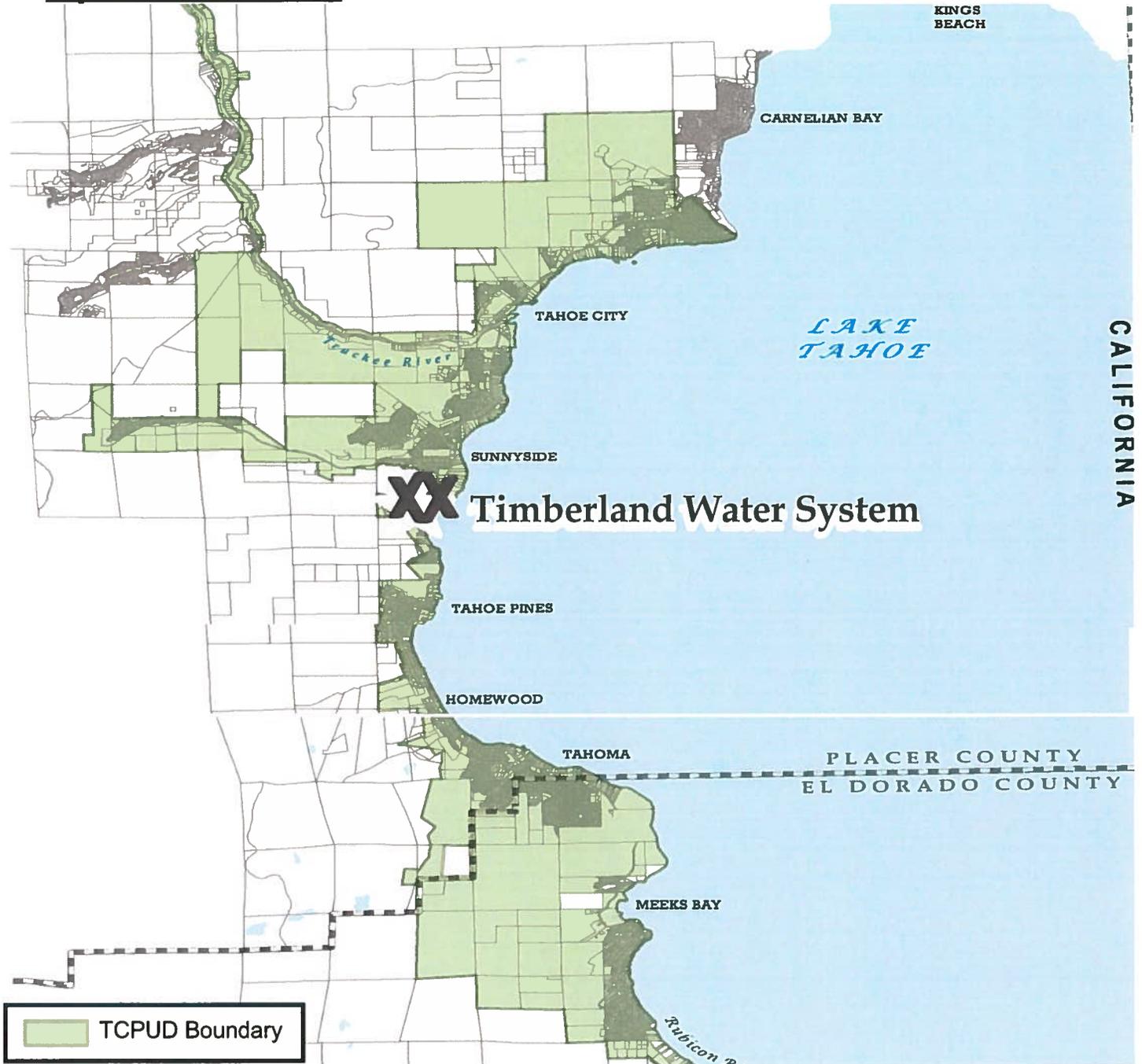
aging infrastructure to maximize water conservation. The installation of meters will improve the District's ability to promote water conservation by tracking and monitoring water use and reporting on actual demand. Metering will help the District understand seasonal use and capacity, identify leaks more efficiently, and affix a rate structure that is more appropriately aligned with water use.

The District has no past working relationship with the Bureau of Reclamation.

# Timberland Municipal Water Meter Installation Project Tahoe City Public Utility District Project Location

The Timberland Municipal Water Meter Installation Project is located on the Westshore of Lake Tahoe, CA approximately 4 miles south of Tahoe City in Placer County. The Project latitude is 39° 7' 41.8476" N and longitude is 120° 9' 58.6008" W. Map 1 below shows the District's entire service area, as well as the specific location of the Timberland Water System. Map 2 below shows the Project area within the District's Timberland Water System.

**Map 1 - TCPUD Service Area**



**Map 2 - Project Area**



**Timberland Municipal Water Meter Installation Project  
Tahoe City Public Utility District  
Technical Project Description**

The Tahoe City Public Utility District (District) is proposing the installation of 100 residential SMART (AMI or AMR) water meters on existing unmetered water service connections located within the newly acquired Timberland Water Service area on the west shore of Lake Tahoe. The water meters are being installed for water customers as required by California State Law, AB 2572 to promote and accomplish water conservation measures.

The Timberland Water System was acquired by the District in early 2018 and with it came the responsibility to correct and resolve aging infrastructure and comply with California state law. Customer metering is the single most valuable tool that a drinking water system can employ to have an understanding of how much water the system uses and loses versus what is produced. This Project will provide benefits both operationally and to customers. In addition, the metering technology can identify potential customer leaks and provide notification to the water system and/or customer directly of such an occurrence. Reduction of water use is a current issue in California, where urban water supplies have been under mandatory reductions in water usage due to the prolonged drought. Additionally, current legislation requires all urban water suppliers to reduce water production by 20% by the year 2020.

The proposed installation of new water meters will occur within the compacted shoulder of roads at the edge of the Placer County roads right-of-way. Therefore, the entire project area has been subject to prior ground disturbance. In some cases it may be necessary to install water meter infrastructure on private property, but in these instances, it will occur within 5' of the property line.

Individual meter installations include the following elements: excavation of approximately three cubic yards at the existing water service connection; removal of a section of existing pipe; installation of a 15-inch diameter PVC pipe inside a 48-in deep water meter pit with accompanying lid and insulation pad, polyethylene tubing, water meter with 6 foot Nicor connector, and MXU remote reader unit; reconnection to the existing residential water service valve and the existing customer service line, employing fittings and all horizontal and vertical adjustments necessary to install a new meter to the existing pipe; application of tracer wire; placement of bedding; backfill; compaction; and testing. Depending on the actual location of each installation, the work may also include saw-cutting, removal and replacement of pavement and the protection or replacement of existing items such as curbing, sidewalk, pavement, landscaping (sod, wood chips, rock, or other mulch), and other fixtures. Once installed, the meter is flush with the ground. The work to be performed also consists of the furnishing of all labor, equipment, supplies, and appurtenances to complete, in satisfactory condition, the construction of the project.

**Timberland Municipal Water Meter Installation Project  
Tahoe City Public Utility District  
Evaluation Criteria**

**Evaluation Criterion A – Project Benefits**

The Project will improve overall water supply reliability by monitoring, tracking, and reporting water use, enabling water managers, and customers alike, to assess water consumption. Water meters are known to contribute to a reduction in water use, and the installation of additional meters will produce direct positive impact on water supplies. The water saved can then continue to remain in the aquifer, acting as a recharge and preserving the groundwater reserves that supply the potable water to the Timberland Water System service area.

One well serves the entire Timberland Water System, so any conservation measures will benefit all customers connected to the system. This includes providing reliable water under even extenuating circumstances such as firefighting/hydrant needs or use during an exceptionally heavy tourist season.

Monitoring, tracking, and reporting water use data not only serves the water manager, but also provides useful trend analysis information for local and regional partners to compare and contrast water use trends. The proposed project would allow the District, as well as its water customers, to have access to daily water use data. With daily data on each customer type, the District can better understand water loss and better predict future water demands as opposed to depending upon estimates based on annual water production and annual wastewater treatment capacity. The details of customer demand by day would help to explain water use variations among customer class and service delivery type. This more detailed understanding will make future drought rate setting more predictable and target water conservation programs to areas with the highest cost-benefit reward.

There are no agricultural uses in the District's service area, and therefore, complementary work done in coordination with NRCS is not expected.

**Evaluation Criterion B – Planning Efforts Supporting the Project**

Following the acquisition of 3 (three) water systems in January 2018, and subsequent operations for 3 (three) months, the District developed a list of short- and long-term priority improvements deemed necessary to bring the systems up to a minimum operating standard. The list of short-term priority improvements was designed to address system reliability, integrate the system into the District's existing work practices, enhance key data collection and provide for more efficient operation. Installing the remaining water meters for customers within the Timberland Water System was identified on the short-term priority improvement list, which was approved by the District Board of Directors on April 19, 2018.

## Evaluation Criterion C – Project Implementation

### Estimated Project Schedule

Task	Start Date	End Date
<b>1. Administration</b>		
1.1 Contract/Grant Agreement	11/01/2018	01/31/2020
1.2 Progress Reports/Invoices	Ongoing	
1.3 Draft/Final Reports	11/01/2019	01/31/2020
<b>2. Environmental Compliance</b>		
2.1 Complete/File CEQA	03/15/2019	04/30/2019
2.2 Complete/File NEPA	03/15/2019	04/30/2019
<b>3. Design</b>	Completed	
<b>4. Implementation</b>		
4.1 Construction Bidding (call for bids/advertisement; pre-bid meeting; bid opening; contract award; notice to proceed)	05/1/2019	05/30/2019
4.2 Install new water meters (mobilization; shoring and worker safety; pavement restoration; demobilization)	06/01/2019	09/30/2019

The permits required for this Project are anticipated to include a CEQA Categorical Exemption and NEPA Categorical Exclusion. The permit documents will be filed no later than 45 days prior to ground disturbing activities. Additionally, this Project involves only minimal ground disturbance under existing pavement or compacted road shoulder, and will be performed as an Exempt Activity under the District’s Memorandum of Understanding with the Tahoe Regional Planning Agency (TRPA). TRPA will be notified of the Exempt Activity in writing in advance of mobilization.

Design has been completed for this Project.

There are no new policies or administrative actions required to implement the project.

Given the small size of the Project area and subsequent environmental compliance, the cost estimate of \$1,979 was derived as 1% of the Project budget. This cost was also constrained by the grant guidelines with a maximum Project cost not to exceed \$200,000.

## Evaluation Criterion D – Nexus to Reclamation

This Project does not have a nexus with and is not connected to a Reclamation project or activity. The Project will not provide direct benefits to any tribes.

## Evaluation Criterion E – Department of Interior Priorities

This Project supports the Department of Interior priority, *Creating a conservation stewardship legacy second only to Teddy Roosevelt* by utilizing science to identify best

practices to manage land and water resources and adapt to changes in the environment. Additionally, this Project will save fuel and reduce carbon emissions, by eliminating the need to drive to service connections for meter reading. This Project helps build long term resilience to environment changes, such as drought, by providing the management tools necessary to evaluate actual water use and make significant changes in behavior and assessment for both customers and water managers.

**Timberland Municipal Water Meter Installation Project  
Tahoe City Public Utility District  
Funding Plan**

The non-Federal share of Project costs will be obtained through the Tahoe City Public Utility District's (District) Water Capital Reserve Budget derived from water rate and property tax revenue. The funding contribution by the District will be monetary for contractual expenses related to the purchase of meters, mobilization/demobilization, shoring and worker safety, and pavement restoration.

There are no other sources of funding supporting this Project. There will be no costs incurred before the Project start date. The District has not requested or received any funding from other Federal partners, and there are no pending funding requests for this Project.

**Table 1. Summary of non-Federal and Federal Funding Sources**

	<b>Funding Amount</b>
<b>Non-Federal Entities</b>	
1. TCPUD Capital Improvement Funds/General Revenue	\$124,904
<b>Non-Federal Subtotal</b>	<b>\$124,904</b>
<b>Other Federal Entities</b>	
No other federal entities	\$0
<b>Other Federal Subtotal</b>	<b>\$0</b>
<b>Requested Reclamation Funding</b>	<b>\$75,000</b>
<b>Total Project Funding</b>	<b>\$199,904</b>

**Budget Proposal**  
**Timberland Municipal Water Meter Installation Project**  
**Tahoe City Public Utility District**

BUDGET ITEM DESCRIPTION	COMPUTATION		Quantity Type	TOTAL COST
	\$/Unit	Quantity		
<b>Salaries and Wages</b>				
				\$ -
subtotal				\$ -
<b>Fringe Benefits</b>				
				\$ -
subtotal				\$ -
<b>Travel</b>				
				\$ -
subtotal				\$ -
<b>Equipment</b>				
				\$ -
subtotal				\$ -
<b>Supplies and Materials</b>				
				\$ -
subtotal				\$ -
<b>Contractual/Construction</b>				
				\$ 197,925.00
subtotal				\$ 197,925.00
<b>Environmental and Regulatory Compliance Costs</b>				
				\$ 1,979.00
				\$ 1,979.00
<b>Other</b>				
				\$ -
subtotal				\$ -
<b>TOTAL INDIRECT COSTS</b>				
<b>Indirect Costs</b>				
None				\$ -
<b>TOTAL ESTIMATED PROJECT COSTS</b>				<b>\$ 199,904.00</b>

**Timberland Municipal Water Meter Installation Project  
Tahoe City Public Utility District  
Budget Narrative**

**1. PERSONNEL**

There are no personnel costs utilized in this budget.

**2. FRINGE BENEFITS**

There are no fringe benefit costs utilized in this budget.

**3. TRAVEL**

There is no travel budget for this project.

**3. EQUIPMENT**

There will be no equipment purchased for this project.

**4. SUPPLIES and MATERIALS**

There will be no supplies purchased for this project.

**5. CONTRACTUAL/CONSTRUCTION**

This budget category includes meters and associated infrastructure, shoring and worker safety, pavement restoration, and mobilization/demobilization; these services will be performed on a contractual basis for this project and are budgeted at \$197,925.

The equipment installation will be bid out to a contractor and includes the installation of the following:

- Purchase of 100 meters at \$1,850 each = \$185,000.
- Shoring and worker safety, 1 at \$2,500.
- Pavement restoration (est. at 5% of properties), 125 sf at \$8/sf = \$1,000
- Mobilization/demobilization (5% of project cost) = \$9,425

**6. ENVIRONMENTAL and REGULATORY COMPLIANCE**

Given the small geographic location of the Project area, we have allocated approximately 1% of the total project costs to cover Environmental and Regulatory Compliance. Additionally, this keeps us within the \$200,000 maximum total cost for the Project. The budget total for this item is \$1,979.

**7. OTHER**

There are no other budget items for this project.

All costs have been deemed reasonable and justified by performing evaluations and comparisons of like programs at other water agencies throughout California, as well as supplier's quotes and previous purchases.

**Timberland Municipal Water Meter Installation Project  
Tahoe City Public Utility District  
Environmental and Cultural Resources Compliance  
Required Permits or Approvals  
Unique Entity Identifier and System for Award Management**

**Environmental and Cultural Resources Compliance**

The Tahoe City Public Utility District (District) will file a CEQA Categorical Exemption under Section 15303 class 3(d). The District also anticipates filing a NEPA Categorical Exclusion for this Project, with supplementary Biological and Cultural surveys as needed or required. The District anticipates qualification of the Exemption/Exclusion for this Project in part because the capacity of the District's water system will not be affected, that is, no change in size or distribution and the Project consists of the operation and minor alteration of an existing public utility. The Project involves only minimal ground disturbance under existing pavement or compacted road shoulder, and is not expected to impact the surrounding environment. CEQA and NEPA documents will be filed no later than 45 days prior to ground disturbing activities.

Biological surveys will determine if any Federally threatened or endangered species, or designated critical habitat exists within or surrounding the Project boundary. If determined necessary, all construction activities will be performed outside critical nesting and breeding times. There are no known wetland or surface waters inside the Project boundary. The Timberland Water System was constructed in the 1960s. This Project will not result in any modification of or effects to individual features of an irrigation system. A cultural survey will be conducted to determine if cultural resources or archeological sites occur in the proposed Project area. The Project will not adversely impact any low income or minority populations. If found, the Project will not limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands. Following the Biological survey, existing flora will be documented. Mitigation measures will be implemented to ensure the Project will not contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area.

**Required Permits or Approvals**

This Project will be performed as an Exempt Activity under the District's Memorandum of Understanding with the Tahoe Regional Planning Agency (TRPA). TRPA will be notified of the Exempt Activity in writing in advance of mobilization. Should any grading occur, this Project is exempt from the Placer County Grading Ordinance.

**Unique Entity Identifier and System for Award Management**

The District's Unique Entity Identifier (i.e. DUNS) is 07-379-1287. The District has an inactive account with the System for Award Management (SAM); however, appropriate forms and information have been submitted to SAM to update its registration account status to active.

**RESOLUTION 18-17**

**A RESOLUTION OF THE TAHOE CITY PUBLIC UTILITY DISTRICT SUPPORTING PARTICIPATION IN THE BUREAU OF RECLAMATION WATERSMART: SMALL SCALE WATER EFFICIENCY GRANTS FOR FY 2018 – FOA BOR-DO-18-F009**

**WHEREAS**, the Board of Directors of the Tahoe City Public Utility District (District) deems it to be in the best interest of the District to participate in the WaterSMART Grant Program; and

**NOW, THEREFORE, BE IT RESOLVED THAT:**

1. The District supports a proposal for the WaterSMART Small Scale Water Efficiency Grants for the TIMBERLAND MUNICIPAL WATER METER INSTALLATION PROJECT (Project);
2. The District is capable of providing the amount of funding and/or in-kind contributions specified in the attached Funding Plan for the Project;
3. If selected for a WaterSMART Grant, the District will work with the Bureau of Reclamation to meet established deadlines for entering into a cooperative agreement; and
4. The General Manager is authorized to execute all necessary forms on behalf of the District.

**PASSED AND ADOPTED** this 20<sup>th</sup> day of July 2018, at a meeting of the Board of Directors of the Tahoe City Public Utility District, by the following vote:

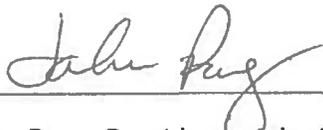
AYES: Friedman, Treabess, Zumwalt, Wilkins, Pang

NOES: None

ABSENT: None

ABSTAIN: None

TAHOE CITY PUBLIC UTILITY DISTRICT



John Pang, President of the Board of Directors

ATTEST:



Terri Viehmann, District Clerk

**Timberland Municipal Water Meter Installation Project  
Tahoe City Public Utility District  
Funding Plan**

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