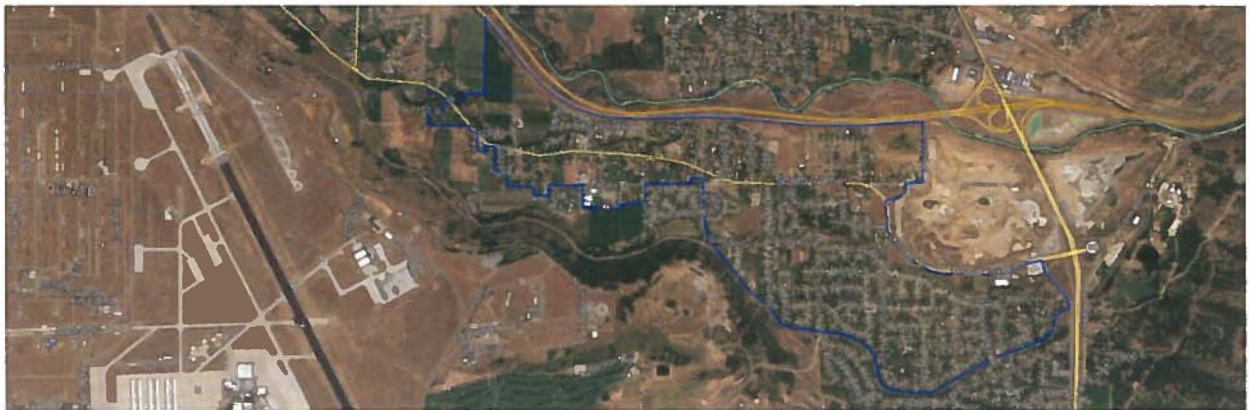


WaterSMART Grants: Water and Energy Efficiency Grants for Fiscal Year 2021

FOA No. BOR-DO-21-F001



South Weber Water Secondary Water Metering Project - Phase 2

APPLICANT:

South Weber Water Improvement District
7924 South 1900 East
South Weber, UT 84405-7732

PROJECT MANAGER:

Jan Ukena
7924 South 1900 East
South Weber, UT 84405-7732
(801) 475-4749
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September 17, 2021

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Technical Proposal and Evaluation Criteria

1. Executive Summary

Applicant Info

Date: September 17, 2020

Applicant Name: South Weber Water Improvement District

District, County, State: South Weber, Davis, Utah

Project Manager:

Jan Ukena, South Weber Water Improvement District

7924 S 1900 E, South Weber, Utah 84405-7732

801-475-4749

SouthWeberWater@gmail.com

Project Funding Request: Funding Group I: \$100,000; Total Project Cost: \$200,000

Project Summary

South Weber Water Secondary Water Metering Project – Phase 2 will install 153 secondary water meters at existing unmetered residential connections to the District’s pressurized irrigation system. This is the District’s second undertaking in a multi-year program to install meters at all its 1,325 existing residential, commercial, institutional, and industrial customers. Sensus iPerl water meters with Sensus endpoints compatible with an existing regional Automated Metering Infrastructure System (AMI) will be installed by a qualified contractor. The project, which will include conservation outreach, will promote water conservation, identify leaks, and peak usage as well as allow the District to better manage its water supply all of which will help the District achieve its best management priorities.

The project contributes to the Bureau of Reclamation’s mission of managing and protecting water resources and the FOA’s objective of using technology to increase water reliability. The project will have quantifiable annual water savings of 58.8 acre-feet, which will remain in the Weber Basin service area. The project contributes to the Bureau of Reclamation’s mission of managing and protecting water resources and the FOA’s objective of using technology to increase water reliability.

Approximately 100% of the District’s water supply is Weber Basin project water. The South Weber Improvement District owns the water shares and has contracts for the delivery of 2,223 acre-feet of water. The water supply is 98% obligated. The District owns and operates a 6.5 ac-ft storage reservoir and a distribution system comprised of 22.1 miles of 30” to 4” pipe.

Schedule

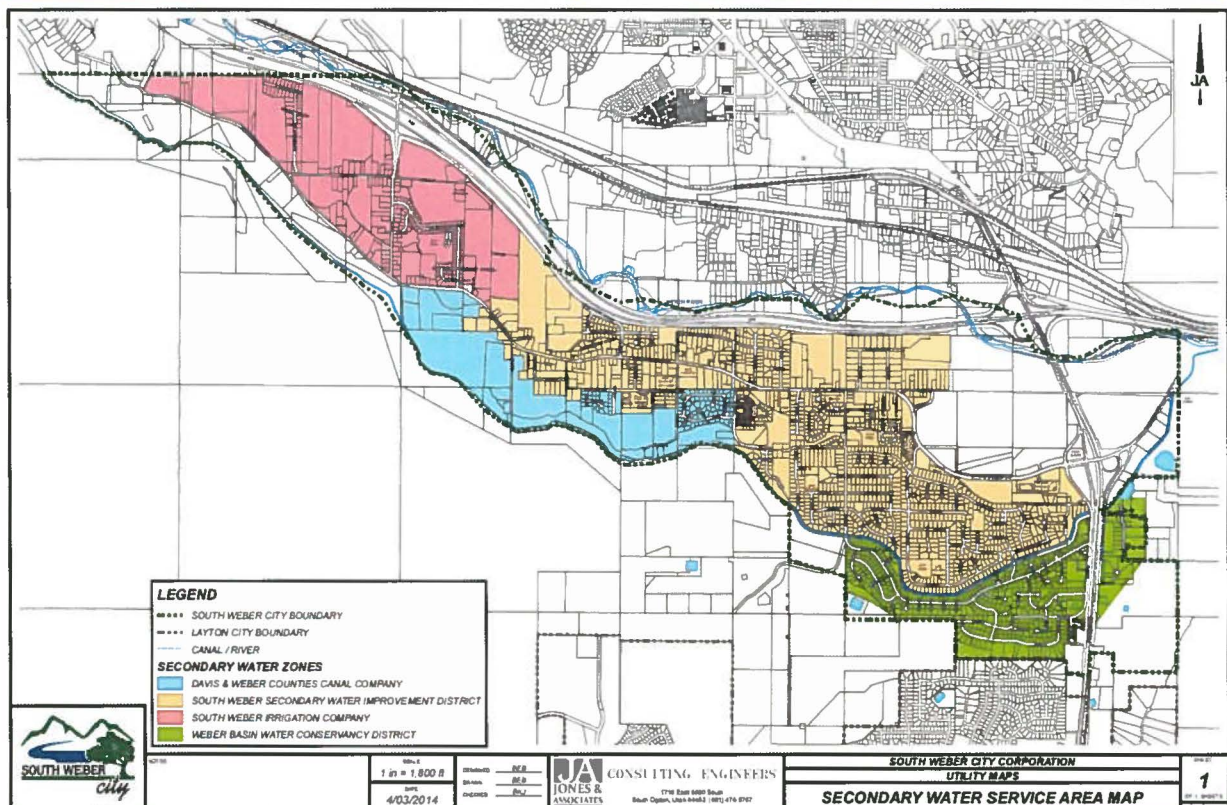
The District intends to begin installation as soon as practical based on the date of grant award notification and execution of a financial assistance agreement. The project schedule anticipates award notification in March 2021, a signed agreement in June, installation starting in July, project completion in November, and final reporting in December 2021. A delay in securing a financial assistance agreement could extend project completion until spring 2022.

Federal Facility

This project will install secondary meters on private residential lots; however, the District's distribution system is supplied water by U.S. Bureau of Reclamation funded facilities.

2. Project Location

The proposed project will take place within South Weber City located in Davis County, Utah six miles south of Ogden, 26 miles north of Salt Lake City, and 2 miles east of Hill AFB.



The proposed project will install meters at the residential homes within the areas outlined in orange located at a latitude of 41.1323° and longitude of -111.9387°. The blue lines represent the District boundaries and the purple lines the Phase 1 installation area. The Phase 2 area outlined in orange generally continues from Phase 1 in the sequence that lots were developed within the District's service area.



3. Technical Project Description

Describe the technical aspects of the project including the materials, equipment, and work to be accomplished as well as the approach used to complete the project.

Overview

The District proposes to install 153 Sensus iPERL water meters along with endpoints compatible with an existing regional AMI (Advanced Metering Infrastructure) fixed antenna system. The installations will be at existing residential connections which are currently unmetered within the locations identified in the previous section. The meters will be installed along the existing underground service lines and near existing curb stop valves.

Problem being Addressed

Utah's population is expected to double by 2060, but its water supply will not. Conservation is a vital first step towards meeting future water needs. More than 60% of Utah's drinking water is used on outdoor landscapes. In 2000, Utah established a statewide goal to reduce water use by 25% per person by 2025. In 2019, the State of Utah set a regional water conservation goal of 20% reduction in water usage between 2015 and 2030¹. South Weber Water Improvement District recognizes that water conservation and efficient irrigation system management is an imperative and as a result has established a goal and allocated funding to begin metering all its pressurized irrigation connections that do not serve agricultural users.

¹ <https://water.utah.gov/goals/>

In 2017 the District began requiring new residential connections to install secondary water meters. As a result, approximately 117 homes currently have secondary water meters. The District's Phase 1 project received authorization to begin installation in of 115 new meters in September. Without metering, the District's water users often do not pay attention to their landscape water usage and may significantly overwater. In some cases, they use more than their existing water rights and may have undetected leaks in their irrigation systems. Without a measurement system, there is reduced incentive to conserve water and to install water conservation equipment such as smart, internet connected sprinkler controllers. There is also no basis for the District to bill for over usage or to develop a pricing structure that encourages water conservation.

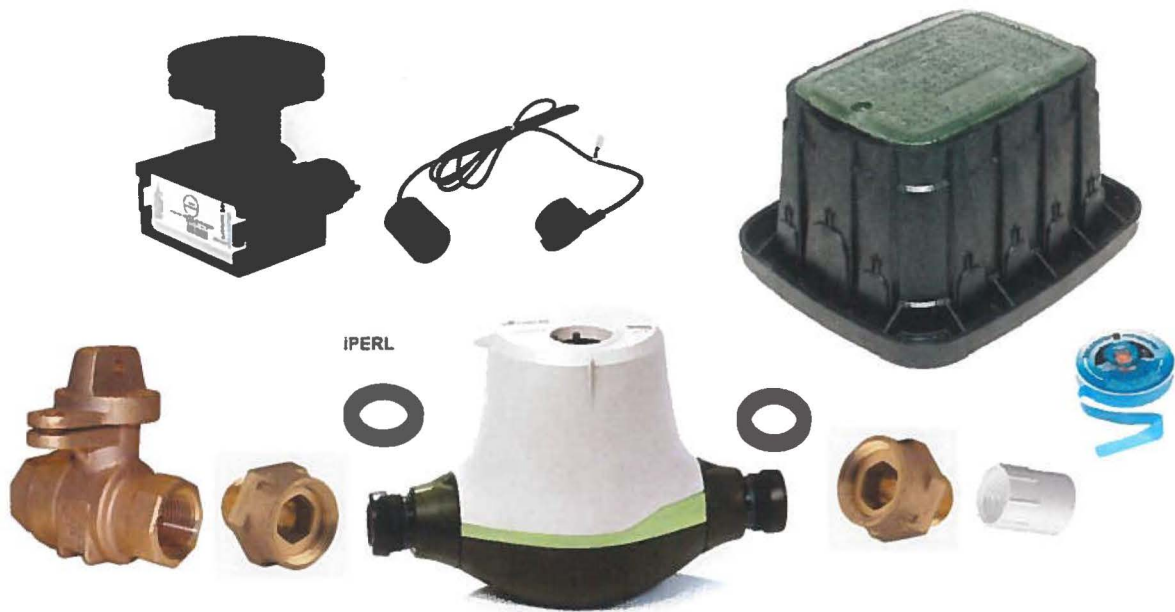
In response to projected future water shortages, the Utah legislature in 2019 passed State Bill 52² which requires all pressurized secondary water providers to meter all non-farm water usage for new services designed after April 1, 2020. The District is already in compliance with this requirement. Additionally, SB 52 requires providers to develop and submit a plan for metering existing pressurized irrigation connections and to report progress annually. While metering of existing connections is currently not required, the District, through this project, intends to comply with the intent and begin to install meters at existing customer connections.

Technical Description

The District proposes to install 1" Sensus iPERL³ water meters, Sensus AMI endpoints, and associated parts as depicted below. The Sensus iPERL meters have a 20-year life cycle and a 20-year battery life guarantee. They have no moving parts, detect system leaks, have an unobstructed water flow, and collect and log system and customer data. The metering data will be transmitted from the endpoint to the existing Weber Basin AMI network. With regards to the ancillary parts pictured below, the District reserves the right to modify or substitute equivalent products, as necessary.

² <https://le.utah.gov/~2019/bills/static/SB0052.html>

³ <https://sensus.com/products/iperl-north-america/>



The meters and ancillary parts will be installed at approximately 153 existing residential connections typified by the homes pictured below. A Categorical Exclusion was recently provided by the Bureau of Reclamation (see Exhibit C) that covers the area where the meters will be installed. As a result, no additional environmental compliance work is required.



The metering assemblies will be installed in suitable boxes installed flush with the existing landscaping. All reasonable efforts will be made to minimize the disturbance to existing landscaping and to restore the site as best as possible to pre-installation conditions. It is anticipated that the meters will be installed adjacent to the existing curb stop valve typically located in the park strip or front yard of each resident.

4. Evaluation Criteria

Evaluation Criterion A- Quantifiable Water Savings

Describe the amount of water expected to be conserved (in acre-feet per year) as a direct result of this project.

This project is expected to conserve 58.8 acre-feet of water per year.

Describe current losses: Please explain where the water that will be conserved is currently going.

Meters are being installed at residences that currently pay a flat fee for irrigation water and as a result they are not conscience of their water usage. Far too often, water is being overused on lawns, shrubs, trees, gardens, pastures and even sidewalks, driveways, and roads. Excess water often runs off and ends up in drainage systems or is lost to evapotranspiration or evaporation. Without a measurement system, there is reduced incentive to conserve water and to install water conservation equipment such as smart, internet connected sprinkler controllers. There is also no basis for the District to bill for over usage or to develop a pricing structure that encourages water conservation.

Additionally, there are undoubtable water leaks within the delivery system and within residential irrigation systems that are currently being lost underground that could be identified and repaired with the information provided by the proposed meters with low-flow accuracy and Advanced Metering Infrastructure (AMI) data analytics.

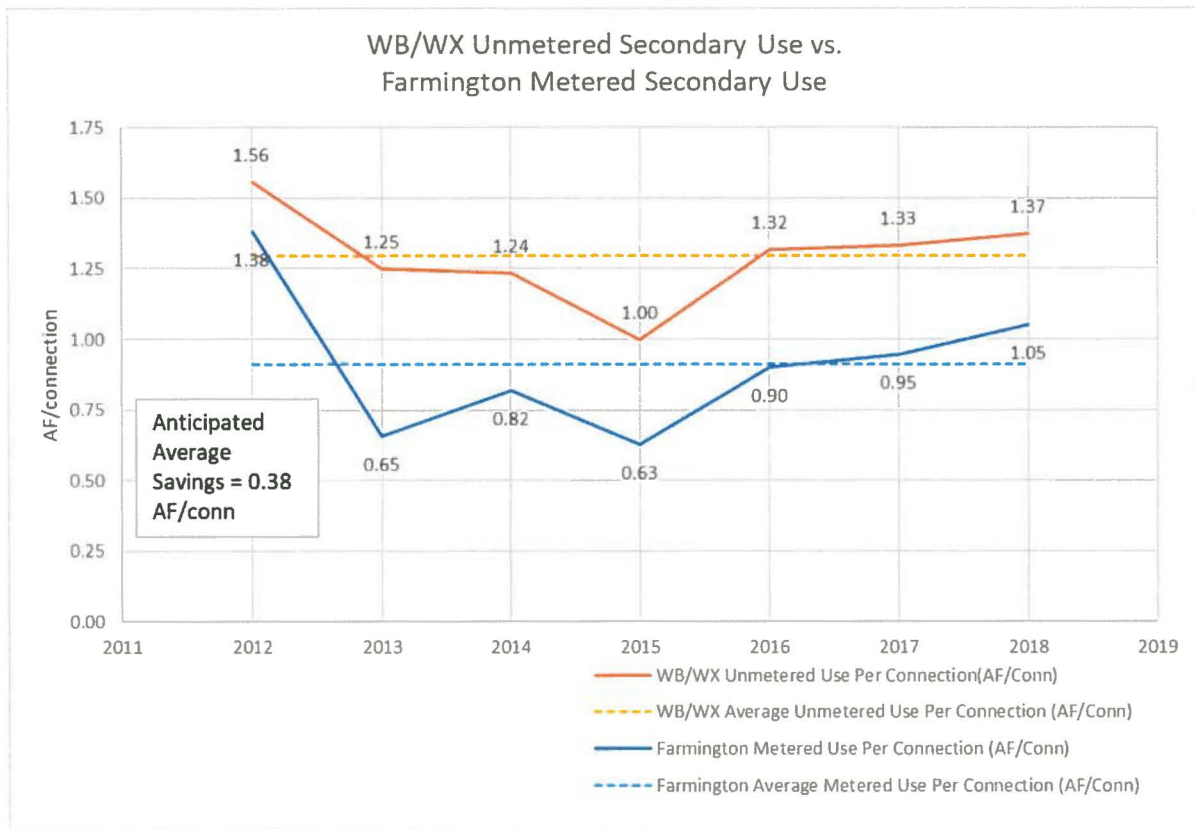
Water conserved through this program will remain in the Weber Basin system managed by the Weber Basin Water Conservancy District. In the future, the project's water savings will allow the District to accommodate future growth with their existing water rights.

Describe the support/documentation of estimated water savings: Please provide sufficient detail supporting how the estimate was determined, including all supporting calculations.

Municipal Metering

a. How has the estimated average annual water savings that will result from the project been determined? Please provide all relevant calculations, assumptions, and supporting data.

The proposed project is estimated to conserve 58.8 ac-ft/yr. of water. This is based on the best know regional data source that directly compares metered and unmetered secondary water usage. Specifically, secondary water users in Farmington, Utah over the period of 2012 – 2018 who were metered used significantly less water than those who were not metered. Usage for unmetered users was based on trunkline flow meter data. The seven-year data set, as illustrated in the following chart and table, indicates a water savings per secondary connection of 0.38 ac-ft per year.



The following calculations illustrate the anticipated water savings for the proposed meter project.

Calculation 1. Documented Percentage Water Savings for Average Metered Secondary Connections in Farmington.

Farmington Secondary Water Usage per Connection								
Water Usage (ac-ft)	2012	2013	2014	2015	2016	2017	2018	Average
Unmetered	1.56	1.25	1.24	1	1.32	1.33	1.37	1.296
Metered	1.38	0.65	0.82	0.63	0.9	0.95	1.05	0.911
Reduction	0.18	0.6	0.42	0.37	0.42	0.38	0.32	0.384

$$1.296 \text{ ac-ft/conn./yr.} - 0.911 \text{ ac-ft/conn./yr.} = 0.384 \text{ ac-ft/conn./yr. Water Savings}$$

Calculation 2. Anticipated Water Savings for proposed project

$$153 \text{ new meters} \times 0.384 \text{ ac-ft/connection/yr.} = 58.8 \text{ ac-ft}$$

b. How have current distribution system losses and/or the potential for reductions in water use by individual users been determined?

Without installation of the proposed residential meters, it is impossible for the District to effectively determine system losses and assess the potential for loss reduction. One of the

principal objectives of this project is to use the meter data and advanced data analytics capability to help identify and repair both system leaks and leaks in residential irrigations systems. While the District is confident that reducing system losses will provide further water savings, no additional specific estimate was included.

The water savings estimate detailed in the previous section was based on water saving data from a seven-year data set from a nearby community that is similar in nature and climate and within the same water basin. Water users that pay a flat fee and have no data on their water usage tend to view water as an unlimited resource and have less motivation to conserve. When actual water usage is tracked and combined with conservation tips and proper information on landscape water needs, the data indicates that significant water usage reductions follow.

c. For installing end-user water service meters, e.g., for a residential or commercial building unit., refer to studies in the region or in the applicant’s service area that are relevant to water use patterns and the potential for reducing such use. In the absence of such studies, please explain in detail how expected water use reductions have been estimated and the basis for the estimations.

Since the District’s first secondary water metering program is just gearing up for construction, the District has to rely on publicly available information. Weber Basin Water Conservancy District published the following data set that studied hourly data, parcel size, irrigated area from a group of 1,057 meters in Farmington, UT.

Water Savings Comparisons							
	2012	2013	2014	2015	2016	2017	2018
Used Gallons	284,912,371	220,146,962	205,346,968	168,066,551	217,748,680	236,101,249	252,738,705
Used AF	874	675.3	629.9	515.5	667.9	724.2	775.6
Used AF/Gross Acreage	2.69	2.08	1.94	1.6	2.06	2.23	2.39
Landscaped Area	225.3	225.3	225.3	225.3	225.3	225.3	225.3
Used AF/Landscaped Area (acres)	3.9	3	2.8	2.3	3	3.2	3.4
Estimated Need (inches)	30.46	29.72	28.41	22.33	28.6	29	33.7
Average % Used of Estimated Need	153.64%	121.13%	135.43%	123.60%	124.52%	132.37%	122%
Average % Allocation Used	82.44%	63.70%	59.41%	48.62%	63.00%	68.31%	73%
Average Allocation per Parcel/yr.	1.003	1.003	1.003	1.003	1.003	1.003	1.003
Total Allocation	1060.171	1060.171	1060.171	1060.171	1060.171	1060.171	1060.171
*This data includes 1,057 meters that have data for 2012-2017 with accurate landscape area.							

In the above table, the “Average % Used of Estimated Need” adjusts for variations in water usage due to seasonal weather patterns. When meters were first installed in 2012, average usage was 54% higher than estimated need. The average over watering over the last four years in the data set has been cut in half to 26% and was 22% in 2018. Similarly, the 2012 water usage per landscaped area has dropped from 3.9 ac-ft/acre to an average of 3.0 ac-ft/acre over the last four years of data.

The District’s initial objective is to obtain a similar reduction in landscape water usage and position it itself for a future tiered rate structure to further encourage water conservation.

d. Not applicable.

e. What types (manufacturer and model) of devices will be installed and what quantity of each?

The project will install 153 1” Sensus iPERL⁴ water meters and Sensus AMI endpoints which will transmit data to the existing Weber Basin AMI network.

f. How will actual water savings be verified upon completion of the project?

Upon completion of the project, the District will have hourly and monthly consumption data available from all of the installed meters within the analytics software program. This data will be analyzed year to year to identify water conservation trends. Adjustments can be made for year to year weather variations by using evapotranspiration rate to normalize the data. Mainline flow data will also be analyzed for year to year variations and for the impact of water savings measures which the District will be better able to quantify as the number of installed meters increases.

Evaluation Criterion B- Water Supply Reliability

Describe how your project addresses water reliability concerns, including making water available for multiple beneficial uses and resolving water related conflicts in the region.

1. *Will the project address a specific water reliability concern?*

As the District fully builds out, outdoor irrigation demands will increase and water conservation in general and the water savings from the proposed project in particular, will be critical to the District’s ability to maintain adequate levels of service. This is particularly important given the region’s susceptibility to drought. The proposed metering will also assist in reduce peak demands and will therefore improve reliability and reduce or postpone improvements to the pressurized irrigation system.

In the near term, the project’s water savings will be left in the Weber Basin system managed by the Weber Basin Water Conservancy District to benefit multiple water users and help mitigate environmental issues associated with the depletion of the Great Salt Lake. Longer term, ongoing water savings from secondary water metering may be used to maintain system reliability as the District’s population increases.

2. *Will the project make water available to achieve multiple benefits or to benefit multiple water users?*

Increasing water demands due to rapid population growth within the region will strain water systems and increase regional conflict. The Weber Basin supplies over half of all secondary water in Utah. In addition to the multitude of cities and water districts struggling to maintain their level of service, shortfalls in the residual water reaching the Great Salt Lake has potentially for significant environmental harm. Water not used by the District and other water

⁴ <https://sensus.com/products/iperl-north-america/>

users within the Weber Basin, empties into the Great Salt Lake where it provides one-fourth of the total water entering the lake.

The Great Salt Lake Advisory Council reports that the Great Salt Lake's water depth has dropped about 11 feet over the past ten years and it will continue to decrease at about the same amount over the next couple of decades if more is not done to bring water to the lake.⁵ Over 757 square miles of dry lakebed has already been exposed with significant potential for PM10 dust with troubling concentrations of nine heavy metals.⁶ "If the lake's level declines, salinity increases, and wetlands are altered. Salinity is a driver of microbial diversity and, as this foundation of the ecosystem is altered, so will be the rest of the food web, affecting large numbers of avian migrators along the Pacific and Central fly-ways."⁷

3. Does the project promote and encourage collaboration among parties in a way that helps increase the reliability of the water supply?

The District will utilize Weber Basin's Customer Information System Application to collect meter data through the Weber Basin AMI network. As a result, annual use, peak day, and hourly demands data will be available to and contribute to the regional data collection program and be available to enhance decision making by regional water managers. Furthermore, by making water usage data readily available to each resident, they can become better water managers over their own consumption.

The State of Utah Division of Water Resources' Regional M&I Water Conservation Goals report lists "installing secondary water meters and smart controllers outdoor irrigation systems" as a key conservation goal and a method of meeting the State of Utah's water new regional water conservation goal of 20% between 2015 and 2030. Water Conservation is also a key objective of the Weber Basin Water Conservancy District which supplies water to the District and is a strong collaborator in District's water conservation and reliability efforts. See their letter of support in Attachment D.

Evaluation Criterion C- Implementing Hydropower
(NOT APPLICABLE)

Evaluation Criterion D- Complementing On-Farm Irrigation Improvements
(NOT APPLICABLE)

Evaluation Criterion E- Department of Interior and Reclamation Priorities

The following Department of Interior priorities are addressed by this project:

1. *Creating a conservation stewardship legacy second only to Teddy Roosevelt.* The

⁵ <https://www.usnews.com/news/best-states/utah/articles/2020-09-07/report-great-salt-lake-shrinking-more-than-a-foot-annually>

⁶ <https://www.sltrib.com/news/environment/2019/09/16/u-scientist-goes-extra/#gallery-carousel-1341497>

⁷ Great Salt Lake Biology, Baxter, Bonnie K, Butler, Jaimi K. 2020, p23.

proposed project will utilize the latest Automatic Metering Infrastructure technology to collect detailed meter data allowing for increased conservation, better water management, and the avoidance of waste of a precious natural resource. This project will allow the District to better stewards over its natural resources and expand the capacity of the existing Department of Interior infrastructure to serve the generation that comes after us.

2. *Utilizing our Natural Resources.* The proposed project will conserve water and enable it to be delivered more efficiently as it will reduce peak demands on infrastructure. This is particularly critical given that Utah is the second driest state in the nation and subject to periods of drought.
3. *Restoring Trust with Local Communities.* The proposed project will provide detailed usage information to District customers. Better water usage data availability will reduce the potential for conflict and increase trust between residents, the District, other water users within the watershed, environmental interests, and regulatory agencies.
4. *Striking a regulatory balance.* Currently District administrators are unable to invoice secondary water users in a way fairly reflects their usage patterns. The proposed project and meter reading system will reduce this administrative burden.
5. *Modernizing our infrastructure.* The proposed project will modernize the District's existing infrastructure with the latest metering technology. By quantifying real-time water flows, the District will better be able to identify constraints that require the construction of new infrastructure, when to best do cyclical maintenance, and better identify and understand the potential impacts of deferred maintenance.

The following Bureau of Reclamation priorities are addressed by this project:

1. *Increase Water Supplies, Storage, and Reliability under WIIN and other Authorities.* Water conservation and detailed usage information gathered from the proposed project will increase reliability by reducing stress on the system, improving maintenance and operations, and more effectively planning systems upgrades.
2. *Leverage Science and Technology to Improve Water Supply Reliability to Communities.* The proposed project will utilize the latest Automatic Metering Infrastructure technology to collect detailed water usage data allowing for increased conservation and better water management which will improve the community's water supply reliability.
3. *Address Ongoing Drought.* The proposed project will enable leaks to be identified and fixed and encourage water conservation. Furthermore, the advanced meters will allow the District to monitor and enforce watering restrictions if required during drought conditions.

Evaluation Criterion F- Implementation and Results

1. Project Planning

Does the applicant have a Water Conservation Plan and/or System Optimization Review (SOR) in place?

Without water conservation, Utah including the Weber basin could face economic growth inhibiting water shortages by 2040⁸.

The District's strategic planning efforts identified five factors that led towards the District's decision to implement a secondary water metering program:

- **Water Conservation.** The District adopted the State of Utah's water conservation goal of 25% by 2025 and the new regional goal of 20% between 2015 and 2030⁹
- **Supply and System Adequacy.** Residential development could infill the remaining open parcels within the District potentially increasing water usage and stressing the water supply and distribution infrastructure.
- **State Bill 52.** While the District has required installation of meters at new connections since 2017, the passage of SB 52 also requires the District to plan for metering existing customers
- **Fair and Accurate Billing.** The District identified a need to measure secondary water usage so that customers do not exceed their water rights and are being billed fairly.
- **Meter Availability.** Cost effective magnetic metering technology with no moving parts and a 20-year life cycle and a 20-year batter life are now available and can be read by an existing Weber Basin AMI network.

Based on the five factors listed above, The District determined that a metering program would increase water conservation, water usage information, user engagement, system reliability, and the time before system upgrades are required. As a result, metering was determined to be the District's top priority.

Accordingly, the District established a multi-phase metering implementation plan and budgeted requisite funds. The first step, accomplished in 2017, was to assess metering technology and to establish a metering policy for all new connections. The second step is South Weber Secondary Water Metering Project -Phase 1 which received a 2020 small scale WaterSMART grant and is currently set to begin installation of 115 meters. The District has budgeted an additional \$100,000 for the proposed project and is seeking matching funding to install an additional 153 water meters.

2. Performance Measures

Provide a brief summary describing the performance measure that will be used to quantify actual benefits upon completion of the project.

⁸ conservationgardenpark.org

⁹ <https://water.utah.gov/water-resources-announces-finalized-regional-water-conservation-goals/>

The performance measure of the project’s actual benefits to be verified will be the quantity of water conserved. Hourly and monthly data from all installed meters will be aggregated and stored in Weber Baisn’s advanced analytics software program. The District intends to use statistically valid sampling of metered lots and use GIS data to determine actual water usage per irrigated acre. The District will then be able to both track that usage metric year to year as well as to compare it to aggregate estimated water usage per irrigated acre from available main line meter data.

3. Readiness to Proceed

Estimated Project Schedule

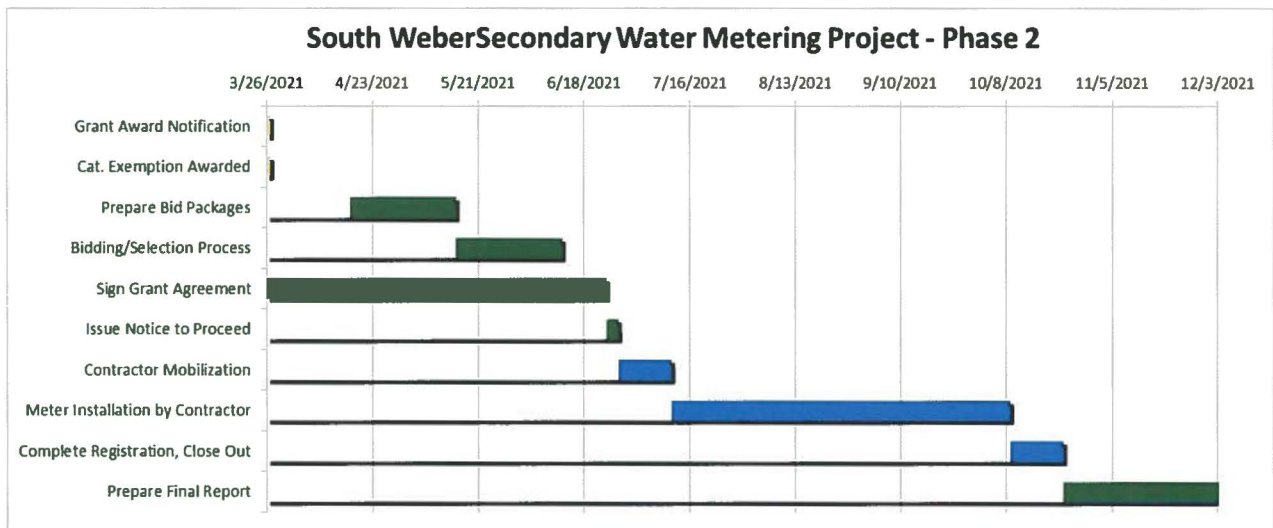
The following project schedule outlines the timing of the major tasks and milestones for the proposed project. A Categorical Exclusion covering the affected area has already been received¹⁰ (See Appendix C). A competitive bid will be conducted, and a qualified contractor selected and mobilized to perform the work. The District will provide affected homeowners with information about the project, the function of the meters, the installation process, and the importance of water conservation. The contractor will also be required to keep homeowners informed during the installation process and of the timing of secondary water outages as required during construction.

The District’s intention is to begin the installation process as soon possible given the timing of the grant award and time to enter into a grant agreement. As indicated in the following schedule, installation is anticipated to begin in July 2021 with final reporting to Reclamation and project close-out in December 2021.

Estimated Project Milestone Schedule

Task Name	Start	End	Duration (days)
Grant Award Notification	3/26/2021	3/27/2021	1
Cat. Exemption Awarded	3/26/2021	3/27/2021	1
Prepare Bid Packages	4/17/2021	5/15/2021	28
Bidding/Selection Process	5/15/2021	6/12/2021	28
Sign Grant Agreement	3/26/2021	6/24/2021	90
Issue Notice to Proceed	6/24/2021	6/27/2021	3
Contractor Mobilization	6/27/2021	7/11/2021	14
Meter Installation by Contractor	7/11/2021	10/9/2021	90
Complete Registration, Close Out	10/9/2021	10/23/2021	14
Prepare Final Report	10/23/2021	12/4/2021	42

¹⁰ https://drive.google.com/file/d/1twYKGIsvNKQ4mj8wJ7TX7WQ7uDQ_Z0cd/view



Describe any permits that will be required, along with the process for obtaining such permits.

The proposed work will be located within existing right of way and along existing residential service lines. No permits will be required for implementation of this project.

Identify and describe any engineering or design work performed specifically in support of the proposed project.

No engineering or design work will be performed specifically in support of this project. The bid documents and specifications will be prepared by qualified District staff

Describe any new policies or administrative actions required to implement the project.
No new policies or administrative actions are required for this project.

Describe how the environmental compliance estimate was developed. Have the compliance costs been discussed with the local Reclamation office?

A Categorical Exclusion (See Appendix C) has already been granted that covers the project area of installation. As a result, the District does not anticipate any environmental or regulatory costs relating to this project. Installation work will only occur on previously disturbed soil in developed residential properties. No impacts to historic water conveyance structures, soils, air quality, animal habitat, or endangered species are expected.

Evaluation Criterion G- Nexus to Reclamation Project Activities

Is the proposed project connected to a Reclamation project or activity?

The proposed project will be performed within the Weber Basin Project, which is a Reclamation project. It will therefore benefit the District and Reclamation through better management of water resources and reduce overall demand which is increasing with a growing population throughout the entire Reclamation project area.

Does the applicant receive Reclamation project water?

Yes, approximately 100% of water delivered by the District is Weber Basin Project water.

Is the project on Reclamation project lands or involving Reclamation facilities?

The distribution system and residential service lines where the meters will be located are owned and operated by the District; however, they are interconnected with the Weber Basin Project which is a Reclamation facility.

Is the project in the same basin as a Reclamation project or activity?

Yes, the proposed project is within the basin of the Weber River Project which is a Reclamation facility.

Will the proposed work contribute water to a basin where a Reclamation project is located?

Yes, the proposed project will better manage water resources within the Weber Basin Water Conservancy District system by providing better water use data and increase water conservation which will therefor increase the water available to other users within the basin.

Will the project benefit any tribe(s)?

N/A

Evaluation Criterion H- Additional Non-Federal Funding

The percentage of non-Federal funding is 50%.

Non-Federal (\$100,000) / Total Project Costs (\$200,000) = 50%

5. Project Budget

Funding Plan and Letters of Commitment

- Please identify the sources of the non-Federal cost share contribution for the project.*
The District has budgeted and will fund all non-Federal contributions entirely from the District's operating revenues and reserves. The District Board has approved a budget for Phase 2 meter installation of \$100,000. There are no other sources of funding supporting this project.
- Please identify whether the budget proposal includes any project costs that have been or may be incurred prior to award.*
The budget does not include any pre-application costs or costs to be incurred prior to award. Bid preparation and administrative costs will be contributed by the District and are not part of the grant budget.

Budget Proposal

Table 1. - Total Project Cost Table

SOURCE	AMOUNT	% of Costs
Costs to be reimbursed with the requested Federal funding	\$100,000.00	50.0%
Costs to be paid by the applicant	\$100,000.00	50.0%
Value of third-party contributions	\$0.00	0.0%
TOTAL PROJECT COST	\$200,000.00	100.0%

Table 2. - Budget Proposal

BUDGET ITEM DESCRIPTION	COMPUTATION		Quantity Type	TOTAL COST
	\$/Unit	Quantity		
Salaries and Wages	\$0.00	-	-	\$0.00
Fringe Benefits	\$0.00	-	-	\$0.00
Travel	\$0.00	-	-	\$0.00
Equipment	\$0.00	-	-	\$0.00
Supplies and Materials	\$0.00	-	-	\$0.00
Contractual/Construction				
Meter Installation Contract	\$1,300.00	153	Lump Sum	\$198,900.00
Other				
Contingency				\$1,100.00
TOTAL DIRECT COSTS				\$200,000.00
Indirect Costs				
N/A				\$0.00
TOTAL ESTIMATED PROJECT COSTS				\$200,000.00

Budget Narrative

Salaries & Wages

No District Salaries or Wages will be included. District staff will manage the proposed project as part of their job requirements. These costs and any associated overhead will be covered as part of the District’s operating expenses and not charged to the project.

Fringe Benefits

No fringe benefits will be required.

Travel

No travel will be required.

Equipment

Installation equipment will be supplied by the selected contractor and is included as a cost in the Contractual /Construction portion of the project.

Materials and Supplies

Materials and Supplies are included as a cost in the Contractual /Construction portion of the project and will be procured by the contractor.

Contractual

Based on Phase 1 bids, the District estimates the cost to install meters and requisite appurtenances installed by a qualified, licensed, and insured contractor to furnish all necessary labor, parts and equipment to meet project specifications and provide a one-year installation warranty will be \$1,300 per installation. The total construction budget, including \$1,100 for contingencies, is 153 installations x \$1,300 per installation + \$1,100 contingency = \$200,000. District staff will provide construction management and inspection services at the District's expense and outside of the grant budget.

Third-Party In-Kind Contributions

N/A.

Environmental and Regulatory Compliance Costs

A Categorical Exclusion was secured as part of the Phase 1 budget that also covers the installation area for Phase 2. As a result, the District does not foresee any additional environmental or regulatory costs.

Reporting

The District's staff time to prepare the reports will be over and above the cost of the project and will not be counted toward the project cost.

Other Expenses

No other expenses will be part of the project.

Indirect Costs

No indirect costs will be part of the project.

6. Environmental and Cultural Resources Compliance

1. *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 project will not impact the surrounding environment. Excavation work is typically less than 24" deep and approximately six square feet per installation. The work will be performed in a manner that minimizes impact to the existing landscaping and the surrounding environment. As almost all excavations are within watered landscaping, dust impact will be minimal. No animal habitats will be negatively impacted.

2. *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 endangered species are impacted by this project.

3. Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as “waters of the United States?” If so, please describe and estimate any impacts the project may have.
No wetlands are impacted by this project.

4. When was the water delivery system constructed?
The District was organized in 1970. Major irrigation water improvements were undertaken in 1979 with a Reclamation loan. Various improvements and upgrades have been made to the system over the decades in order to develop a pressurized irrigation system that meets the growing population’s water needs

5. Will the project result in any modification of or effects to, individual features of an irrigation system (e.g., head gates, 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.
The project will not modify or effect the irrigation system components. The proposed work will only add meters where individual residences connect to the distribution system.

6. 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.
No. The District is not aware of any buildings, structures or features in the irrigation district that are listed or eligible for listing on the National Register of Historic Places. None of the residences where meters will be installed are listed or eligible for listing on the National Register of Historic Places.

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

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

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

10. Will the project contribute to the introduction, continued existence, or spread of noxious weeds or non- native invasive species known to occur in the area?
No.

7. Required Permits or Approvals

The proposed work will be located within existing right of way and along existing residential service lines. No permits or approvals will be required for the project.

8. Letters of Project Support

Included in the Attachments section are letters of project support from:

- David Larson, City Manager, South Weber City
- Senator F. Ann Millner, Utah State Senate
- Tage I. Flint, P.E., General Manager/CEO, Weber Basin Water Conservancy District

9. Official Resolution

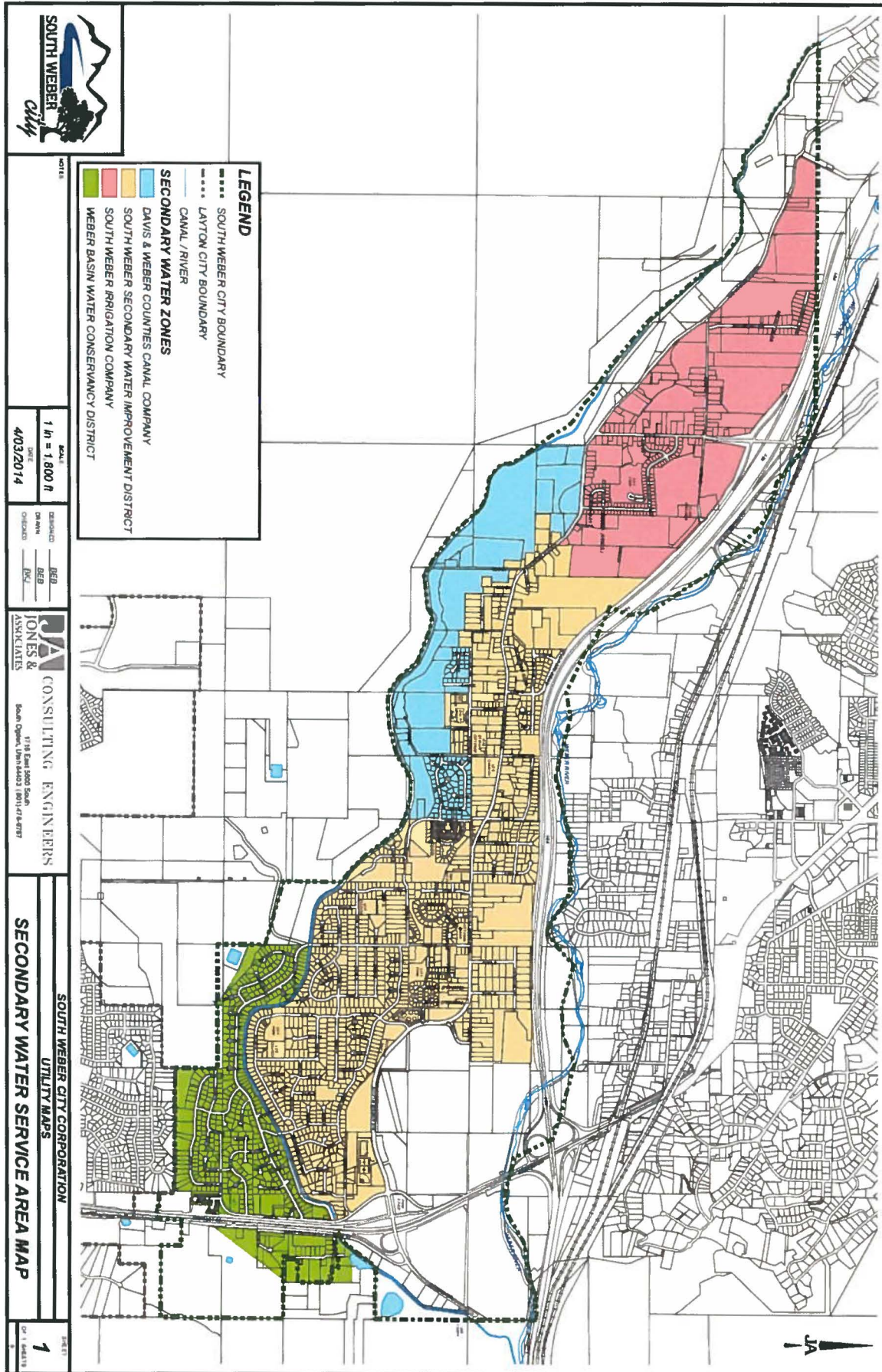
An official resolution meeting the FOA requirements was adopted during the District's September 9, 2020 Board meeting and is attached in Appendix E.

10. Unique Entity Identifier and System for Award Management

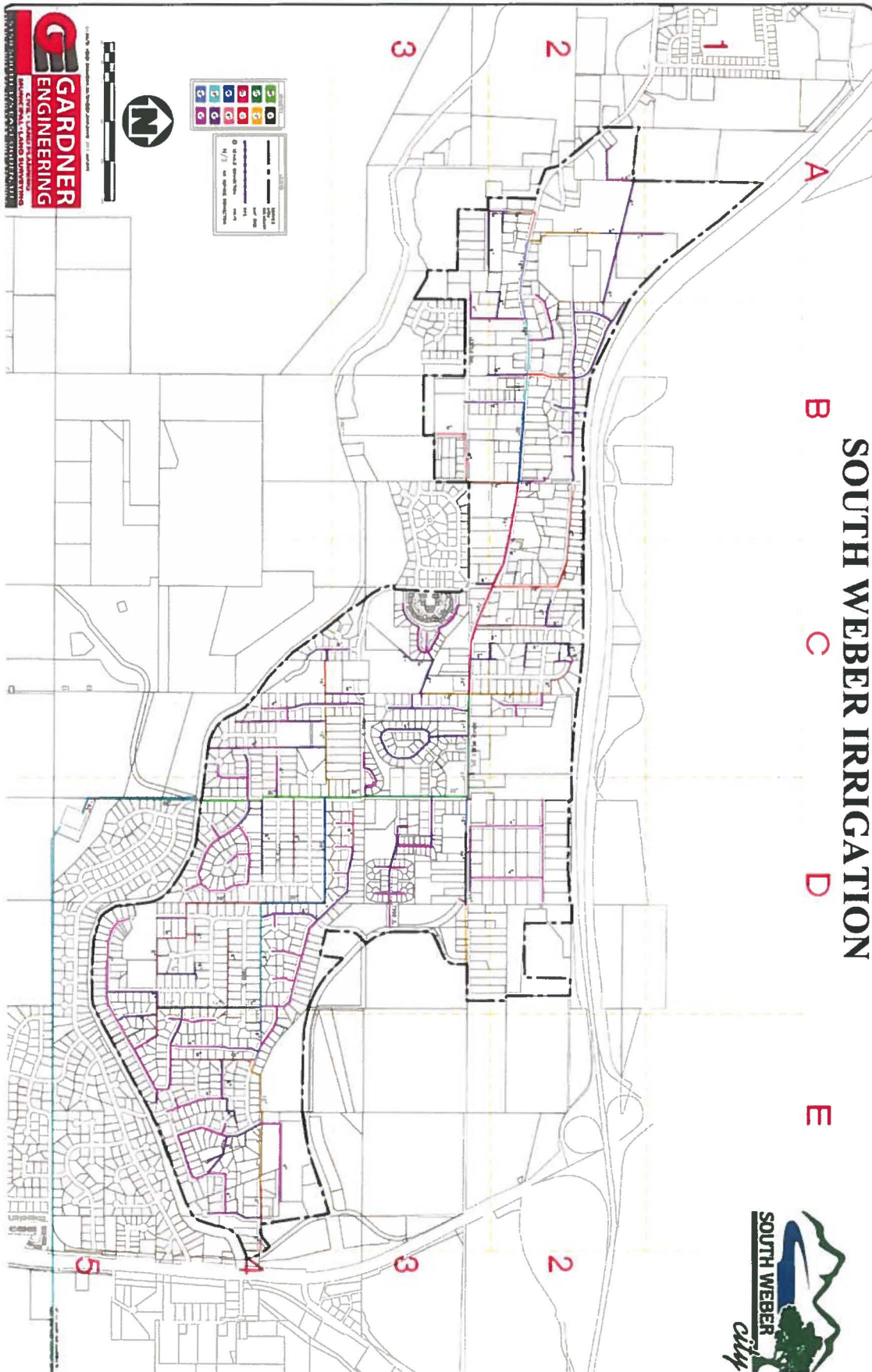
The District's Unique Entity Identifier (i.e. DUNS) is 117441752. The District has an active SAM registration with an expiration date of 06/26/2021. The District's CAGE Code is 6ZMH9 with an expiration date of 07/01/2025. The District will maintain an active SAM registration throughout the duration of the Project.

11. Attachments

Attachment A. Map of the District's Service Area (Tan Color)



Attachment B. Pressurized Irrigation System Map





— BUREAU OF —
RECLAMATION

Categorical Exclusion Checklist

Interior Region 7: Upper Colorado Basin Provo Area Office

Project: WaterSMART

Date: September 3, 2020

Feature: N/A

Proponent: South Weber Water Improvement District

Preparer: Brittany White

PETER CROOKSTON Digitally signed by PETER CROOKSTON
Date: 2020.09.03 16:40:18 -06'00'
Environmental Group Chief

CARLEY SMITH Digitally signed by CARLEY SMITH
Date: 2020.09.03 15:42:30 -06'00'
Area Office Archaeologist

RICK BAXTER Digitally signed by RICK BAXTER
Date: 2020.09.03 18:11:27 -06'00'
Division Manager
Water, Environmental, and Lands

CARLEY SMITH Digitally signed by CARLEY SMITH
Date: 2020.09.03 15:42:47 -06'00'
Indian Trust Asset Coordinator

KENT KOFFORD Digitally signed by KENT KOFFORD
Date: 2020.09.04 09:26:07 -06'00'
Area Manager

BRITTANY WHITE Digitally signed by BRITTANY WHITE
Date: 2020.09.03 10:00:09 -06'00'
Area Office Biologist

Environmental Control No. PRO-CE-20-068

Agreement or Contract No. N/A

Proposed Action

The South Weber Water Improvement District located near Salt Lake City, Utah, will install approximately 150 secondary water meters equipped with Advanced Metering Infrastructure on unmetered, existing residential connections to the District's pressurized irrigation system. The improved water use data will help the District decrease water losses and improve the overall reliability of the water supply. The project is supported by a five-factor strategic planning effort. This WaterSMART project is for the installation of approximately 150 meters, but because the District has plans to install additional meters in the future, this CE includes those locations as well.

Exclusion Category

The proposed exclusion category for the proposed action is

516 DM 14.5 C(3) Minor construction activities associated with authorized projects which correct unsatisfactory environmental conditions or which merely augment or supplement, or are enclosed within existing facilities.

Environmental Commitments and Remarks

Plants, Fish, and Wildlife with Federal Protections

An Information, Planning, and Conservation report was obtained from the U.S. Fish and Wildlife Service on August 31, 2020. No species on that report, including species protected under the Endangered Species Act, Migratory Bird Treaty Act, or the Bald and Golden Eagle Protection Act, would be significantly impacted by this project.

Waters of the U.S.

No Waters of the U.S. would be affected by this project.

Cultural Resources

This project is exempt from Class III survey and SHPO review under Appendix A, I. 12 & 20 of the 2017 Programmatic Agreement between the Bureau of Reclamation, Provo Area Office and the Utah State Historic Preservation Office. The project will result in no effect to known historic properties.

If any cultural site, feature, or artifact (historic or prehistoric) is discovered on Federal land or during implementation of federally funded projects, whether on the surface or as an inadvertent subsurface discovery, it shall immediately be reported to the Provo Area Office Archaeologist. Construction in the area of discovery shall cease until an assessment of the cultural material and an evaluation to determine appropriate actions to prevent loss of significant cultural or scientific value can be made by a professional archaeologist.

Any person who knows or has reason to know that he/she has inadvertently discovered possible human remains on Federal land or during implementation of federally funded projects, he/she must provide immediate telephone notification of the discovery to Reclamation's Provo Area Office archaeologist. Work will stop until the proper authorities are able to assess the situation onsite. This action will promptly be followed by written confirmation to the responsible Federal agency official, with respect to Federal lands. The appropriate State Historic Preservation Office and interested Native American tribal representatives will be promptly notified. Consultation will begin immediately. This requirement is prescribed under the Native American Graves Protection and Repatriation Act (43 CFR Part 10); and the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470).

Construction Notification

The applicant/proposing agency shall notify the Provo Area Office's Environmental Group Chief at (801) 379-1000, fourteen (14) days in advance of its intent to commence any ground disturbing activities for this project.

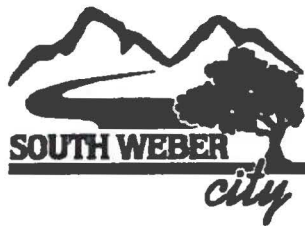
Evaluation of "Extraordinary Circumstances"

No.	Extraordinary Circumstances	No	Yes	Uncertain
1	This action would have a significant effect on the quality of the human environment. (40 CFR 1502.3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	This action would have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources. (NEPA Section 102(2)(E) and 43 CFR 46.215)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	This action would have significant impacts on public health or safety. (43 CFR 46.215(a))	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	This action would have significant impacts on such natural resources and unique geographical characteristics as historic or cultural resources; parks, recreation, and refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (EO 11990); flood plains (EO 11988); national monuments; migratory birds; and other ecologically significant or critical areas (43 CFR 46.215 (b))	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	This action would have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks. (43 CFR 46.215(d))	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	This action would establish a precedent for future actions or represent a decision in principle about future actions with potentially significant environmental effects. (43 CFR 46.215 (e))	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	This action would have a direct relationship to other actions with individually insignificant but cumulatively significant effects. (43 CFR 46.215 (f))	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	This action would have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places as determined by Reclamation (LND 02-01 and 43 CFR 46.215 (g)).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	This action would have significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species, or have significant impacts on designated critical habitat for these species. (43 CFR 46.215 (h)).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	This action would violate Federal, tribal, State, or local law or requirement imposed for protection of the environment. (43 CFR 46.215 (i))	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	This action would affect Indian trust assets. (S.O. 3175; 1993 Reclamation Policy Memorandum)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	This action would have a disproportionately high adverse effect on low-income or minority populations (E.O. 12898, 43 CFR 46.215 (j)).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	This action would limit access to, and ceremonial use of, Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (EO 13007, 43 CFR 46.215 (k), and 512 DM 3)).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	This action would contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act, E.O. 13112, and 43 CFR 46.215 (l)).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

NEPA ACTION TAKEN:

- Categorical Exclusion**—The proposed action meets the criteria set forth in 43 CFR 46.215. No further analysis is required.
- Environmental Assessment**—Additional analysis is required to determine whether the proposed action would have significant environmental impacts.
- Environmental Impact Statement**—The proposed action would likely have significant impacts on the human and natural environment.

Attachment D. Letters of Project Support



1600 E. South Weber Drive
South Weber, UT 84405

www.southwebercity.com

801-479-3177
FAX 801-479-0066

September 15, 2020

To Whom It May Concern,

This letter is written in support of South Weber Water Improvement District's application to receive a WaterSMART FY2021 Water Efficiency grant from the Bureau of Reclamation for secondary water metering. The South Weber Water Improvement District is an entity in South Weber City who has been serving secondary water customers for over sixty years.

This grant would be very beneficial to the South Weber Water Improvement District as it would help them meet the objectives of Utah S.B. 52 by installing water usage meters for their customers while avoiding financial debt.

The meters would be invaluable in accomplishing the goals of water conservation, identifying leaks, and tracking peak usage times. These measures would also help the Water District comply with Utah's regional water conservation goal of reducing water usage 20% by 2030.

Please consider the South Weber Water Improvement District for this great opportunity to receive this grant and help them fulfill their commitment to water conservation.

Sincerely,

David Larson
City Manager



SENATOR
F. ANN MILLNER
EIGHTEENTH DISTRICT

4287 HARRISON BLVD., #313
OGDEN, UT 84403
(C) 801-900-3897
amillner@utahsenate.org

UTAH STATE SENATE

320 STATE CAPITOL • P.O. BOX 145115 • SALT LAKE CITY, UTAH 84114
801-538-1035 • www.utahsenate.org

September 15, 2020

To Whom It May Concern,

I write in support of South Weber Water Improvement District's application to receive a WaterSMART FY2021 Water Efficiency grant from the Bureau of Reclamation for secondary water metering. The South Weber Water Improvement District has been providing secondary irrigation water for over sixty years and currently serves approximately 1,325 customers.

In 2019, the State of Utah passed S.B 52 which requires secondary water metering on all new homes and asks water providers to meter their existing customers. Additionally, the State of Utah set a regional water usage reduction goal of 20% between 2015 and 2030. While conserving water is critical to Utah's future, retrofitting existing homes and business with secondary water meters has created a significant financial burden for secondary water providers.

The matching funds from a WaterSMART would be of great benefit to this small water district in enabling them to meet their water conservation objectives and better manage their distribution resources.

I support and urge your positive consideration of South Weber Water Improvement District's WaterSMART FY2021 Water Efficiency application.

Sincerely,

F. Ann Millner
Utah State Senate
District 18



WEBER BASIN WATER CONSERVANCY DISTRICT

2837 EAST HIGHWAY 193 • LAYTON, UTAH • PHONE (801)771-1677 • SLC (801) 359-4494 • FAX (801) 544-0103

September 16, 2020

Tage I. Flint
General Manager/CEO

Board of Trustees:

Dee Alan Waldron
President
Morgan County

Kym O. Buttschardt
Weber County

Randy B. Elliott
Davis County

Scott K. Jenkins
Weber County

Marlin K. Jensen
Weber County

P. Bret Millburn
Davis County

Angie Osguthorpe
Weber County

Paul C. Summers
Davis County

Dave Ure
Summit County

Jan Ukena, Chairman, Board of Trustees
South Weber Water Improvement District
7924 South 1900 East
South Weber, Utah 84405

RE: Letter of Support for South Weber Water Improvement District

Dear Jan,

Weber Basin Water Conservancy District is pleased to support your effort to implement a Secondary Water Metering Project under the Bureau of Reclamation's WaterSMART Water and Energy Efficiency Program. We appreciate the importance of improving the efficiency of your system and becoming more resilient to overuse in our water-scarce basin. We look forward to being a stakeholder in this process and participating with South Weber Water in the process of metering secondary water use. This type of system upgrade is important as it will permit all users to better understand their usage and limit unnecessary overuse.

Weber Basin Water delivers wholesale irrigation water to South Weber Water. Also, South Weber Water is using Weber Basin's automated metering infrastructure system to collect real-time hourly water use data from the meters and report the water usage to the customer.

Weber Basin is currently in the process of installing meters on its secondary water connections and has realized a water savings of 20 to 30% by sending monthly educational statements to users. South Weber Water will benefit greatly by installing meters and will better understand how much water is being used.

We strongly support your grant application and appreciate the advancements it will make in water conservation and efficiencies for South Weber Water Improvement District and the Weber River Basin.

Sincerely,

Tage I. Flint, PE
General Manager/CEO

TIF/DEH/sm

Attachment E. Official Resolution

RESOLUTION

A RESOLUTION OF THE SOUTH WEBER WATER IMPROVEMENT DISTRICT SUPPORTING PARTICIPATION IN THE BUREAU OF RECLAMATION WATERSMART GRANTS: WATER AND ENERGY EFFICIENCY GRANTS FOR FY 2021 – FOA: BOR-DO-21-F001

WHEREAS, the Board of Directors of the South Weber Water Improvement 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 SOUTH WEBER WATER; SECONDARY WATER METERING PROJECT – PHASE 2 (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 Office Manager is authorized to execute all necessary forms on behalf of the District.

PASSED AND ADOPTED this 9th day of September 2020, at a meeting of the Board of Directors of the South Weber Water Improvement District, by the following vote:

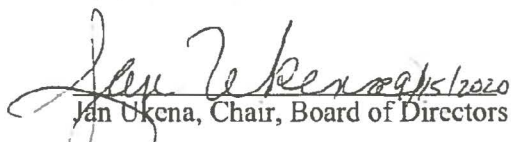
AYES: Ukena, Hess, Mansell, Reeve, McCorkle

NOES: None

ABSENT: None

ABSTAIN: None

SOUTH WEBER WATER IMPROVEMENT DISTRICT


Jan Ukena, Chair, Board of Directors

ATTEST:

Cindi Mansell, Secretary