

WaterSMART Grants:
Water and Energy Efficiency
Grants FY 2021

Woods Cross and West Bountiful Secondary Water Metering Project – Phase III



APPLICANT:

Weber Basin Water Conservancy District
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PROJECT MANAGER:

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Technical Proposal and Evaluation Criteria

Executive Summary

Applicant Info

Date: September 17, 2020

Applicant Name: Weber Basin Water Conservancy District (WBWCD)

City, County, State: Layton City, Davis County, Utah

Project Manager:

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Project Funding Request: Funding Group I, \$500,000; Total Project Cost, \$1,600,000

Project Summary

A one paragraph project summary that specifies the work proposed, including how funds will be used to accomplish specific project activities and briefly identifies how the proposed project contributes to accomplishing the goals of this FOA.

Weber Basin Water Conservancy District's Woods Cross and West Bountiful Secondary Water Metering Phase III Project will install approximately 1,000 secondary water meters. Depending on actual costs received at the time of bidding, this quantity may be adjusted slightly either up or down to maximize the funding. This project will have a quantifiable sustainable water savings of 380 acre-feet, and improved energy efficiency by reducing 81,890 kW-hr in energy used for pumping. The Woods Cross and West Bountiful Secondary Water Metering Phase III Project is the third phase of WBWCD's Woods Cross Secondary Water Metering Project. WBWCD was awarded Phase I in 2018, Phase II in 2019, and have both agreements signed. In 2019, the WBWCD applied for Phase III funding and was awarded the grant. However, the location was changed, with BOR approval, to install the meters in the nearby city of Centerville, where an immediate need for more efficient use of water was identified with support from the local leadership. Construction of both Phase I and Phase II are completed and installation for Centerville will begin in the fall of 2020. These meter install projects are a continuation of WBWCD's commitment to achieve the Utah Governor's goal of 25 percent water conservation by 2025. WBWCD provides secondary water to over 22,000 connections in Davis and Weber counties. They began metering connections in 2008 and have installed an estimated 10,000 meters to date, with plans to continue installing additional meters this year. The meters within this project will be located in WBWCD's Woods Cross and West Bountiful secondary service area; an area where they are experiencing a lowering of the groundwater from pumping and the effects of multiple years of extreme drought.

This application was originally used in the FY2020 funding announcement which was awarded. However, this application has been updated to reflect where the meters associated with this project will be installed after the previously described change in location. Previously, 650 meters were included in the application; this application is requesting funding assistance for approximately 1,000 meters.

The proposed project will contribute to the goals of this FOA in the following ways:

- **Water Reliability:** The installation of secondary water meters and significant public involvement and conservation education that WBWCD will initiate in the Woods Cross service areas will encourage users to manage and conserve water resources more efficiently. The increased awareness among residential water users on how they can develop sound water use habits and evaluate their water use through monthly meter information will contribute to better water reliability in their communities.
- **Mitigate Conflict:** The ability to reduce the pumping of groundwater in the Woods Cross area will reduce future conflict that could happen with the loss of groundwater in the area. Largescale ground-water withdrawals from a number of public and private wells in this densely populated area, could create problems associated with declining ground-water levels and conflicts among the many water-right owners. Through metering, water use awareness education, and conservation, WBWCD and local water users will work together to reduce water usage and groundwater pumping.

Length of Time and Estimated Completion Date

State the length of time and estimated completion date for the proposed project.

This project is ready to move forward as soon as it is awarded. An environmental document will be prepared as part of the project, and it is anticipated that a Categorical Exclusion will be approved based on the fact that the project will take place in previously disturbed areas and within existing road alignments. The environmental document will take two to six months. The installation of the meters will take 12 to 24 months and will take place during the watering off season (typically October 15-April 15). It is expected to start in October 2021 and completed by April 2023. The education and information process will be ongoing with regular public information regarding the time and placement of the meters throughout the entire project. The project will be completed within the required two-year time frame.

Federal Facility

Whether or not the project is located on a Federal facility.

In 1949, the United States Congress authorized the Weber Basin Project (Project), which was a U.S. Bureau of Reclamation (Reclamation) project aimed at developing and effectively utilizing the available water resources within the Weber River Basin Drainage. The Weber Basin Water Conservancy District was subsequently created in June of 1950 by a decree of the Second District Court of Utah and under the guidelines of the Utah Water Conservancy Act. WBWCD is the operating agency for the Weber Basin Project and is responsible for the sale and delivery of

project water, operation and maintenance of project facilities and is contracted with the U.S. Government for repayment of reimbursable costs of the Project.

Project Location

The Woods Cross and West Bountiful Secondary Water Metering Project is located in Davis County ten minutes north of Salt Lake City. The secondary metering project will take place west of I-15 within Woods Cross and West Bountiful Cities. This is a growing community that serves as suburban type area. For project location and detailed project info, see [Attachment B – Project Location Map](#), and [Attachment C – Project Detail Map](#).

Technical Project Description

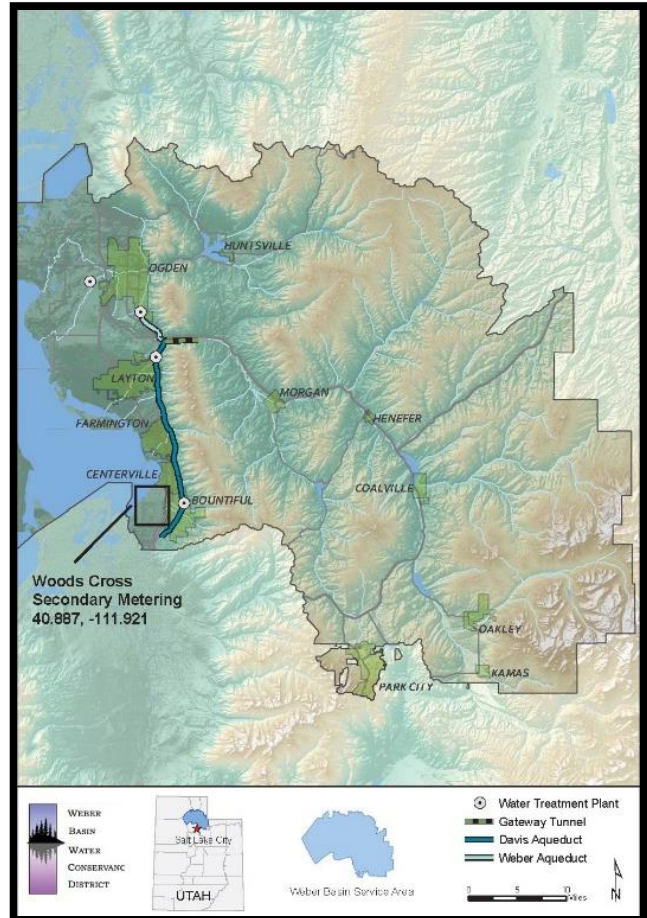
Describe the work in detail, including specific activities that will be accomplished. This description shall have sufficient detail to permit a comprehensive evaluation of the proposal.

WBWCD currently has a total of approximately 22,000 secondary connections. In 2008, WBWCD began metering secondary connections, and to date, they have installed about 10,000 meters with plans to continue installing additional meters this year. The goal is to have all secondary connections on WBWCD system metered so that users can be

more accountable and educated regarding their secondary water use. The meters are equipped with radio's that allow for communication with a fixed network Advanced Metering Infrastructure (AMI) system that allows continuous data collection. The Wood Cross/West Bountiful secondary service area is primarily served by the 18.8 trunkline off of the Davis Aqueduct, which is part of the USBR's Weber Basin Project. The service area is also served by three irrigation wells: West Bountiful Golf Course Well, 500 South Well and the Mills Park Well.

In recent years, WBWCD primarily relied on the Mills Park Well for needed well water in the area in addition to the South Davis Trunkline which provides approximately 90 – 95 percent of the water to the Woods Cross/West Bountiful secondary service area.

The project includes activities that will conserve water through secondary water metering which includes installing approximately 1,000 additional end user meters. These meters will be located in WBWCD's Woods Cross/West Bountiful secondary service area. Similar to past meter installation projects, WBWCD will purchase the water meters and the AMR radio transmitters



for the Project. Thus, it will reduce costs and properly correlate the meters to the appropriate address where they will be installed. Prior to any physical construction or disruption to individual yards, a public involvement information campaign will be organized to identify and inform all users who will be affected.

WBWCD will also provide the time frame for installation and what benefits will come as a result of having an individual meter on their connection. The contractor will pass outdoor hangers prior to construction in any given area to inform homeowners of their presence in the areas where they will be working and provide at least 48 hours lead time prior to installation on their parcel.

E.1. Technical Proposal: Evaluation Criteria

E.1.1. Evaluation Criterion A – Quantifiable Water Savings (30 Points)

Quantifiable Water Savings

Describe the amount of estimated water savings. For projects that conserve water, please state the estimated amount of water expected to be conserved (in acre-feet per year) as a direct result of this project.

For this project, the amount of estimated water savings is 380 acre-feet/year. For the connections alone, that are proposed to be metered approximately 1,300 acre-feet of water is delivered annually. The secondary irrigation water services for the entire service area, which includes Woods Cross City and West Bountiful City, is approximately 4,700 connections.

Describe current losses. Explain where the water that will be conserved is currently going (e.g., back to the stream, spilled at the end of the ditch, seeping into the ground).

Water is being overused on lawns, gardens, concrete sidewalks, and pastures and is mostly lost to evapotranspiration and evaporation. Excess watering can cause water to runoff the property and often is consumed by invasive plants like phragmites. In some cases, the secondary system has been used to irrigate row crops and pastures.

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

Estimated water savings was determined based on metered secondary use data from the Farmington service area (an area similar in soil types and lot sizes to the Woods Cross/West Bountiful area). Secondary water use, on average for Woods Cross and West Bountiful, is 1.30 acre-feet per secondary connection, making the estimated secondary use of the proposed connections to be metered 1,300 acre-feet/year ($1,000 \times 1.30 = 1,300$ acre-feet). The total water supply being considered for the proposed project is 1,300 acre-feet/year.

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.*

It is estimated that the proposed project will conserve 380 AF/yr. Meter data from 2014 – 2018 has shown that secondary users in Farmington that have a secondary meter use significantly less water than those who are not metered at this time. Based on the available data (2014-2018) from existing metered end user connections in the Farmington service area, metered end user connections used on average 0.91 AF/connection/yr. During the same time period, un-metered secondary connections in Woods Cross are estimated to have used on average 1.30 AF/connection/yr. The 1.30 AF/connection/yr was calculated based on data from trunkline flow meters delivering water to the area. Figure 3 below shows the secondary water use by year for both metered and un-metered connections

using the Farmington service area as the comparison. On average, metered secondary connections used 0.38 AF/Conn less than un-metered connections.

WBWCD believes additional conservation is possible beyond the observed 0.38 AF/conn/yr if users continue to respond to the targets they are being given for appropriate use.

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

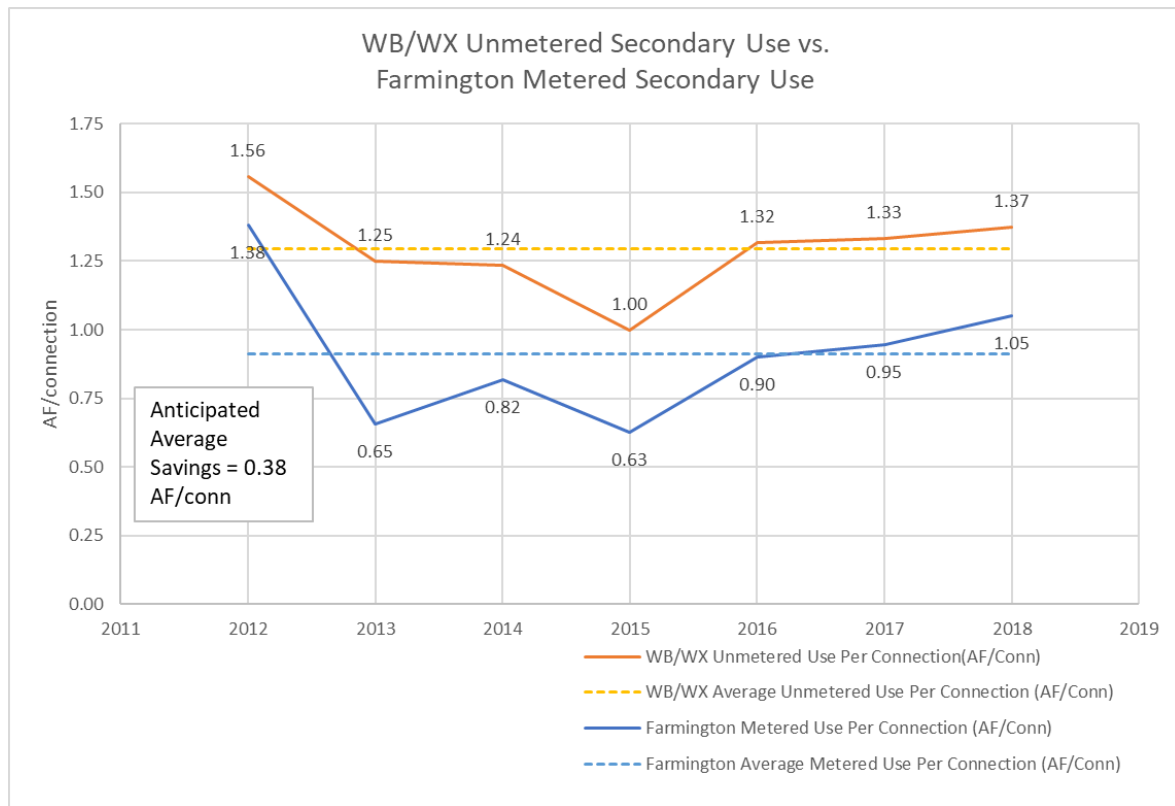
Calculation 1. Documented Water Use Reduction for Metered Secondary Connections in Woods Cross

$$1.30 \text{ AF/conn/yr} - 0.91 \text{ AF/conn/yr} = 0.38 \text{ AF/conn/yr Water Savings}$$

Calculation 2. Anticipated Water Savings for Proposed Woods Cross Meters

$$1,000 \text{ new meters} \times 0.38 \text{ AF/conn/yr savings} = 380 \text{ AF/yr}$$

Figure 1 - Secondary Metered & Unmetered use Comparison



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

Water reductions for individuals in the proposed project are being based on actual 2012-2018 metered connection data that are located within the project area. As was shown in

the above calculations, there is an impact from having a meter on a water connection and showing water users what they use. Without usage information from the meter, people assume they are using a reasonable amount of water. However, when the actual usage is known, coupled with help and information on proper landscape water needs, data shows that water use in metered areas has decreased. The calculation for how much each user can reduce usage is based on average use from what has been seen and recorded. However, it is believed that even greater savings can be achieved due to user demographics in remaining unmetered areas, parcel sizes, site locations and other factors that can play a role in high usage. WBWCD is confident that there will be substantial water savings with each new meter based on the historical data on meters already installed within the Weber Basin service area. Current distribution system losses are unknown in the Woods Cross/West Bountiful area but because much of the system is newer development, distribution system losses are not expected to be a significant portion of unmetered use.

- c. *For installing individual water user meters, 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.*

All new subdivisions and new service connections to WBWCD's system are now required to install individual meters, which accelerates WBWCD's goal of metering all service connections.

Data is available for all meters installed, but to have some consistency over time, WBWCD used data from a group of 1,057 meters that have usage records from 2012-2018. Data was collected and compiled in hourly increments to analyze and determine the effectiveness of these 1,057 meters, during the irrigation seasons of those six years. In addition to usage data, WBWCD has used mapping technology to identify the parcel size and the area of each parcel that would be considered to be "irrigated area" (everything that is not a physical structure or hardscape surfaces).

Table 1 below offers a side-by-side comparison of the 2012-2018 irrigation seasons, again using the metered data group for calculation. On average, customers are using less than the traditional allocation, which is 3 acre-feet per gross acre, per year. Average usage compared to estimated need over the six years shows improvement. Users comply with the volume given them, as the estimated demand shows a significant improvement from 145 percent in 2012 to just 90 percent in 2015, but due to the hot and dry summer of 2016 and 2018, both increased.

Table 1 - Water Savings Comparisons

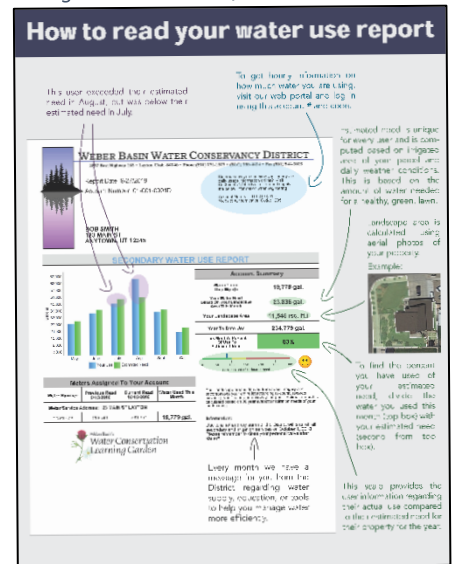
Water Savings Comparisons							
	2012	2013	2014	2015	2016	2017	2018
Used Gallons	284,912,371	220,146,962	205,346,968	168,066,551	217,748,680	236,101,249	252,738,705
Used AF	874	675.3	629.9	515.5	667.9	724.2	775.6
Used AF/Gross Acreage	2.69	2.08	1.94	1.6	2.06	2.23	2.39
Landscaped Area	225.3	225.3	225.3	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.

The majority of users exceeds the estimated need. The estimated need is listed on every metered customer’s Secondary Water Use Report and is almost always less than the allotted amount they have for their parcel. See Figure 2 below for a sample Secondary Water Use Report (for a full-sized version of the report, see [Attachment D – Sample Secondary Water Use Report](#)), which also includes instructions on how to read the report. These instructions are available to customers via WBWCD’s web site.

The estimated need is based on the moisture needs of turfgrass, which has the highest water demand in any landscape. The assumption is made that the entire irrigable digitized area turf, which gives users a generous amount of water for different landscape needs. Considering that most yards are not 100 percent turf (turf requiring the highest water demand of landscape irrigation) and that other landscaping plants are more water efficient (trees, shrubs, gardens), it is a reasonable goal to have users reduce water consumption to meet and exceed their estimated need.

Figure 2 - Secondary Water Use Report



This data seems conclusive in showing that having a meter and receiving usage information promotes accountability and will cause behavior changes in usage to occur when users are given a target; however, it does not show the difference in use between metered secondary

connections and un-metered secondary connections. Installation of distribution system meters will not receive points under this criterion. Accordingly, these projects must be paired with a complementary project component that will result in water savings in order for the proposal to receive credit for water savings, e.g., pipe installation using upgraded materials, or individual water service meters.

Photo 1 - Sensus iPerl Meter with AMR

This project does not deal with the installation of main distribution meters.

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

WBWCD is currently requiring the installation of the Sensus iPerl meter for the traditional 1-inch connections. In the case that a service requires more flow than a 1-inch meter can supply, the Elster EvoQ4 meter will be used. However, there will only be a few of these meters. The approved EvoQ4 meter for larger connections comes in 2-



inch through 12-inch sizes; however, this project only contemplates the use of a few 2-inch and 4-inch meters. The EvoQ4 meters are compatible with the AMR radio transmitter currently used to gather meter usage data and the fixed network AMI system WBWCD implemented in the past year. The new AMI system provides usage data in hourly increments, which is important to WBWCD. WBWCD uses the hourly data to track irrigation timing and volume of water used at irrigation times.

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

At the completion of each year of the project, WBWCD will have water usage data from every meter installed. The data will be in hourly increments from April 15 to October 15. The data will also include a monthly consumption value. Water savings will not be fully known after just one irrigation year. However, the usage will continue to be gathered every year and comparisons made to show how water use will adjust and decrease over time. It has been seen that simply having a meter installed has helped users quantify their usage and alter their behaviors. The historical data shows that most users have been responsive and appreciative of receiving monthly water use statements and have reduced water usage as a result.

WBWCD will be able to use historical trunk line meter data to compare usage from years prior to metering with years following metering. If weather is significantly different between years, evapotranspiration rates can be used to normalize data. Comparing historical water use to use after full implementation of the meter project will more accurately depict what impact the installation of individual meters has on the entire system.

E.1.2. Evaluation Criterion B – Water Supply Reliability (18 Points)

Address how the project will increase water supply reliability. Provide sufficient explanation of the project benefits and their significance. These benefits may include, but are not limited to, the following:

- *Will the project address a specific water reliability concern? Please address the following:*
 - *Explain and provide detail of the specific issue(s) in the area that is impacting water reliability, such as shortages due to drought, increased demand, or reduced deliveries. Will the project directly address a heightened competition for finite water supplies and over-allocation (e.g., population growth)?*

As previously mentioned, the Woods Cross/West Bountiful area is primarily served by the Davis Aqueduct. The 23-mile long Davis Aqueduct is one of WBWCD's most critical pieces of infrastructure because it provides raw water to the 46 MGD Davis North Water Treatment Plant in Layton, Utah and the 16 MGD Davis South Water Treatment Plant in Bountiful, Utah, and supplies wholesale and retail secondary customers all along its length and critical industrial flows at its terminus.

As demands due to new growth and development have increased in areas served by the Davis Aqueduct, peak flows have reached the maximum capacity of the aqueduct. As the areas served by the Davis Aqueduct continue to grow rapidly, WBWCD expects additional demand for both secondary and potable water in the south Davis County area. Currently, the capacity of the Davis Aqueduct is a limiting factor in providing water during peak summer water demands. Another concern for the south Davis County Area water supply is the declining groundwater levels issues which will likely limit significant future groundwater development in the area and may actually result in pumping reductions to existing water wells in the area.

Drought and overwatering are other issues impacting water reliability in the Woods Cross/West Bountiful service areas. Drought affects many areas in the state of Utah and has a significant impact on how much water is available during each irrigation season. Drought is no stranger to the service area and is an uncertain variable that cannot be controlled. Regardless of drought and other water reliability/quality issues that may occur within the delivery system, water users are overwatering, and are not being conscientious of their water use habits that could be better managed to prepare for the drought years.

The project will directly address a heightened competition for finite water supplies and over-allocation by conserving water that will be banked and used for future growth needs and to supply new connections and future demand needs within WBWCD's service area.

- *Describe how the project will address the water reliability concern? In your response, address where the conserved water will go and how it will be used, including whether the conserved water will be used to offset groundwater pumping, used to reduce diversions, used to address shortages that impact diversions or reduce deliveries, made available for transfer, left in the river system, or used to meet another intended use.*

WBWCD is prepared to address the water reliability concerns described above by installing water meters and implementing water awareness education. The proposed secondary metering project will increase the water supply reliability of the south Davis County area in two ways:

1. Decreased secondary water use in the Woods Cross/West Bountiful area will result in less water needing to be conveyed through the Davis Aqueduct, which will result in additional peak raw water capacity being available at the Davis South Water Treatment Plant for treatment for potable water purposes.
2. Decreased secondary water use in the Woods Cross/West Bountiful area will allow WBWCD to decrease pumping of secondary water wells in the area during off peak times, which will have a positive impact on groundwater levels, which are a significant issue in the area.

Water conserved through this project will be banked and used for future growth needs and to supply new connections and future demand needs within WBWCD's service area. Water not required for the project area will remain in the system as stored water or instream flows. It is also possible that saved water could go to meet the needs of other areas in WBWCD.

- *Provide a description of the mechanism that will be used, if necessary, to put the conserved water to the intended use.*

Meters will allow for more water to be saved and held in WBWCD's upstream reservoirs, and within the Weber River system, allowing WBWCD to hold water for later in the irrigation season when it is needed to be used for instream flows and held for storage water for the next season.

- *Indicate the quantity of conserved water that will be used for the intended purpose.*

For this project, the amount of estimated water savings is 380 acre-feet/year. Within WBWCD's Woods Cross and West Bountiful service area, approximately 5,300 acre-feet of water is delivered annually. Approximately 4,200 acre-feet of this water is delivered to WBWCD's secondary irrigation users, 750 acre-feet delivered as wholesale irrigation water to North Salt Lake City and approximately 350 acre-feet delivered to agricultural users in the area. The irrigation water

services approximately 3,787 connections in the project area. This project will continue the metering process for existing secondary connections in this area.

- *Will the project make water available to achieve multiple benefits or to benefit multiple water users? Consider the following:*

- *Will the project benefit multiple sectors and/or users (e.g., agriculture, municipal and industrial, environmental, recreation, or others)?*

Yes, metering secondary water connections will benefit the multiple sectors served by WBWCD. WBWCD serves a geographic area over 2,500 square miles that includes District-administered water contracts from primarily municipal, to industrial (M&I), to agriculture. Municipal use includes lawns and gardens, and agriculture use includes irrigation of row crops and pastures. WBWCD supplies residential customers with irrigation water in Davis and Weber counties via approximately 484 miles of pipelines, and also delivers irrigation water to many irrigators and farmers in Box Elder, Davis, Morgan, Summit, and Weber Counties. Considering its large service area, WBWCD supplies irrigation water to multiple environmental and recreation sectors, such as city parks, gardens, and other recreational and educational centers. All sectors receiving metered connections will be able to use collected meter data to better understand how they can reduce water usage and groundwater pumping and contribute to greater water supply reliability.

- *Will the project benefit species (e.g., federally threatened or endangered, a federally recognized candidate species, a state listed species, or a species of particular recreational, or economic importance)? Describe the relationship of the species to the water supply, and whether the species is adversely affected by a Reclamation project.*

Efficient use of our limited and variable water supply ensures a more balanced allocation of competing uses including stream flows; which benefits the endangered species within the watersheds in Weber Basin.

- *Will the project benefit a larger initiative to address water reliability?*
The proposed secondary water metering project contributes to a larger initiative of WBWCD to achieve the Utah Governor's goal of 25 percent water conservation by 2025. As is being done by multiple water districts across the State of Utah, WBWCD is doing its part to develop projects, such as the proposed, to encourage its users to manage and conserve water resources more efficiently. Through water use awareness education and conservation, WBWCD will work with its users to reduce water usage and groundwater pumping that has contributed to a largescale declining of ground-water levels and conflicts in the area; and

by extension, WBWCD's efforts will contribute to the reduction of groundwater pumping throughout the State of Utah.

- *Will the project benefit Indian tribes?*

No, the project will not benefit Indian tribes.

- *Will the project benefit rural or economically disadvantaged communities?*

No, the project will serve Woods Cross and West Bountiful, Utah, which are not considered to be rural or an economically disadvantaged community.

- *Describe how the project will help to achieve these multiple benefits. In your response, please address where the conserved water will go and where it will be used, including whether the conserved water will be used to offset groundwater pumping, used to reduce diversions, used to address shortages that impact diversions or reduce deliveries, made available for transfer, left in the river system, or used to meet another intended use.*

As described previously, WBWCD serves a geographic area over 2,500 square miles that includes District-administered water contracts from primarily municipal, to industrial (M&I), to agriculture. Within its geographic area, WBWCD supplies irrigation water to multiple environmental and recreation sectors, such as city parks, gardens, and other recreational and educational centers. Water conserved through this project will be banked and used for future growth needs and to supply new connections and future demand needs within WBWCD's service area. Water not required for the project area will remain in the system as stored water or instream flows. Those sectors receiving metered connections will be able to use collected meter data to better understand how they can reduce water usage and groundwater pumping and contribute to greater water supply reliability that meets the water supply/reliability needs of all sectors served by WBWCD.

- *Does the project promote and encourage collaboration among parties in a way the helps increase the reliability of the water supply?*

Yes, WBWCD supplies retail secondary and wholesale culinary water to all of the municipalities within the proposed project area. The proposed project will provide another opportunity to continue to collaborate with Woods Cross City and West Bountiful City to promote conservation and to develop a more reliable water supply. The water saved from this project will also have a positive impact on cities in the southern Davis County area that receive water through WBWCD's Davis Aqueduct. Water supplies within this area have been stressed because of decreasing groundwater levels and difficulties for WBWCD in meeting peak demands during the summer months.

○ *Is there widespread support for the project?*

WBWCD and the cities in the proposed project area are in support of the project because it will promote conservation of water, decrease groundwater pumping in the area and free up capacity in the Davis Aqueduct needed to meet peak demands.

The proposed project will help move the state of Utah and WBWCD closer to their goal of 25 percent in reduced water use by 2025. Letters of support for WBWCD project include Division of Water Resources, Wood Cross City, and West Bountiful City can be found in Attachment E – Letters of Support.

○ *What is the significance of the collaboration/support?*

The Division of Water Resources (DWRe) recognizes the importance of water conservation and the water saved through this improvement project. They have always supported projects such as this through matching loans and planning grants to water districts, municipalities, and irrigators. Within DWRe's letter of support, they indicate that WBWCD is and continues to be a valuable partner promoting wise water use in our state and community, as well as being partners in the Governors Water Conservation Team and the Slow the Flow campaign.

Currently, WBWCD delivers water to many cities, sub-conservancy districts and private irrigation companies. WBWCD has the highest percentage of secondary water use in Utah. This is the primary reason that emphasis has been made, and the accountability for this water at the user level is such a priority. This project will allow WBWCD to work with these other entities and lead the way in improving the efficiency of the secondary water systems within WBWCD's boundaries.

It will also increase water use awareness among residential water users in a way that could not be achieved in any other way. WBWCD believes that this project, along with other conservation goals and activities will help prevent a water-related crisis or conflict because it will provide more water to be available for future needs and growth which is projected to double along the Wasatch Front by 2060. The future customers in WBWCD's service area can be more aware of their water use, and it will be easier to help them reduce if they fall into a category of excessive use.

○ *Is the possibility of future water conservation improvements by other water users enhanced by completion of this project?*

WBWCD has already seen conservation improvements by others, i.e. Davis and Weber Counties Canal Company – large piping and metering projects in 2015 and 2016. Other improvements – Echo Canal Company, Hights Creek Irrigation Company, Hoytsville Ditch Company and many others are working to try to make

a difference within WBWCD's service area by piping, pressurizing, and metering their systems.

- *Will the project help to prevent a water-related crisis or conflict? Is there frequently tension or litigation over water in the basin?*

The proposed project will reduce the potential for water-related conflict. WBWCD serves one of the fastest growing regions in the Western United States, with the population of the region (and thereby the demand for water) expected to increase significantly by 2025. Due to this rapid growth, there is an increasingly volatile balance between the demand for irrigation water, and the rapidly increasing demand for additional municipal and industrial (M&I) water. Particularly in years of drought, the proposed project will substantially contribute to WBWCD's conservation efforts and will help to alleviate potential future conflicts.

As previously mentioned, water savings will also help with the conflict of decreasing groundwater supplies in the area. With the water savings from metering, it is anticipated that there will be a decrease in pumping the Mills Park Well, which will help with groundwater conditions that this area has been experiencing due to drought and pumping.

- *Describe the roles of any partners in the process. Please attach any relevant supporting documents.*

WBWCD is committed to working with Woods Cross City, West Bountiful City, DWRe, and others throughout the project. See Attachment E – Letters of Support. Because of the amount of work to be completed within Woods Cross and West Bountiful, close collaboration will be important in implementing a successful project.

- *Will the project address water supply reliability in other ways not described above?*

Within the Weber River Watershed Plan of 2014, it says that "The goal of this plan is to recognize both the human and ecological values that the watershed provides and develop strategies to protect and enhance those values." Allowing for more water to remain in the Weber River, Echo, East Canyon and other reservoirs, recreational opportunities will be benefited, water quality will be improved, recreation fishing will be sustainable, and economic development will continue.

In addition, WBWCD has completed a Drought Contingency Plan which identifies secondary metering as a strategy to mitigate the impacts of drought. A secondary meter will not only conserve water to make more water available during drought years but having a meter on a secondary connection will also allow WBWCD to restrict use during drought events whereas in the past WBWCD could only ask that residents conserve water.

E.1.3. Evaluation Criterion C – Implementing Hydropower (18 Points)

If the proposed project includes construction or installation of a hydropower system, please address the following:

N/A – The proposed project does not include construction or installation of a hydropower system.

E.1.4. Evaluation Criterion D – Complementing On-Farm Irrigation Improvements (10 Points)

If the proposed project will complement an on-farm improvement eligible for NRCS assistance, please address the following:

The Woods Cross/West Bountiful service area also provides water deliveries of approximately 350 acre-feet to agricultural users in the area. There is likely potential for On-Farm Irrigation improvements at these farms; however, we are not aware of any current applications.

E.1.5. Evaluation Criterion E – Department of the Interior Priorities (10 Points)

Address those priorities that are applicable to your project. Points will be allocated based on the degree to which the project supports one or more of the priorities listed, and whether the connection to the Priority(ies) is well supported in the proposal.

Department Priorities

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

On the topic of conservation, Teddy Roosevelt wisely instructed, “Conservation means development as much as it does protection. I recognize the right and duty of this generation to develop and use the natural resources of our land; but I do not recognize the right to waste them, or to rob, by wasteful use, the generations that come after us.” WBWCD agrees with Teddy Roosevelt that America’s precious water resources must be available and reliable for current and future generations. WBWCD operates the Weber Basin Project which belongs to the Federal Government, and ultimately, this project will expand the capacity of this existing infrastructure by reducing demand on the system. WBWCD will take a major step towards ensuring water availability and reliability for current and future generations by not only metering its secondary water distribution, but by educating its users to keep them from overwatering. WBWCD directly plays an active role in helping its water users to understand how beautiful water-wise landscapes can be, by means of their Learning Garden that was built on site in 2008 and ongoing workshops demonstrating this beauty. The Learning garden is open year-round to the public and is free to visit and landscaping classes also take place throughout the year and are free to the public.

Attention to water conservation is most prevalent in the western United States, and especially in Utah – the second driest state in the nation. Because of our semi-arid climate and drought, water conservation in Utah is something that is taken seriously by water distributors and users throughout the state. WBWCD utilizes science to identify best practices to manage land and water resources and adapt to changes in the environment,

such as the proposed secondary water meters that will be actively used to reduce the disastrous effects of drought. In addition, WBWCD has prepared a Drought Contingency Plan that will help them better understand their response to drought and how to work with all of its users. The proposed project is an opportunity for WBWCD and its water users to work together to create goals and sound water use habits. Working towards these goals and implementing better water use habits will protect Utah's water resources and ensure that these resources are made available to sustain current and future water users within the WBWCD service area.

2. *Utilizing our natural resources*

The proposed project will contribute to ensuring American Energy is available to meet our security and economic needs by reducing the need for power by saving water, which will result in decreased energy used for pumping wells.

3. *Restoring trust with local communities*

As WBWCD works with the local cities located within their service area to address two major issues (water supply reliability and groundwater conditions in the area), they work to restore trust with those local cities and the water users within city jurisdiction. Building trust through education, conservation, and accountability, WBWCD will help its water users better manage their water use habits. One way WBWCD helps its water users make conservation easier is by providing rebates for various products that help save water, such as smart irrigation controllers.

4. *Striking a regulatory balance*

Not applicable to the proposed project.

5. *Modernizing our infrastructure*

The installation of secondary water meters supports the White House Public/Private Partnership Initiative to modernize U.S. infrastructure. According to a study from 2009 called "Metering Secondary Water in Residential Irrigation Systems," done by Utah State University, "...standard residential water meters do not normally function in debris-filled secondary water. The metering mechanism can clog or be degraded by suspended debris of both organic and inorganic nature in the water. By way of innovative meter designs [as is proposed in the WBWCD's project] ...secondary water systems have had success metering their secondary water." Modern meter designs on secondary water systems have proven successful in making many water users more aware of how much water they are using. The study mentions that because secondary water supply is commonly charged at a fixed rate, many water users assume that they have the right to an unlimited supply of water. WBWCD is working to educate users regarding the finite resource water is and to reduce their water usage by utilizing modern meter technologies and digital education platforms.

Reclamation Priorities

1. *Increase Water Supplies, Storage, and Reliability under WIIN and other Authorities*
Not applicable for this project.
2. *Streamline Regulatory Processes and Remove Unnecessary Burdens to Provide More Water and Power Supply Reliability*
The installation of secondary water meters will support streamlining regulatory services because accurate data will be more readily available relating to the volume of water consumed.
3. *Leverage Science and Technology to Improve Water Supply Reliability to Communities*
Water supply can become more reliable when WBWCD has an accurate description of where the delivered water is being consumed.
4. *Address Ongoing Drought*
Metering secondary water allows WBWCD to have a starting point of how much water is being consumed. From there, WBWCD will then be able to address conservation measures and accurately determine how effective those conservation measures are performing. Symptoms of a drought can be alleviated if there is less water being consumed.
5. *Improve the Value of Hydropower to Reclamation Power Customers*
Not applicable for this project.
6. *Improve Water Supplies for Tribal and Rural Communities*
Not applicable for this project.
7. *Implementation of new Title Transfer authority pursuant to P.L. 116-9.*
Not applicable for this project.

E.1.6. Evaluation Criterion F – Implementation and Results (6 Points)

E.1.6.1. Subcriterion No. F.1 – Project Planning

Does the applicant have a Water Conservation Plan and/or System Optimization Review (SOR) in place? Please self-certify or provide copies of these plans where appropriate to verify that such a plan is in place.

WBWCD has a water conservation plan that has been implemented, updated and submitted in 2018 to the Utah State Division of Water Resources as well as the Bureau of Reclamation (Provo Area Office). WBWCD has also completed a System Optimization Review (SOR) for an overall planning and projecting of future water needs and demands. In addition, WBWCD recently prepared a Drought Contingency Plan funded by Reclamation. This plan allows them to develop better understanding of the impact of drought and strategies to plan for sustainable water demands and water supplies as they continue to change. Within the Drought Contingency Plan, water conservation is an important action in mitigating the effects of future droughts. With conservation being the key, secondary metering permits WBWCD to enforce water restrictions during times of Drought, which they are currently unable to do.

Provide the following information regarding project planning:

- 1) Identify any district-wide, or system-wide, planning that provides support for the proposed project. This could include a Water Conservation Plan, SOR, or other planning efforts done to determine the priority of this project in relation to other potential projects.*

WBWCD SOR has identified canal lining and metering projects as the top two priorities. This application addresses metering projects. WBWCD has also developed a water conservation plan that was most recently updated in 2018. Retail secondary irrigation metering is one of the priority items listed in WBWCD’s water conservation plan. Metering fits into conservation as well as water management plans that will assist WBWCD in accounting for current water use while planning how to meet the needs of future demands. With the development of the Drought Contingency Plan, WBWCD will be able to continue their goals of the SOR and water conservation plan and help them meet other goals of the State.

- 2) Describe how the project conforms to and meets the goals of any applicable planning efforts and identify any aspect of the project that implements a feature of an existing water plan(s).*

The proposed project will assist WBWCD in meeting its conservation goal, which is also the State of Utah’s goal of a 25 percent reduction in per capita use by 2025. Furthermore, WBWCD plans to meet 35 percent conservation by 2050. Conservation can be thought of as a future supply, because it delays the need for more costly water development projects.

Prepare60, a center established by the four largest water conservancy districts, including WBWCD, focuses on protecting what Utah has, using it wisely, and providing for the future:



Protect what we have

- Repair and replacement of existing infrastructure
- Watershed and water source protection



Use it wisely

- Water conservation – efficient use of a precious resource



Provide for the future

- New water sources and development of new infrastructure

WBWCD strives to focus first and foremost on the “Use it wisely” initiative because it is the most effective and least costly way to create and maintain a safe, reliable, and sustainable water supply. In WBWCD’s area, with current unmetered secondary water, the greatest potential for conservation comes with accountability and end user knowledge of how much they use. Data that is presented in the proposal also shows the conservation savings that will be achieved to benefit WBWCD and to benefit

surrounding areas and other water purveyors to meet water conservation goals, environmental improvement goals, and energy reduction goals by reduced pumping costs.

E.1.6.2. Subcriterion No. F.2 – Performance Measures

Provide a brief summary describing the performance measure that will be used to quantify actual benefits upon completion of the project (e.g., water saved or better managed, energy generated or saved).

The performance measures that will be documented and quantified to show the actual benefits upon completion of the project will include water that is saved and/or better managed.

Water Savings and/or Better Water Management Performance Measures

This proposed project will be measured for success by the reading and logging of the data from the installed meters, which will be logged monthly by an AMI system. The information gathered will be in hourly intervals and will be analyzed and compared over time to show and track water savings. As WBWCD logs hourly incremental data from the meter, they are able to compare allocations with actual usage. This will allow them to determine if the allocations are too large and use the collected water usage data to tailor and target water conservation educational material to users that may not understand or may not recognize they need assistance in reducing usage. Current usage is based on trunk line and facility meters in the area. This produces an average use per un-metered connection in the area. Once meters are installed, water savings will be quantified using the individual meters, new measures for targeting high use can be developed and implemented, and the direct water savings will be tracked.

All of this will be documented for the water users and sent to them for their information using the Secondary Water Use Report. [See Attachment D – Sample Secondary Water Use Report.](#)

E.1.6.3. Subcriterion No. F.3 – Readiness to Proceed

Identify and provide a summary description of the major tasks necessary to complete the project. Include an estimated project schedule that show the stages and duration of the proposed work, including major tasks, milestones, and dates.

Table 2 below is an estimated project schedule that shows the stages and duration of the proposed work, including yearly funding, major tasks, milestones, and dates:

Table 2 - Estimated Project Schedule

SCHEDULE	Feb – Apr 2021	Apr – Oct 2021	Oct - Dec 2021	Jan - April 2022	Oct – Dec 2022	Jan – March 2023	April – May 2023	June – Sept 2023
Milestone/Task								
Sign WaterSMART contracts								
Environmental Document prepared and approved by Reclamation								

Metering Project Installation Year 1				
Metering Project Installation Year 2				
Final reporting and project close-out				

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

Woods Cross and West Bountiful Cities will be involved and notified of all metering project implications and timelines. Any concerns they have will also be addressed prior to the project construction. WBWCD will work with homeowners to minimize installation impacts and provide an improved service connection.

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

WBWCD has now completed multiple meter installation projects. Through this effort standard drawings and specifications have been developed by staff to facilitate this effort.

Describe any new policies or administrative actions required to implement the project.

No new policies will be required to implement this project. WBWCD has been implementing the installation of secondary water meters since 2008 and has had a very successful educational and public information process from the very beginning. Policies and administrative action were first implemented in 2008 when the first secondary meters were installed.

E.1.7. Evaluation Criterion G – Nexus to Reclamation Project Activities (4 Points)

Is the proposed project connected to Reclamation project activities? If so, how? Please consider the following:

Yes, the proposed project is directly related to Reclamation activities, since the water supplying the Woods Cross/West Bountiful area is part of the Weber Basin Project. Much of the infrastructure, pumping, and other activities are connected to Reclamation-owned land, facilities, and infrastructure that WBWCD operates to provide the water where needed.

- *Does the applicant receive Reclamation project water?*
The majority of WBWCD’s water is original Weber Basin Project water. Weber Basin is the central entity for Reclamation Project water for the entire region.
- *Is the project on Reclamation project lands or involving Reclamation facilities?*
The metering of the proposed project will not take place on Reclamation project lands but will have an effect on Reclamation facilities due to the decrease in water needed over the long term. Reduced usage equates to an increase in storage, an increase in water marketing, a decrease in pumping, and a reduced cost when upsizing and improving existing infrastructure to carry additional water to meet the future demands.
- *Is the project in the same basin as a Reclamation project or activity?*
The proposed project is within WBWCD boundaries, which is a Reclamation project.

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

This proposed project will serve to support Reclamation objectives and will augment water supplies in the Weber Basin area, thus reducing future conflicts for water to this area. Water saved in this project will be used for future demands in the Weber Basin service area, which is part of a Reclamation project.

- *Will the project benefit any tribe(s)?*

This proposed project will not benefit any Tribes.

E.1.8. Evaluation Criterion H – Additional Non-Federal Funding (4 Points)

State the percentage of non-federal funding provided using the following calculation: Non-Federal Funding divided by Total Project Cost.

$$\frac{\$1,100,000 \text{ Non-Federal Funding}}{\$1,600,000 \text{ Total Project Cost}} = \mathbf{68.75\%}$$

Project Budget

Funding Plan and Letters of Commitment

Describe how the non-Federal share of project costs will be obtained.

Identify the sources of the non-Federal cost share contribution for the project, including:

- *Any monetary contribution by the applicant towards the cost-share requirement and source of funds (e.g., reserve account, tax revenue, and/or assessments)*
WBWCD will fund all non-Federal contributions entirely with Weber Basin Water Conservancy District operating revenues.
- *Any costs that will be contributed by the applicant*
N/A
- *Any third-party in-kind costs (i.e., goods and services provided by a third party)*
N/A
- *Any cash requested or received from other non-Federal entities*
State Revolving Loan Conversation
- *Any pending funding requests (i.e. grants or loans) that have not yet been approved, and explain how the project will be affected if such funding is denied*
N/A

In addition, identify whether the budget proposal includes any project costs that have been or may be incurred prior to award. For each cost, describe:

- *The project expenditure and amount*
N/A
- *The date of cost incurrence*
N/A
- *How the expenditure benefits the Project*
N/A

Budget Proposal

Table 3 - Total Project Cost Table

Source	Amount
Costs to be reimbursed with the requested Federal funding	\$500,000
Costs to be paid by the applicant	\$1,100,000
Value of third-party contributions	\$0.00
Total Project Cost	\$1,600,000

Table 4 - Budget Proposal

Budget Item Description	Computation		Quantity Type	Total Cost
	\$/Unit	Quantity		
Salaries and Wages				\$0.00
Fringe Benefits				\$0.00
Equipment				\$0.00
Supplies and Materials				\$0.00
Contractual /Construction				\$1,600,000
1" End User Secondary Meter - WB/WX Service Area	\$1,500	1,063	EA	\$1,595,000
Environmental and Regulatory Compliance	\$5,000	1	EA	\$5,000
Third-Party In-Kind Contributions				\$0.00
Other				\$0.00
Total Direct Costs				\$1,600,000
Indirect Costs				\$0.00
Type of rate	Percentage	\$base		\$0.00
Total Estimated Project Costs				\$1,600,000

Budget Narrative

Salaries and Wages

No WBWCD Salaries or Wages will be included. All services will be contracted. WBWCD's staff time will be over and above the cost of the project and will not be counted toward the project cost.

Fringe Benefits

No fringe benefits will be required.

Travel

No travel will be required.

Equipment

Equipment will be part of the contracted portion of the project.

Materials and Supplies

Materials and Supplies will be part of the contracted portion of the project and will be documented as required.

Contractual

In order to determine unit costs, which were included in the cost estimate for this project, WBWCD relied upon contract unit prices from similar projects recently completed in 2019.

WBWCD will bid the construction portion of the project to several prequalified construction companies. The contractual costs shown are estimates for each of the components to furnish and install all the equipment. Generally, the low bidder will be selected based on a determination of acceptable qualifications.

Contract will include installing approximately 1,000 meters and boxes.

Third-Party In-Kind Contributions

No third-party in-kind contributions will be part of the project.

Environmental and Regulatory Compliance Costs

The environmental document for this project will be minimal in that all of the metering will be within previously disturbed areas. The cost was included at \$5,000.

Other Expenses

No other expenses will be part of the project.

Indirect Costs

No indirect costs will be part of the project.

Total Costs

WBWCD Portion: \$1,100,000 Fed Portion: \$500,000 Total: \$1,600,000

Environmental and Cultural Resources Compliance

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

The project will require only a minimal level of earthwork to install meters. There will be some excavation of the existing connection to allow for a meter pit to be installed. No animal habitats will be negatively impacted, and work impacts will be very minimal, even to existing landscapes.

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?

WBWCD is not aware of any impacts concerning threatened or endangered species in this area.

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 proposed project may have.

WBWCD is not aware of any impacts to wetlands in this area.

When was the water delivery system constructed?

The original District/Reclamation Project began in the late 1950s and continued over several year periods in the early 1960s. Since then, additional infrastructure with conveyance canals and pipes have been added to meet the growing population water needs.

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.

There will be no significant modifications to the main conveyance system within the metering portion of the project.

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.

WBWCD is not aware of any building, structures or features that would be impacted or would qualify. A cultural resource inventory will be completed as part of the submitted environmental document.

Are there any known archeological sites in the proposed project area?

WBWCD is not aware of any impacts to any archeological sites. An archeological resource inventory will be completed as part of the submitted environmental document.

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

The project will not require a right-of-way or relocations from adjacent properties and will have no impact on residential uses within the study area.

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.

Required Permits or Approvals

Applicants must state in the application whether any permits or approvals are required and explain the plan for obtaining such permits or approvals.

Woods Cross and West Bountiful Cities will be involved and notified of all metering project implications and timelines. Any concerns they have will also be addressed prior to the project construction. WBWCD will work with homeowners to minimize installation impacts and provide an improved service connection.

Letters of Project Support

Include letters from interested stakeholders supporting the proposed project.

Letters of support from the following entities are included in [Attachment E – Letters of Support](#):

- » Division of Water Resources – Todd Stonely, Project Funding Manager
- » Woods Cross City – Gary Uresk, City Administrator

Official Resolution

Include an official resolution adopted by the applicant’s board of directors or governing body. The official resolution may be submitted up to 30 days after the application deadline.

The Official Resolution for the Woods Cross Secondary Water Metering Phase III Project is included at the end of this application in Attachment F.

Attachment A - WBWCD Delivery System Information

Weber Basin Water Principal Infrastructure

DAMS & RESERVOIRS

Name	Location	Type of Dam	Height (ft)	Total Capacity (AF)	Usable District Capacity (AF)	Acquisition Dates
Causey	Eastern Weber County	Earth & Rock	200	7,870	6,870	1962-1964
East Canyon	Southern Morgan County	Concrete Arch	245	51,200	20,100	1965-1967
Lost Creek	Eastern Morgan County	Earth & Rock	220	22,500	20,010	1964-1966
Pineview	Ogden Valley, Weber County	Earth & Rock	91	110,150	66,228	1955-1957
Smith & Morehouse	South-eastern Summit County	Earth & Rock	82	8,350	6,560	1984-1988
Wanship	Summit County	Earth & Rock	156	62,120	60,860	1954-1957
Willard	Southern Box Elder County	Earth	36	227,189	202,160	1957-1963

AQUIFER STORAGE & RECOVERY

Name	Location	Pond Area (acres)	Capacity (cfs)	Acquisition Dates
ASR	Weber County	7.5	10	2002

DIVERSIONS

Name	Location	Pass-Through Capacity (cfs)	Acquisition Dates
Ogden Valley	South Fork of Ogden River	2,000	1962-1964
Slaterville	Weber River west of Ogden	9,000	1956-1957
Stoddard	Weber River north of Morgan	6,000	1955-1956

HYDRO GENERATION POWER PLANTS

Name	Location	Type	Capacity (kw)	Acquisition Dates
Causey	Eastern Weber County	2 unit	2,100	1999-2000
Gateway	Mountain Green	1 unit	4,275	1957-1958
Wanship	Wanship	1 unit	1,950	1957-1958

CANALS, TUNNELS & PIPELINES

Name	Location	Type	Capacity (cfs)	Length (miles)	Acquisition Dates
Davis Aqueduct	Davis County	Concrete pipe	355	23.0	1954-1957
Gateway Canal	Morgan County	Concrete-lined	700	8.5	1954-1956
Gateway Tunnel	Morgan and Davis County	Concrete-lined	435	3.3	1952-1954
Layton Canal	Davis County	Earth-lined/concrete-lined/pipe	260	18.0	1962-1964
M&I Pipelines	Davis and Weber County	Varies 6"-48"	varies	80.0	1955-2012
Ogden Valley Canal	Weber County	Part earth-lined	35	9.2	1962-1964
Secondary Pipelines	Davis and Weber County	Varies 2"-36"	varies	325.0	1955-2012
Weber Aqueduct	Weber County	Concrete pipe	80	5.0	1954-1956
Western Summit County	Summit County	Ductile Iron	8.9	9.0	2013
Willard Canal	West Weber County	Earth-lined/concrete-lined	1,050	11.0	1961-1963

PUMPING PLANTS

Name	Location	Capacity (cfs)	Height of Lift (ft)	Acquisition Dates
Antelope Booster	Layton	22	50	1978
East Bountiful	Bountiful	18	475	1955
East Layton	Layton	9	65	1955
Gateway	Mountain Green	150	150	1995
Kanesville #1	West Haven	3	218	2000
Kanesville #2	West Haven	10	315	2001
Layton Canal	West Haven	260	23	1955
Old Post Rd Booster	Ogden	6	200	1960
Rockport	Wanship	25	45	2009
Roy Drought Relief	Roy	150	340	1981
Sand Ridge East	Layton	9	92	1955
Sand Ridge West	Layton	15	138	1955
South Davis	Bountiful	18	530	1955
Unitah Bench	South Ogden	18	365	1955
Val Verda	Bountiful	6	240	1955
West Haven #1	West Haven	10	218	2003
West Haven #2	West Haven	3	230	2010
Willard No. 1	West Weber County	500	45	1960
Willard No.2	West Weber County	250	20	1960

UNDERGROUND WATER WELLS

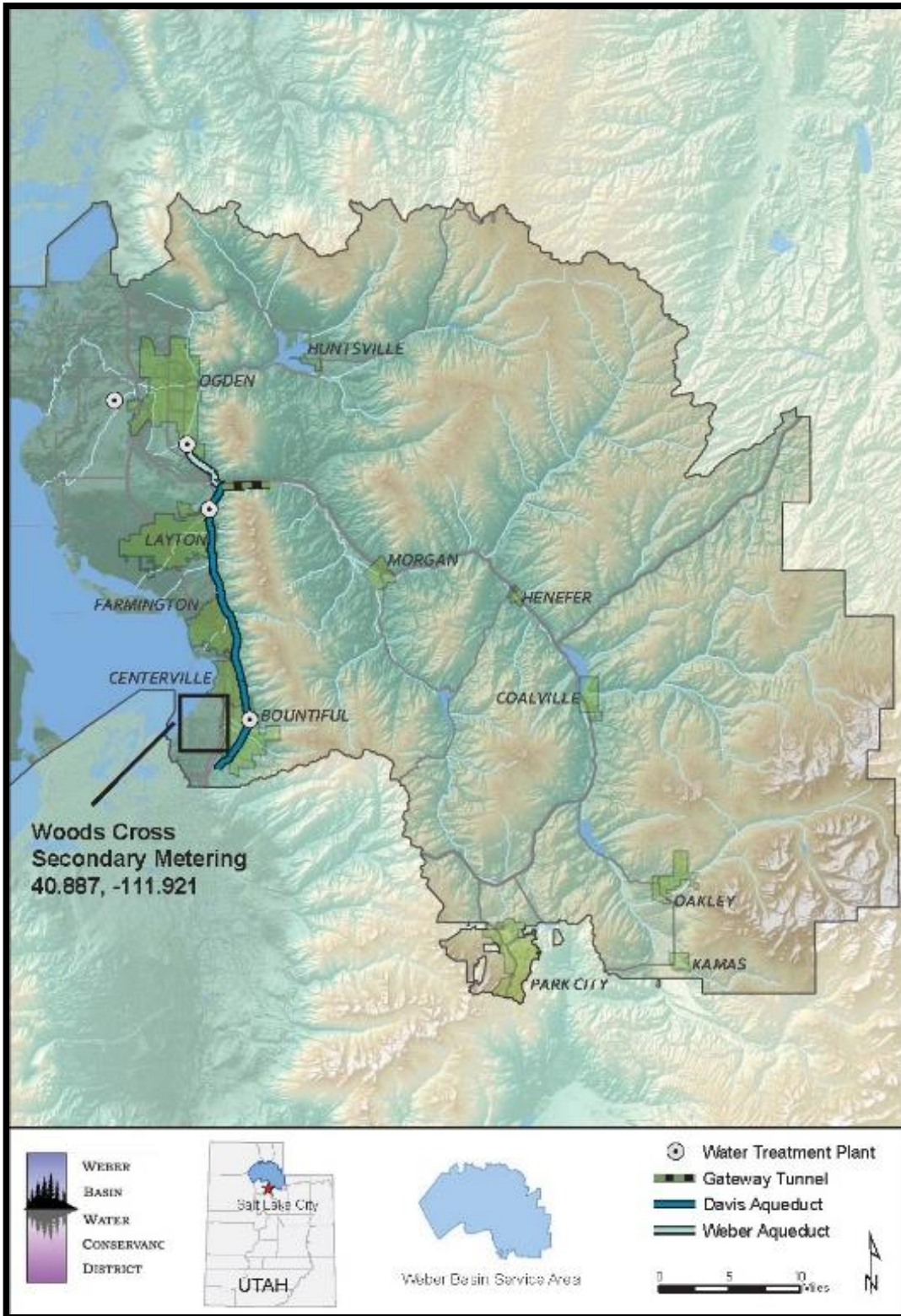
Name	Location	Type	Capacity (cfs)	Acquisition Dates
Ben Lomond	Harrisville	M&I	1.8	2001
Clearfield #1	Clearfield	M&I	5.0	1961
Clearfield #2	Clearfield	M&I	5.0	1961
Davis Boulevard	Bountiful	M&I	2.2	2003
District Well #2	South Weber	M&I	11.0	1985
District Well #3	South Weber	M&I	10.0	1990
Fairfield	Layton	M&I	10.0	1992
Farmington #1	Farmington	Irrigation	5.0	1995
Farmington #2	Farmington	Irrigation	5.0	1996
Laytona	Layton	M&I	5.0	1958
Mills Park	West Bountiful	Irrigation	2.2	2011
North Ogden	North Ogden	M&I	1.8	1967
North Weber	Harrisville	M&I	1.6	2006
Orchard Dr. Well	Bountiful	M&I	0.8	1991
Riverdale	Riverdale	M&I	6.6	1960
South Davis	Woods Cross	M&I	5.2	1961
South Weber #1	South Weber	M&I	10.0	1962
South Weber #2	South Weber	M&I	10.0	1962
Washington Terrace	Washington Ter.	Irrigation	4.0	2013
West Bountiful 5th South	West Bountiful	Irrigation	4.0	1992
West Bountiful Golf	West Bountiful	Irrigation	2.0	1993

WATER TREATMENT PLANTS

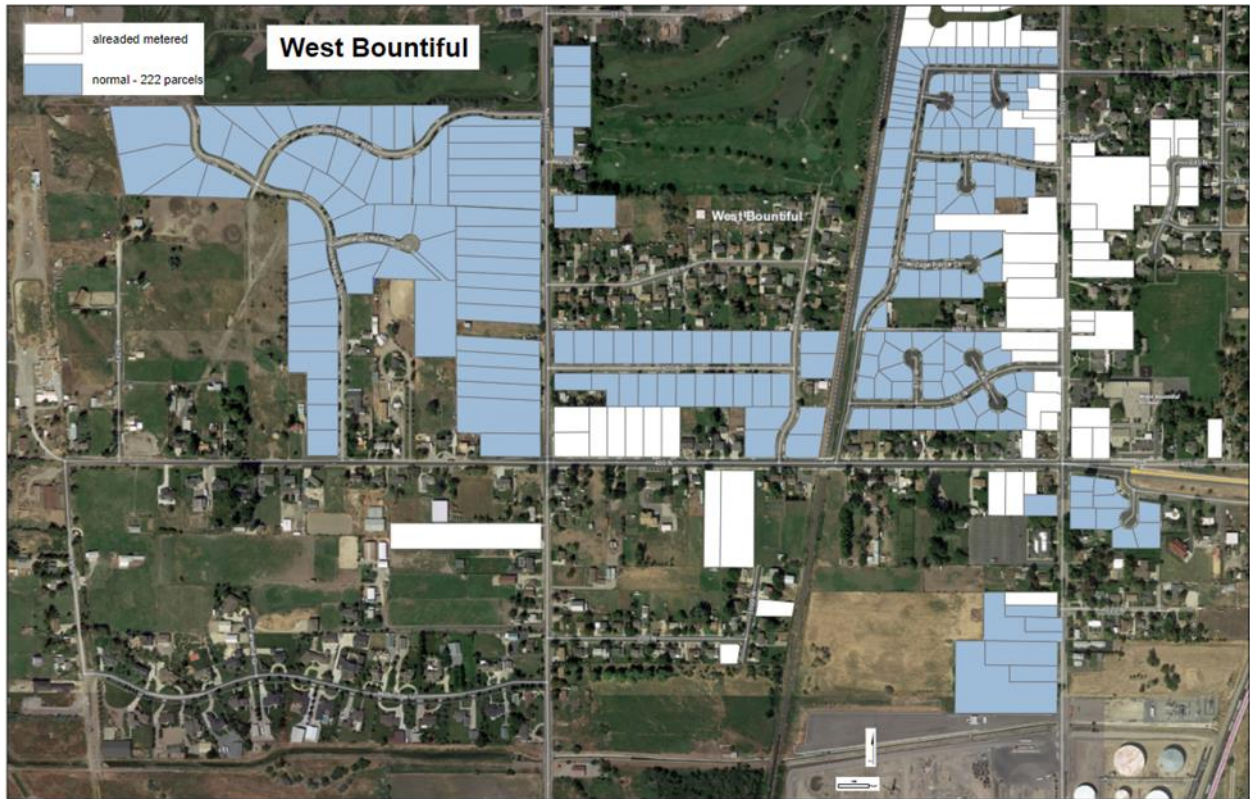
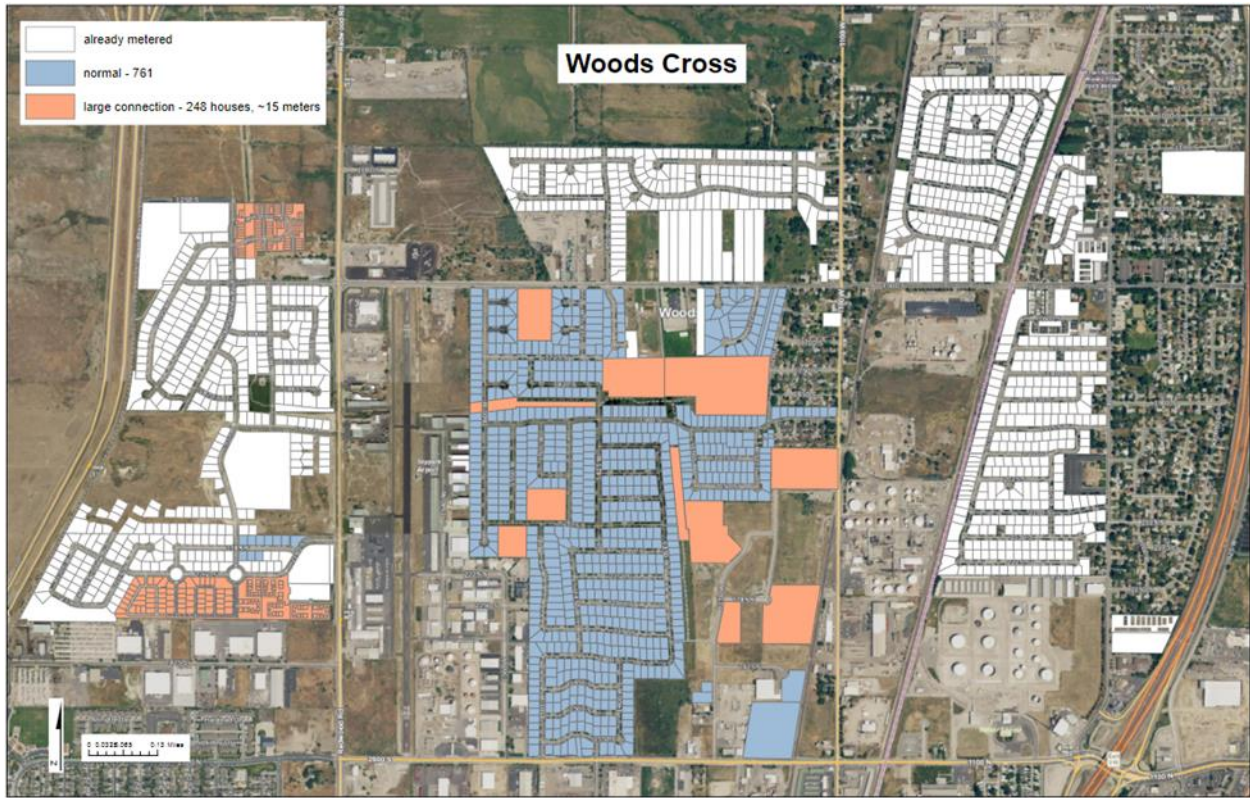
Name	Location	Capacity (MGD)	Acquisition Dates
Davis North WTP	Layton, Davis	46	1955
Davis South WTP	Bountiful, Davis	16	1955
East Canyon WTP	Jeremy, Summit	5.5	2013
Weber South WTP	Ogden, Weber	32	1955

AF=Acre Feet • CFS=Cubic Feet per Second • MGD= Million Gallons per Day

Attachment B – Project Location Map



Attachment C – Project Detail Map




Attachment D – Sample Secondary Water Use Report

How to read your water use report

This user exceeded their estimated need in August, but was below their estimated need in July.

To get hourly information on how much water you are using, visit our web portal and log in using this account # and code.



WEBER BASIN WATER CONSERVANCY DISTRICT

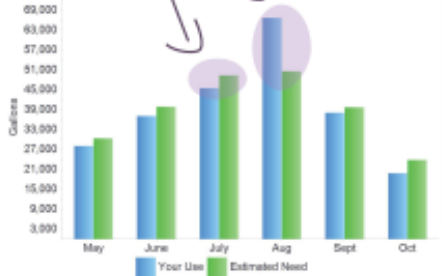
2837 East Highway 193 • Layton, Utah 84040 • Phone (801) 771-1677 • (SLC) 359-4494 • Fax (801) 544-0103

Report Date: 9/27/2018
Account Number: 01-001-0001D


BOB SMITH
123 MAIN ST
ANYTOWN, UT 12345

Did you know you can view your hourly and daily usage information online? Visit Customers.WeberBasin.Com and supply the below information when registering!
Account Number: 01-001-0001D
Website Authentication Code: 1235

SECONDARY WATER USE REPORT




Water Used This Month	19,779 gal.
Your Water Need Based On Your Landscape Area This Month	23,836 gal.
Your Landscape Area	11,545 (sq. ft.)
Year To Date Use	234,779 gal.
This Month's Percent Of Use To Estimated Need	83%



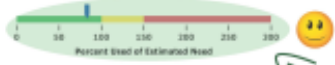
Example:

Meter Number	Previous Read 9/15/2018	Current Read 10/15/2018	Water Used This Month
12345678	269,585	289,364	19,779 gal.



Information:
Due to a hot and dry summer the District will shut off all secondary and irrigation services on October 1, 2018. Please remember to close your personal valve after shutoff.

Every month we have a message for you from the District regarding water supply, education, or tools to help you manage water more efficiently.



Percent Used of Estimated Need

Estimated need is unique for every user and is computed based on irrigated area of your parcel and daily weather conditions. This is based on the amount of water needed for a healthy, green, lawn.

Landscape area is calculated using aerial photos of your property.

To find the percent you have used of your estimated need, divide the water you used this month (top box) with your estimated need (second from top box).

This scale provides the user information regarding their actual use compared to their estimated need for their property for the year.

Attachment E – Letters of Support

Woods Cross City



September 24, 2019

Tage I. Flint, General Manager/CEO
Weber Basin Water Conservancy District
2837 East Hwy 193
Layton, UT 84040

Dear Tage,

Woods Cross City is pleased to write in support of your grant application being submitted to the Bureau of Reclamation Water and Energy Efficiency Grants Program. We applaud your efforts to increase the efficiency of your system to conserve valuable water and energy. We understand that this metering project will meter all water supplied to the resident and inform the resident through a monthly statement of how much water they are using. This information will then be used by the resident to help them adjust their watering schedules and conserve water.

Woods Cross City recognizes the importance of water conservation in our often water-short basin. The water saved through these improvement projects will provide benefit to water users and the regional environment. Weber Basin continues to be a valuable partner promoting wise water uses in our community.

We strongly support your grant application and appreciate the advancements it will make in water savings and improving water efficiencies in the District boundary of Weber Basin Water Conservancy District.

Sincerely,


Gary Uresk
City Administrator

1555 South 800 West • Woods Cross, Utah 84087 • 292-4421 • Fax 292-2225



State of Utah
DEPARTMENT OF NATURAL RESOURCES

BRIAN C. STEED
Executive Director

Division of Water Resources

ERIC L. MILLIS
Division Director

September 24, 2019

Tage Flint, General Manager
Weber Basin Water Conservancy District
2837 E. Hwy. 193
Layton, UT 84040

Tage,

The Utah Division of Water Resources understands that Weber Basin Water Conservancy District is seeking federal funds to install water meters on secondary irrigation connections in West Bountiful and Woods Cross. As available data from similar projects clearly demonstrates, metering secondary irrigation systems and providing customers with their water use data can yield significant water savings.

As an agency, our mission is to plan, conserve, develop and protect Utah's water resources. Through revolving loan funds overseen by the Utah Board of Water Resources, the division is able to provide financial assistance to help construct projects that further this mission. On August 1, 2019, the division received an application from your district requesting funding for the West Bountiful and Woods Cross secondary metering projects. This request was approved by the board member representing your area and will go before the full board on October 10, 2019 for authorization.

As manifest by the approval of your application, the Division of Water Resources is supportive of your project and hopes that you are successful in obtaining the desired federal funding. We urge the U.S. Bureau of Reclamation to approve the requested funds through its WaterSMART grant program to enable the district to complete the proposed projects.

Sincerely,



Todd Stonely, P.E.
Project Funding Manager

TES:db

cc: Ben Marett (via email)
Ashley Nay, Weber Basin Water Conservancy District (via email)



Attachment F – Official Resolution



WEBER BASIN WATER CONSERVANCY DISTRICT

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

OFFICIAL RESOLUTION

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

WHEREAS, The Weber Basin Water Conservancy District (District) is committed to the concept of water conservation,

WHEREAS, The District recognizes the need to conserve water and use it more efficiently in order to provide for the needs of the growing population in the District's boundaries;

WHEREAS, The District strongly supports the Bureau of Reclamation's goals as set forth in the 2021 WaterSMART program.

NOW THEREFORE, BE IT RESOLVED that the Board of Trustees, agrees and authorizes that:

1. The Secretary of Weber Basin Water Conservancy District has the legal authority to enter into an agreement with Reclamation;
2. The WaterSMART: Water and Energy Efficiency Grant application for the Woods Cross Secondary Water Metering Phase III Project has been reviewed by the Board of Trustees and supports the application submitted;
3. The Weber Basin Water Conservancy District will provide the amount of \$1,100,000 as specified in the funding plan; and
4. If selected for a WaterSMART: Water and Energy Efficiency Grant, the District will work with Reclamation to meet established deadlines for entering into a grant or cooperative agreement.

ATTEST

I, TAGE I. FLINT, Secretary of the Weber Basin Water Conservancy District, hereby certify that the foregoing is a true and correct copy of a resolution adopted by the Board of Trustees of the Weber Basin Water Conservancy District at a regular meeting held August 27, 2020.



Tage I. Flint, Secretary