

# WaterSMART

## Small-Scale Water Efficiency Projects for FY2025

Funding Opportunity No. **R24AS00059**



### **Meter Upgrades for SCADA Integration on Source Wells in Consolidated Irrigation District #19**

Spokane Valley, WA

Consolidated Irrigation District #19  
Shane Sheppard, General Manager  
120 N Greenacres Road  
Spokane Valley, WA 99016  
Phone: 509-924-1855

**January 14, 2025**

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# Technical Proposal and Evaluation Criteria

## Executive Summary

Date: Application due date: January 14, 2025

Applicant: Consolidated Irrigation District #19; Spokane Valley, WA

Project Title: Meter Upgrades for SCADA Integration on Source Wells in Consolidated Irrigation District #19 (CID#19)

Project Summary:

CID#19 makes deliveries of water to irrigation, municipal, and industrial users in the Spokane Valley and has measured the groundwater extractions with mechanical propeller meters for over 30 years. Spare parts for Sparling's old mechanical meters have become difficult to find and consequently they are difficult, if not impossible to repair. CID#19 now plans to upgrade groundwater measurement from source wells to Spokane Valley patrons by upgrading mechanical propeller meters on **18 high-capacity wells in 11 locations** to electromagnetic meters with no moving parts and digital output for SCADA integration over a one-year period.

CID#19 plans to make use of district and Bureau funds to upgrade meters on **18** source wells in the district in the coming year. CID#19 will contract with a meter manufacturer for the purchase and configuration of electromagnetic meters that will provide accurate flow measurement, real-time delivery flows, and logging of delivery data. District staff have extensive experience in pipeline construction/repair and will perform the installation of these new meters.

Approximate Length: One Year

Completion Date: June 30, 2026

**Federal Facility:** Yes, the Bureau of Reclamation owns the physical water system, however Consolidated Irrigation District #19 operates and maintains the system for the Bureau of Reclamation.

## Background Data

### Consolidated Irrigation District #19 and Spokane Valley Project History:

The Spokane Valley Project is unique among projects constructed by the Bureau of Reclamation. Traditional reclamation projects involve the construction of new, or rehabilitation of existing, dams, reservoirs and distribution systems. But with the Spokane Valley Project, the existing system was abandoned and replaced by a system of wells, pumps, storage tanks, and pipelines to serve 7,200 acres of land in the Spokane Valley.

Settlement of the Spokane Valley began at about the turn of the century as agriculture began to develop near the growing City of Spokane. Development of irrigation in parts of the Valley started about 1905. Growth of Spokane as an industrial, commercial and transportation center

added impetus to Valley settlement as subdivided tracts of irrigated land provided desirable suburban home sites.

In about 1903 the Spokane Valley Land and Water Company was organized with a goal to irrigate 22,000 acres to promote land sales. By 1912 the company had built a canal from Post Falls to lands in Washington along the north side of the Spokane River. Several years later the South Branch Canal was built to serve land south of the river. In 1921 the Spokane Valley Farms Company was organized and took over water rights, irrigation facilities, unsold land and other assets of the Spokane Valley Land and Water Company. Because collections of annual charges, stipulated in original land and water deeds, were insufficient to meet irrigation operating expenses, the new company encouraged formation of irrigation districts in areas that could utilize its water rights.

Two irrigation districts, Spokane Valley Irrigation District No. 10 and Greenacres Irrigation District, formed in 1922 in the area south of the Spokane River under a newly enacted Washington law. Irrigation District No. 10 was located in the area now called the Corbin pressure zone and Greenacres Irrigation District was located in the area now called the Greenacres pressure zone. The new law empowered such districts to issue bonds and enforce water charge collections. In the partly developed area north of the river, the East Farms and West Farms Irrigation Districts were organized in about 1924 and made similar agreements with the Spokane Valley Farms Company for water rights and distribution system rehabilitation. Still later, Otis Orchards, Pasadena Park and Trentwood Irrigation Districts joined the system.

The seven irrigation districts under the Spokane Valley Farms System eventually organized the Spokane River Canal Company, an Idaho Corporation, to improve and operate the main canal in Idaho. The Corporation's board of directors, composed of one representative from each irrigation district, met annually in Coeur d'Alene, Idaho. A similar organization, the Spokane County Joint Board of Control, performed the same function for main facilities in the State of Washington.

Early in the 1950s it was determined that the facilities of the existing systems were in need of rehabilitation or replacement and that satisfactory delivery of water was no longer available to many owners within the irrigation districts because of subdivision of lands. A reconnaissance report, "Spokane Valley Project, Washington," was published in June, 1954. It outlined six plans of development and concluded that a plan to construct wells, pumping plants and pressure distribution pipelines to replace the existing gravity system was most advantageous. All seven irrigation districts strongly favored the plan. A feasibility investigation of a pipe system to provide irrigation service for sprinkler system and water service for domestic, commercial and industrial use was initiated in the fall of 1954 and was published in August, 1956.

Congressional authorizing legislation provided for the Spokane Valley Project to be constructed under the provisions of Public Law 86-276, 86th Congress, S. 994, approved September 16, 1959; as amended by Public Law 87-630, 87th Congress, S. 2008, approved September 5, 1962. In January 1961, Consolidated Irrigation District No. 10 was organized to negotiate and execute a repayment contract with the United States acting through the Bureau of Reclamation for the construction of the project works. The repayment contract executed between Consolidated

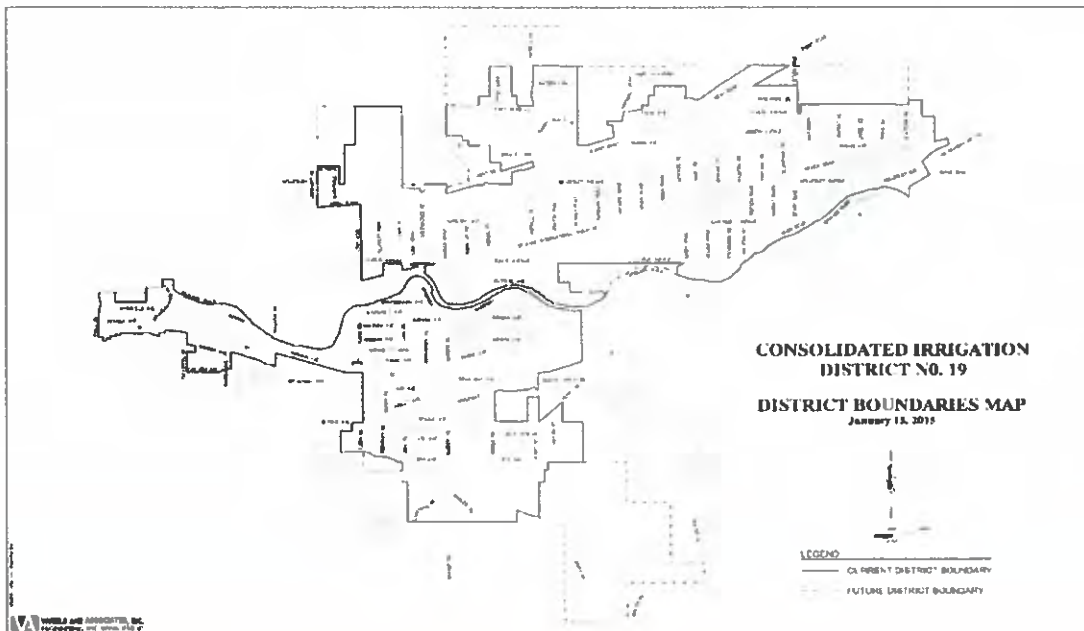
Irrigation District No. 19 and the United States of America and confirmed by proceedings in the Spokane County Superior Court, provided that before construction of the project works could be commenced, arrangements satisfactory to the Secretary of Interior be made by Consolidated Irrigation District with the other irrigation districts serving lands within the boundaries of Consolidated Irrigation District No. 19. These arrangements resulted in the discontinuance of separated operations by said districts prior to the first assessment by Consolidated Irrigation District No. 19 for water delivery from the Spokane Valley Project. The lands to be served by the new project and within Consolidated Irrigation District No. 19 were all lands formerly served under the Spokane River Canal System, excepting Pasadena Park Irrigation District, Trentwood Irrigation District and those lands in Spokane Valley District No. 10 lying west of Pines Road, or adjacent thereto, and the small area with access to Vera Irrigation District facilities in the Adams Road vicinity. The project was placed into service in 1966.

Project components included construction of the 11 existing elevated reservoirs, drilling of the District's existing wells and installation of pressure mains. Not included in that project were the Campbell, Barker, Granite and Chinook reservoirs, the Granite and Flora booster stations and various mains installed in recent years.

## Area Map

**Figure 1- Consolidated Irrigation District #19**

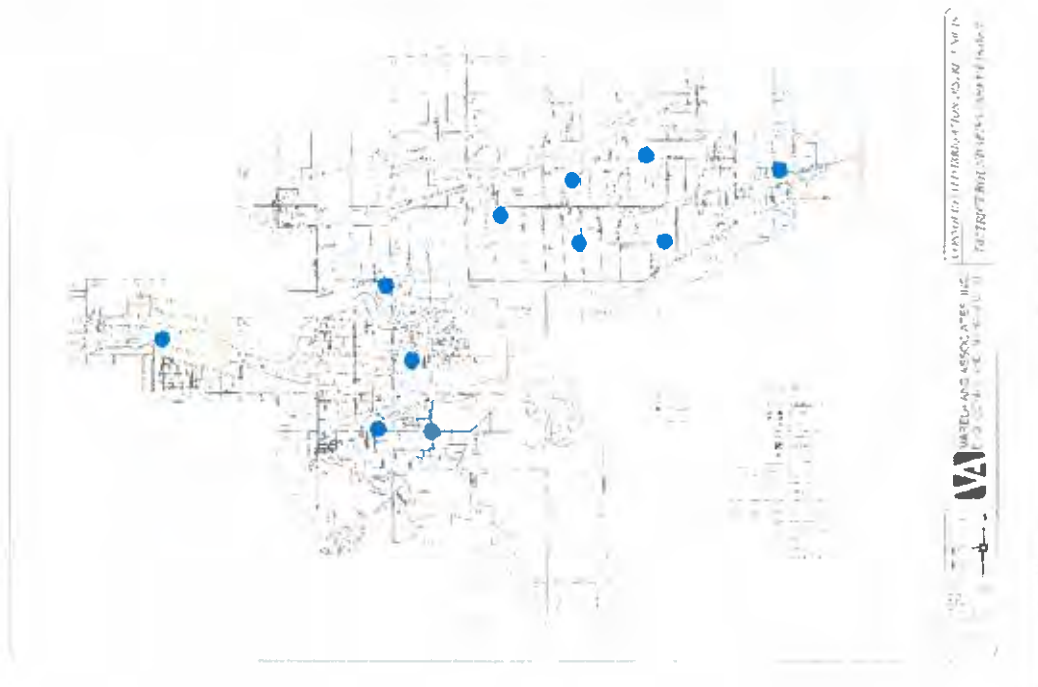
The Spokane Valley Project is located on a ten-mile stretch of land which straddles the Spokane River east of Spokane, Washington (Spokane County). Project lands cover about 7,100 acres of land in Washington, and about 100 acres in Idaho. Project lands are divided into six areas: the Carder, Greenacres, and Corbin areas on the south side of the river, and the Otis Orchards, West Farms, and East Farms areas to the north of the river.



## Project Location

The majority of the District is located in the unincorporated areas of the Spokane Valley both north and south of the Spokane River; a portion of the District sits inside the Cities of Spokane Valley and Liberty Lake. The District extends range from a westerly most point at Pines Road east to the State line and including wholesale service to a small area in Idaho. No natural boundaries are on the east and west. To the north and south are hills and mountains which form somewhat of a natural boundary. The map below shows the locations of the wells where the work for this project will be completed.

**Figure 2 –Meter Sites**



## Technical Project Description and Milestones

Consolidated Irrigation District #19 (CID#19) intends to improve groundwater management within the Spokane Valley Project by upgrading water measurement to electromagnetic meters with assistance from the WaterSMART Small-Scale Water Efficiency Grant. These meters will be integrated into the existing SCADA system for real-time data acquisition of water extractions from source wells for improved water management in CID#19.

The proposed project will upgrade **18** existing Sparling mechanical meters to electromagnetic meters with no moving parts featuring datalogging capabilities. The new meters will also be telemetry-ready with signal output capability to allow the District to connect these meters to the existing SCADA system. The new meters will also reduce the amount of staff time required for repairs. Meter downtime will be reduced improving water use records at CID#19. These meters will provide operational advantages to the district as well as improving data collected for water

management in the Spokane Valley Project.

The district is proposing to upgrade **Eighteen** mechanical propeller meters with electromagnetic meters in the coming year. The meters planned to be installed will be the McCrometer DuraMag electromagnetic meter. The DuraMag is a flanged full-bore electromagnetic meter that can be powered either by an internal lithium battery, AC, or DC power.



Upon the successful award of this proposal, meter upgrades will be able to begin immediately since meter pits are currently in place and the new meters will have a smaller footprint for easy integration. Meters will be ordered in the Winter of 2025/2026 for installation during maintenance intervals at the district.

## Evaluation Criteria

**Evaluation Criterion (A)- Project Benefits:** *Up to 35 points may be awarded based upon evaluation of the benefits that are expected to result from implementing the proposed project. This criterion considers a variety of project benefits, including the significance of the anticipated water management benefits and the public benefits of the project. This criterion prioritizes projects that modernize existing infrastructure in order to address water reliability concerns, including making water available for multiple beneficial uses and resolving water related conflict in the region.*

**Benefits to the Category A Applicant's Water Delivery System:** *Describe the expected benefits to the Category A applicant's water delivery system. Address the following: Clearly explain the anticipated water management benefits to the Category A applicant's water supply delivery system and water customers.*

- *Will the project result in more efficient management of the water supply?*

Yes. The proposed meter upgrades will improve water management. The existing water meters require physically going to each site and reading the flow meter and volume delivered. Also, the mechanical meters require regular maintenance. Spare parts are not available for the existing Sparling mechanical propeller meters and consequently, many of them are in disrepair. In addition, signal output from these meters is challenging as well for connection to the district's SCADA system. The new electromagnetic meters will have signal output capability for SCADA integration, on-board dataloggers for local storage of water diversion records, and will require less maintenance due to no moving parts. These upgrades allow the district managers to discern where the water is needed and which wells have the capacity to meet needs for district patrons.

With the diminishing water supply on the Spokane River as well as increased water demand on the alluvial aquifer, the ability to better manage water has become more critical. Accurate flow measurement will enhance our water management ability. Improved measurement will provide better water accounting accuracy. The more accurately water is measured, the less water loss occurs with faulty meter readings. This will allow the district to compare the total production volume from source wells to the volume delivered through consumption meters and better evaluate and reduce water system leakage.

- *Where any conserved water as a result of the project will go and how it will be used?*

SCADA-enabled flow meters will also help us provide better water distribution to our users. Since the source of all water used in CID#19 is groundwater, conserved water will remain in the local aquifer for future uses. The underground aquifer is the best storage location since water is protected from evaporation or consumption by non-beneficial uses. Improved measurement accuracy of extraction at source wells will aid the district in determining where losses are occurring in the service area and reduce unnecessary pumping which will conserve water in the aquifer for future use.

*Explain the significance of the anticipated water management benefits for the Category A applicant's water delivery system and customers. Consider:*

- *Are customers not currently getting their full water right at certain times of year?*

Yes. At certain times, the amount of water in the system is not able to meet user demand. In these situations, all users are asked to limit their water use or water is obtained through interties with adjacent suppliers. CID#19 has interties with several neighboring systems (see below) to compensate for emergencies that may occur, however, the improved accuracy and management derived from this project will improve resilience and lessen the need for reliance on these intertie relationships. Again, advanced metering with features including no moving parts, on-board datalogging, and signal-outputs for SCADA will enhance our ability to monitor these situations.

### 1.3.3 Interties with Neighboring Systems

The District has interties with several neighboring water systems. The table following contains intertie details.

**Table 1-1 Interties with Neighboring Systems**

System	Location	Size	Valve Type	Purpose	Metered?
Vera Water & Power	Ycca Ave & Mamer Rd	5"	Manually Operated	Emergency Only	No
Vera Water & Power	Mission Ave & Adams Rd	5"			
Modern Electric Water Co	Mission Ave & Pines Rd	5"			
Trentwood Irrigation Dist	Broad Ave & Boulder Rd	5"			
Spokane Industrial Park	Daton Ave & Flora	5"			
Liberty Lake Sewer & Water	Country Vista Dr & I-90	12"			
Pioneer Water Company	Trent Ave. & Long Rd. (St. Joes Cemetery exit)	2"			

- *Does this project have the potential to prevent lawsuits or water calls?*

Yes. No known lawsuits have been filed over water supply to our customers, however, CID#19 does have legal responsibilities related to its water rights. CID#19 has a responsibility under Washington state law to ensure that volume extracted by the source wells that provide water to the district do not exceed the vested water right for the district. The State of Washington may audit water rights in the valley if water resources diminish in the Spokane River Basin. With better flow measurement and record keeping, these issues will be easier to manage the finite resource.

- *What are the consequences of not making the improvement?*

If this improvement is not made, the existing mechanical meters installed at the source wells will continue to fall into disrepair and production data from these wells will become less and less accurate or even available. In addition, minimizing leakage losses within the distribution system

is currently a high priority of CID#19 which will become more difficult if accurate production data from the source wells is not achieved.

- *Are customer water restrictions currently required?*

Yes. At times, the amount of water in the delivery system is not able to meet user demand. Since the adoption of the WSP in 2016, CID#19 has implemented a Water Loss Action Plan to reduce losses related to system leakage and actions to reduce summer water use. Accurately metering all source wells will enhance our ability to monitor these situations. Other communities in the region including the City of Spokane have had to implement alternate day watering schedules, but CID#19 is hoping to avoid restrictions through voluntary actions.

- *Other significant concerns that support the need for the project.*

The older mechanical meters installed at the source wells are in different levels of disrepair since replacement parts are unavailable from Sparling Instruments. In the same manner, obtaining signal output from the existing mechanical meters to the district SCADA system is difficult. CID#19 would not be able to adequately manage water resources in the district without accurate and continuous metering.

**Broader Benefits:** *Describe the broader benefits that are expected to occur as a result of the project. Consider:*

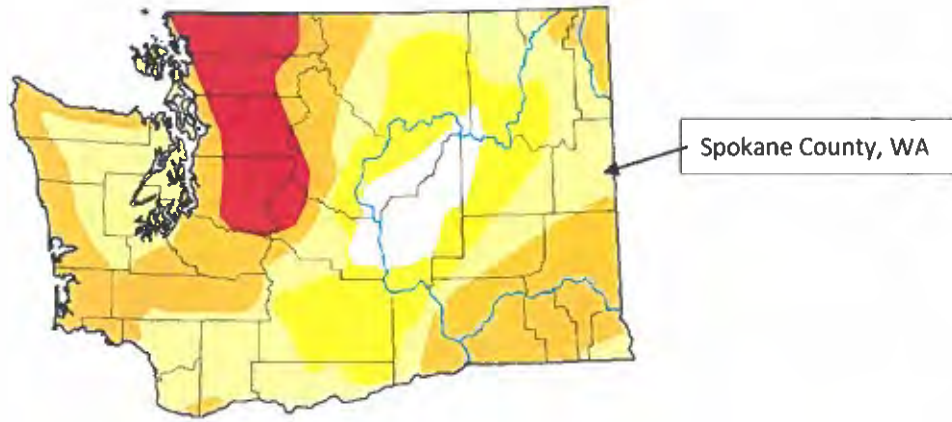
- *Will the proposed project increase collaboration and information sharing among water managers in the region? Please explain.*

Yes. The CID#19 service area spans approximately 10 miles east to west and hundreds of vertical feet which necessitates multiple pressure zones. CID#19 has a total of eight pressure zones; three on the south side of the Spokane River and five on the north side of the river. Both north and south systems make extensive use of PRVs and altitude valves to intertie the pressure zones and increase overall system redundancy and reliability. These improvements will allow us to provide more accurate information to district water managers. The proposed project will also benefit the neighboring systems with which CID#19 has intertie arrangements to enable CID#19 to understand the amount of water that it has to share with its neighbors.

The Corbin, Carder, and Greenacres pressure zones are south of the Spokane River and constitute what is referred to henceforth as the south system. The West Farms, Otis Orchard, East Farms, Granite, and Chinook pressure zones are north of the Spokane River and are henceforth referred to as the north system.

- *Is the project in an area that is experiencing, or recently experienced, drought or water scarcity? Will the project help address drought conditions at the sub-basin or basin scale? Please explain.*

Yes. Please see the map below from the U.S. Drought Monitor which shows conditions from **Sept. 26, 2023**, for the Spokane Valley in Washington State to be in **Moderate to Severe** Drought. This has actually improved from several years of Severe to Extreme or even Exceptional Drought in the same region.



- *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)? Please explain.*

Yes. According to the Center for Biological Diversity’s website - <https://www.biologicaldiversity.org>, the following threatened or endanger species exist in Spokane County, WA:

SpeciesbyCounty	
Related records:	-
Bull Trout	▶
Canada Lynx	▶
Monarch butterfly	▶
North American water snake	▶
Spokane's Catchfish	▶
Yellow-billed Cuckoo	▶

None of these species nor their habitat will be negatively impacted by this project. In fact, since the source wells of CID#19 are hydrologically connected to the Spokane River, any conserved water that remains in the local aquifer will support baseflows in the river to the benefit of those species reliant on the aquatic habitat of the Spokane River such as the Bull Trout or others that depend on the river.

- *Will the proposed project positively impacts/benefit various sectors and economies within the applicable geographic area (e.g., impacts to agriculture, environment, recreation, and tourism)? Please explain.*

Yes. This project will have a beneficial impact on several sectors of the local economy. This project will be beneficial to the agricultural economy by supplying irrigation water to over 7,000 acres in the Spokane Vally Project. CID#19 also provides water to several commercial and industrial customers within the project area which has a growing population of over 100,000 and depend on the district for culinary water, industrial uses and fire protection as well.

- *Will the project complement work being done in coordination with NRCS in the area (e.g., the area with a direct connection to the districts water supply)? Please explain.*

Yes. The local NRCS office and other local conservation districts are currently supporting district farmers with several on-farm efficiency programs, including nozzle exchange programs and soil health initiatives. Improved accuracy in the measurement of irrigation water delivered to farmers participating in these programs helps quantify the success and evaluation of these programs.

**Evaluation Criterion (B) Planning Efforts Supporting the Project:** *Up to 25 points may be awarded based on the extent to which the proposed on-the-ground project is supported by an applicant's existing water management plan, water conservation plan, System Optimization Review (SOR), or identified as part of another planning effort led by the Category A applicant. This criterion prioritizes projects that are identified through local planning efforts and meet local needs. **Plan Description and Objectives:** Is your project supported by a specific planning document or effort? If so, describe the existing plan. When was the plan developed? What is the purpose and objective of the plan?*

Yes. CID#19 has completed a Water System Plan which was adopted by the district's Board of Directors in September of 2016. Pursuant to Washington state statute, *WAC§246-290-496(1)*, all water systems are required to measure the volume of water produced or purchased using a source meter or other meter installed upstream of the distribution system.

CID#19's Water System Plan is driven by the implementation of Objectives of the district which include but are not limited to:

A: Consolidated Irrigation District No. 19, in addition to its statutory duties, exists primarily to deliver municipal, domestic, industrial, commercial, and irrigation water to the water users of the District in an efficient manner at the lowest possible cost consistent with good management practices.

B: The District shall promote the wise and efficient use of all available water, realizing that water is one of the most important resources we have.

C: The District must be continually alert to the technical advances and changes in operation and maintenance procedures and incorporate them wherever practical.

One of the major goals of the district is to become an even better steward of the water they manage. The district must address the continual need for improvements to the Spokane Valley Project (the Project) while acknowledging and understanding the benefits the Project provides to other resource and economic communities. By developing a comprehensive and flexible Water System Plan the district can protect its interests and those of Reclamation while expanding the number of water users who benefit from improvements in the facilities and operations of the Project. Such benefits may be of sufficient magnitude that they warrant investment by those outside Reclamation and the district. A well-developed Water System Plan, properly prioritized and tied to funding needs, will allow the System to sensibly pursue the most cost-effective improvements to the system. With a plan in-hand, the ability to understand opportunities for leveraging the resources of the district will be enhanced.

*Plan Development: Who developed the planning effort? What is the geographic scope of the plan? If the planning effort was not developed by the Category A applicant, describe the Category A applicant's involvement in developing the planning effort.*

The Water Supply Plan (WSP) was developed by the Board and Staff of CID#19, was finalized, and adopted in September of 2016. The WSP was developed to guide the activities and operations of CID#19 as a quasi-municipal corporation, organized pursuant to Title 87, Laws of the State of Washington, pertaining to the organization and operation of irrigation districts. The District and its Board of Directors are given the authority and power, as set forth in said Title 87, to adopt Bylaws, Rules, and Regulations for the government and management of the district and its water supply and distribution system. CID#19 is considered a **Category A** applicant since it is an irrigation district with water or power delivery authority.

The majority of the district governed by this WSP is physically located in the unincorporated areas of the Spokane Valley both north and south of the Spokane River; a portion of the district sits inside the Cities of Spokane Valley and Liberty Lake (See Figure 1). The district extents range from a westerly most point at Pines Road east to the State line and including wholesale service to a small area in Idaho. No natural boundaries exist to the east and west. To the north and south are hills and mountains which form somewhat of a natural boundary.

**Support for the Project:** Describe to what extent the proposed project is supported by the identified plan. Address the following:

- *Is the project identified specifically by name and location in the planning effort?*

Yes. Section 8.0 of the CID#19 WSP which addresses Water Use Efficiency (see excerpt below) and the requirement by statute in the State of Washington *WAC §246-290-810* for meters to be installed at source wells for the measurement of all produced water.

## **8.0 WATER USE EFFICIENCY**

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### **8.1 Introduction**

WAC 246-290-810 requires that Water System Plans and Small Water System Management Programs must describe the municipal water supplier's existing Water Use Efficiency (WUE) Program. The municipal water supplier must continue existing levels of water use efficiency.

### **8.2 Metering Requirements**

#### **8.2.1 Source Meters**

WAC 246-290-496(1) requires systems to measure the volume of water produced or purchased using a source meter or other meter installed upstream of the distribution system. The requirements of this section of the WAC do not apply to volumes of water delivered to a public water system through an emergency intetic; however, inteties used as permanent or seasonal sources must have meters.

- *Is this type of project identified in the planning effort?*

Yes. Metering of source wells for produced water and consumptive meters to measure deliveries to water users is addressed in the CID#19 Water System Plan. Metering both source wells and consumption is critical to determining Distribution System Leakage and its reduction in the district.

- *Explain whether the proposed project implements a goal, objective, or address a need or problem identified in the existing planning effort.*

Yes. This project is directly related to the wise and efficient use (Objective B) of available water in the district. Efficient water management, including the reduction or elimination of water leaks can't be done without accurate water measurement.

- *Explain how the proposed project has been determined as a priority in the existing planning effort as opposed to other potential projects/measures.*

The CID#19 Board of Directors considers infrastructure upgrades that improve water use efficiency and water management a priority as identified in the Water System Plan approved in Sept, 2016. Since the adoption of the WSP in 2016, Distribution System Leakage (DSL) is an issue that CID#19 has been addressing through goals to directly reduce DSL and summer usage. This will be accomplished through accurate metering of source wells and comparing those values to consumption meters to identify and reduce leakage. Any project encouraging better water use efficiency is a priority.

The CID#19 Board of Directors has resolved to pursue funding for this project at its **May 8, 2024** board meeting to initiate meter upgrades. A copy of this resolution is an attachment at the end of this document titled "Board Resolution"

**Evaluation Criterion (C) Implementation and Results:** *Up to 20 points may be awarded based upon the extent to which the applicant is capable of proceeding with the proposed project upon entering into a financial assistance agreement. Applicants that describe a detailed plan (e.g. estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates) will receive the most points under this criterion.*

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

Jan, 2025: Submit Application to Bureau

June, 2025: Successful notification of award from the Bureau

Sept, 2025: Sign contract with the Bureau

Sept, 2025: Initiate Environmental Compliance with local Bureau office.

Oct, 2025: Order flowmeters and necessary materials from manufacturer/suppliers

Nov, 25 – Mar, 26: Install at least 18 meters at 11 source well locations with signal output capabilities for SCADA

Spring, 2026: Finalize any installations not completed the preceding winter. Complete SCADA Integration with new meter signals.

June, 2026: Prepare Final Project Report for Bureau

- *Proposals with a budget and budget narrative that provide a reasonable explanation of project costs will be prioritized under this criterion.*

Please refer to Section D.2.2.3. for a detailed budget and budget narrative.

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

No new permits will be required to accomplish this project. Work is considered operational improvements which can be accomplished within existing environmental restrictions. Work will be completed within existing meter pits.

• Identify and describe any engineering or design work performed specifically in support of the proposed project. What level of engineering design is the project currently? If additional design is required, describe the planned process and timeline for completing the design.

No engineering or design work will be required. The work proposed in this project is considered to be upgrade of existing facilities. Signal output will be configured at the factory to match requirements of CID#19's SCADA system.

• Does the applicant have access to the land or water source where the project is located? Has the applicant obtained any easements that are required for the project? If the applicant does not yet have permission to access the project location, describe the process and timeframe for obtaining such permission.

All work will be performed within existing meter pits. No easements or permission is required since the system is owned by the Bureau and operated and maintained by CID #19.

• Identify whether the applicant has contacted the local Reclamation office to discuss the potential environmental and cultural resource compliance requirements for the project and the associated costs. Has a line item been included in the budget for costs associated with compliance? If a contractor will need to complete some of the compliance activities, separate line items should be included in the budget for Reclamation's costs and the contractor's costs.

Clyde Lay and Rebecca Doolittle have been contacted at the Bureau office in Ephrata, WA and have advised CID#19 that Environmental Compliance would be minimal. Due to the nature of the work being done in this project, assessment is likely to be a "No Potential to Effect". This process will also include a Categorical Exclusion Checklist for NEPA. Compliance costs have been estimated by the Bureau at \$769 as reflected in the budget.

**Evaluation Criterion (D) Nexus to Reclamation:** Up to 5 points may be awarded based on the extent that the proposal demonstrates a nexus between the proposed project and a Reclamation project or activity. Describe the nexus between the proposed project and a Reclamation project or activity, including.

• Is the proposed project connected to a Reclamation project or activity? If so, how?

Yes. CID#19 is within the Spokane Valley Project and has a relationship with Reclamation that dates back to the 1950s when the initial evaluation of the project area was conducted by the Bureau of Reclamation.

• Does the applicant have a water service, repayment, or operations and maintenance(O&M) contract with Reclamation?

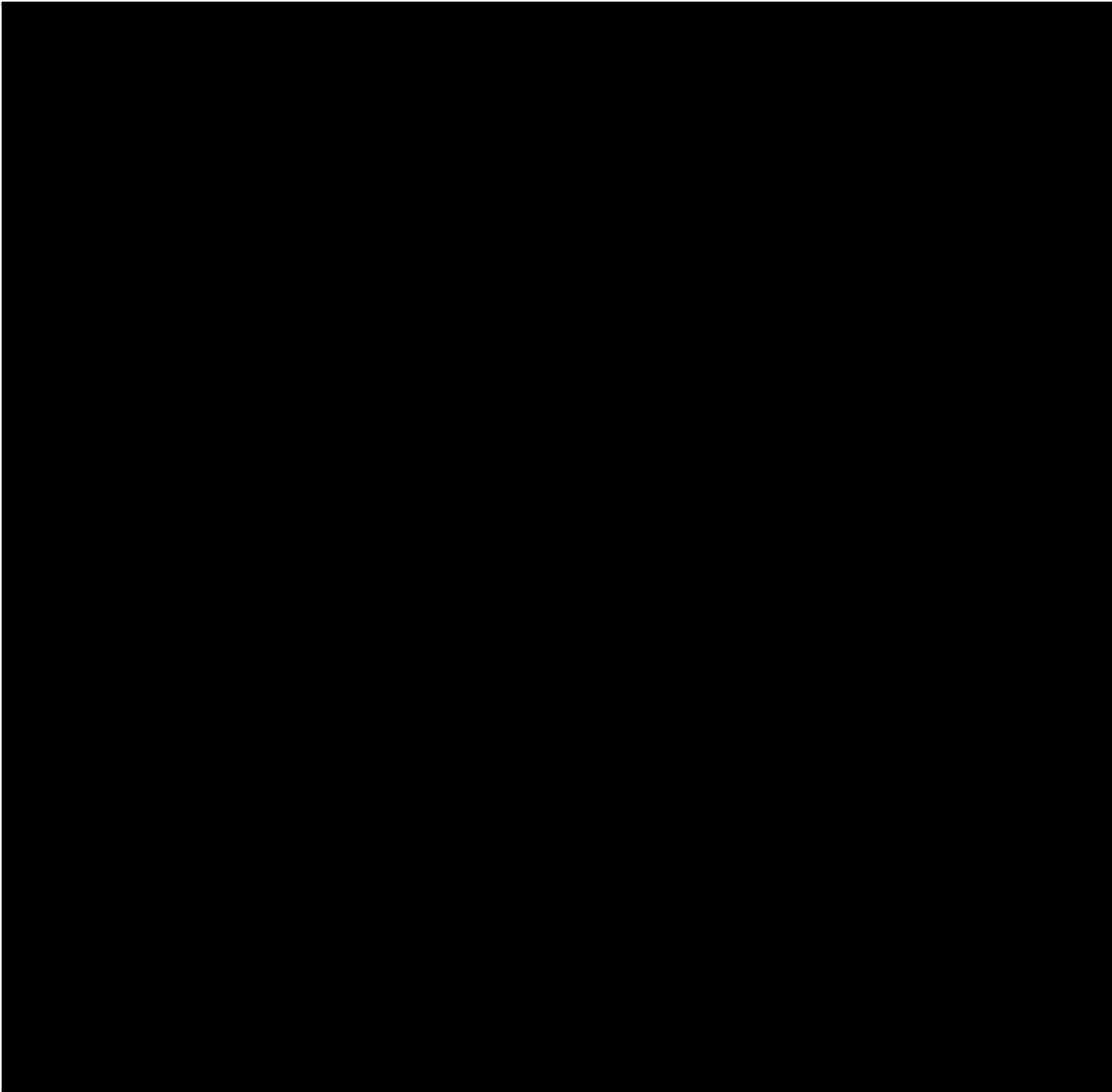
Yes. The Bureau of Reclamation owns the physical water system; however, Consolidated Irrigation District #19 operates and maintains the physical system for the Bureau of Reclamation.

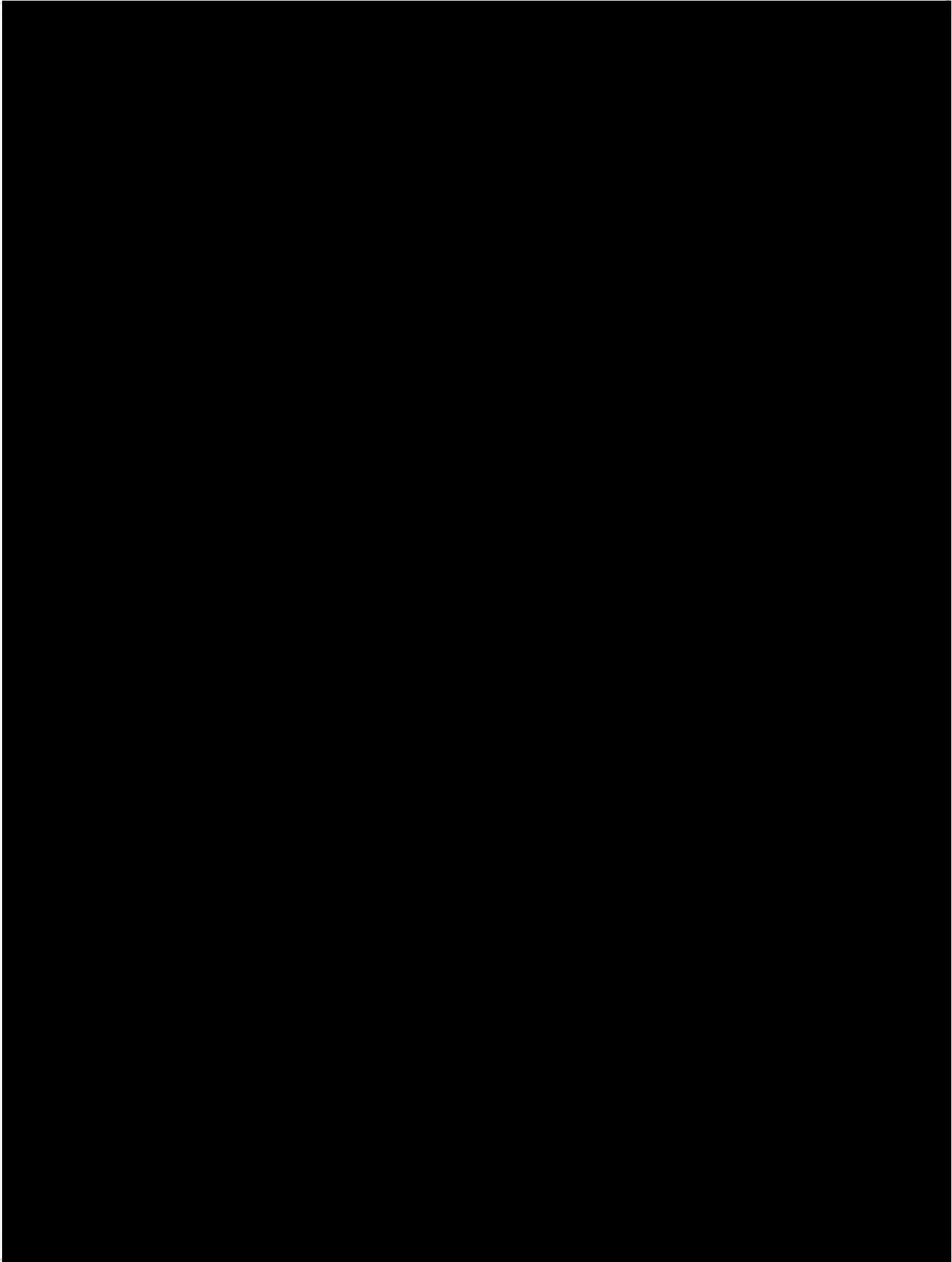
- *If the applicant is not a Reclamation contractor, does the applicant receive Reclamation water through a Reclamation contractor or by any other contractual means?*

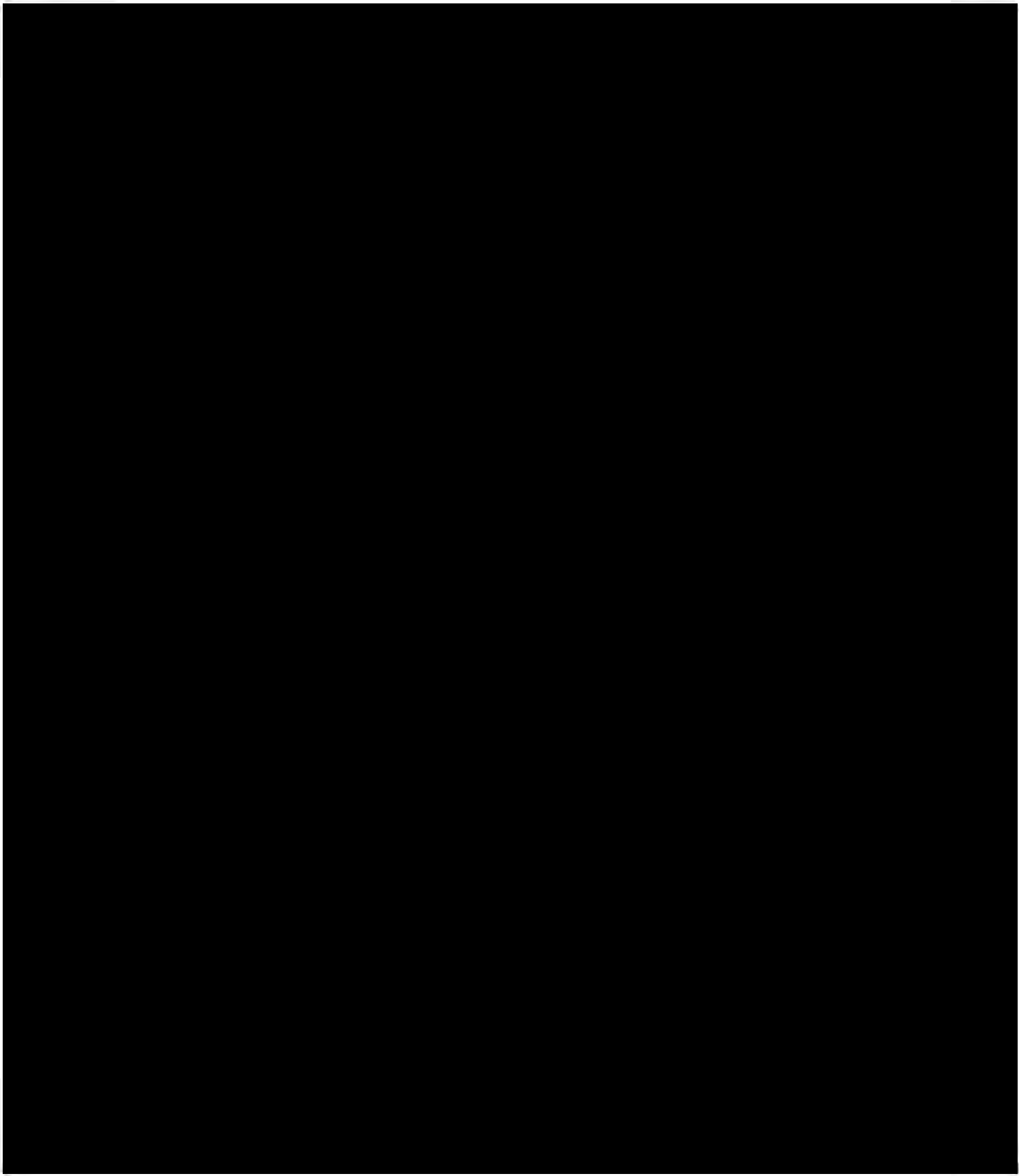
CID#19 does not receive water through a contractor but operates the system for the Bureau of Reclamation.

- *Will the proposed work benefit a Reclamation Project Area or activity?*

Yes. This project will benefit the water users in the Spokane Valley Project Area by improving the accuracy by which water is measured at the source wells for CID#19 which will improve the district's ability to evaluate water use efficiency within the district and reduce Distribution System Leakage (DSL).







## D.2.2.3. Project Budget & Narrative

### Project Budget

#### Funding Plan

Table 1 - Total Project Cost Table

Funding Sources	% of Total Project Cost	Total Cost by Source
Costs to be reimbursed with the requested federal funding	47.9%	\$100,000
Costs to be paid by applicant, Consolidated ID #19	52.1%	\$108,843
<b>TOTAL PROJECT COST</b>	<b>100%</b>	<b>\$208,843</b>

Table 2 - Budget Proposal

Budget Item Description	Computation \$/unit	Quantity	Quantity Type (hours/days)	Total Cost
<b>Salaries and Wages</b>				
Meter Removal/Installation	\$60.00	576	hrs	\$34,560
				\$34,560
<b>Fringe Benefits</b>				
				\$0
<b>Travel</b>				
No federal funds to be used for travel to install equipment				
<b>Environmental Compliance Costs</b>				
				\$769
<b>Equipment</b>				
10" DuraMag Electromagnetic Meter	\$5,067.00	2	ea	\$10,134
12" DuraMag Electromagnetic Meter	\$5,753.00	12	ea	\$69,036
14" DuraMag Electromagnetic Meter	\$9,365.00	4	ea	\$37,460
<b>Subtotal</b>				<b>\$116,630</b>
<b>Supplies and Materials</b>				
10" 501 Dresser Coupling Romac	\$395.93	2	ea	\$792
10" x 3' DIP Spool	\$1,142.15	2	ea	\$2,284
10" 1/8" Gaskets (\$26.73 x 5=\$133.63 ea)	\$133.63	2	ea	\$267
12" 501 Dresser Coupling Romac	\$479.26	12	ea	\$5,751
12" x 3' DIP Spool	\$1,493.33	12	ea	\$17,920
12" 1/8" Gaskets (\$28.49 x 5=\$142.44 ea)	\$142.44	12	ea	\$1,709
14" 501 Dresser Coupling Romac	\$685.69	4	ea	\$2,743
14" x 3' DIP Spool	\$2,197.89	4	ea	\$8,792
14" 1/8" Gaskets (\$53.23 x 5=\$266.15 ea)	\$266.15	4	ea	\$1,065
Fasteners (Nuts & Bolts) 10" & 12"	\$96.90	14	ea set	\$1,357
Fasteners (Nuts & Bolts) 14"	\$155.38	4	ea set	\$622
<b>Subtotal</b>				<b>\$43,301</b>
<b>Contractual/Construction</b>				
SCADA Integration	\$7,500.00			\$7,500
<b>Subtotal</b>				<b>\$7,500</b>
<b>Total Direct Costs</b>				<b>\$202,760</b>
<b>Indirect Costs</b>		3%		<b>\$6,082.79</b>
<b>Total Estimated Costs</b>				<b>\$208,843</b>

Funding for our project will be provided by the WaterSMART grant and the CID#19. No letters of commitment from outside sources will be needed.

### **Budget Narrative**

The estimated project cost is **\$208,843**. Upon delivery of the supplies, the grant funds from the BOR will help pay for the equipment purchased from the meter distributors. Costs for meters and supplies/materials have been obtained from distributors and are included in the above budget. The costs for new meters, supplies and equipment to upgrade meters is **\$159,931**. Quotes for meters, dresser couplings, nuts, bolts, and other fasteners have been obtained and included as **Attachments** to this application. Environmental Compliance costs have been estimated by the Bureau at **\$769** and included in the budget as well.

Labor to install 18 meters by district employees is **\$34,500**. This is estimated from recent work at \$60/hour @ 32 staff hours to remove old meters and install new meters (**\$1,920**) per well site. This will be considered an in-kind contribution to the project. Expenses required to integrate the signal output to the existing SCADA system is **\$7,500**. Three percent (3%) indirect or contingency costs of **\$6,082.79** have been included for unforeseen expenses.

In-kind contributions from CID#19 will be the cash required to purchase meters and installation materials as well as staff time to remove/install meters. Cash used to purchase meters and installation materials that is not reimbursed by the Bureau (above the \$100,000 request) will be used as match. District staff will perform the field work to remove old meters and install new meters, but no reimbursement will be sought from the Bureau for these costs. Consequently, this staff time will be an in-kind contribution. CID#19 will be responsible for all the labor, heavy equipment, and the materials needed for meter removal/installation at the sites to accommodate the new equipment. In-kind contributions that are not covered in the budget will be made up by the CID#19 Operating funds.

### **Total Costs**

The district requests **\$100,000** from the Bureau's Small-scale Water Efficiency Grant. The remaining **\$108,843** will come from the Consolidated Irrigation District #19 in cash and in-kind services.

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

CID#19 is registered on the SYSTEM for Award Management (SAM). The unique entity identifier is **LHSTPGAKWJ23**. The Consolidated Irrigation District #19 will maintain an active SAM registration throughout the project.

### **Section H: Environmental and Cultural Resources Compliance**

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

CID#19 plans to accomplish meter upgrades or improvements with this project. The meters will be in the same locations as previous meters and any environmental impacts will be minimal.

*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 will not be affected.

*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.*

No.

*When was the water delivery system constructed?*

Project construction began in 1963 with surveys and test drilling. Survey work was carried out by government forces. The first contract let in association with the project was awarded in February 1963, to Holman Drilling Corporation, for drilling of test wells. Holman Drilling also contracted to drill exploratory pilot holes, and in May 1964, Holman received the contract to drill 34 water supply wells at 11 different sites. Drilling of the first wells began in June 1964, and work under the contract was completed in February 1965.

In early 1965, Reclamation contracted with the Lester N. Johnson Company to install more than 85 miles of concrete distribution pipe. Work under the contract began in early July and by the end of 1965, 28 miles of pipe had been laid. The erection of 11 steel storage tanks, each with a capacity of 50,000 gallons, was contracted to Chicago Bridge and Iron Company, Inc. Erection of the first tank began in early August 1965. By the end of the year, the first tank was complete and the second tank partially complete. The contract for earthwork and construction of 34 deep-well pump plants was awarded to Emmett Nelson, Inc., in October 1964. Work under the contract began on October 6.

Chicago Bridge and Iron completed the last storage tank in mid-November 1966, several months ahead of schedule. Installation of the pipelines by the Lester N. Johnson Company was essentially complete by the end of 1966. The last of the 34 pump units, supplied by Layne and Bowler, Inc., were delivered in February 1966. The last pump plant was completed by Emmett Nelson, Inc., on March 1, 1967. The project was officially dedicated on October 14, 1967, and turned over to the Consolidated Irrigation District for operation and maintenance on January 1, 1968.

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

No modification of the distribution system will be necessary under this project. Meters will be placed in existing meter pits without disturbing the earth or modification of existing structures.

*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

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

No

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

No

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

No

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

No



# Attachments



# Quotation

Quote Number: 101042560v3  
Use quote number at time of order to ensure  
that you receive prices quoted

McCrometer Inc.  
3255 W Stetson Ave  
Hemet, CA 92545  
Phone: (951) 652-6811  
Website: www.mccrometer.com

Quote Date: 05/02/2024

Quote Expiration: 06/01/2024

Consolidated Irrigation District #19

Name: Shane Sheppard  
Phone: 509-924-1855  
Email: consolidatedirrigation@comcast.net

Sales Contact: Ken Quandt Email: kenq@mccrometer.com

## PRICING QUOTATION

Line	Part Number	Description	Qty	Unit Price	Net Unit Price	Extended Price
1	MCNPN	DM12-15RE3001 12" DuraMag Electronic Meter	12	5,753.00	5,753.00	69,036.00
2	MCNPN	DM14-15RE3001 14" DuraMag Electronic Meter	4	9,365.00	9,365.00	37,460.00
3	MCNPN	DM10-15RE3001 10" DuraMag Electronic Meter	2	5,067.00	5,067.00	10,134.00
Grand Total						\$ 116,630.00

## NOTES

Sales Contact:  
Name: Ken Quandt  
Title:  
Phone:  
Email: kenq@mccrometer.com



**H.D. FOWLER  
COMPANY**

PO Box 160 • Bellevue, WA • 98009-0160



To: SHANE  
consolidatedirrigation@comcast.net  
CONSOLIDATED IRRIGATION DISTRICT #19 (035650)  
12/18/24 02:02:45pm

From: Lance Lockmer  
Phone: (509) 568-8400 x2540

## Order Acknowledgement

This order requires confirmed receipt of this acknowledgement because it contains special order items which are indicated by two asterisks (\*\*). Please approve this order by simply replying to this email message, or by printing the attachment, signing and returning it back to us.

Non-Stocks, Special Orders or Engineered items may not be returnable. Those that are returnable are subject to a minimum 25% restock fee. Some orders may also have applicable freight charges not shown on this Order Acknowledgement.

I accept this as written. Please get this order for me as listed below.

Signature \_\_\_\_\_ Date \_\_\_\_\_ Print Name \_\_\_\_\_

**Your PO:** NEW SOURCE METER INSTALLS      **Project:**  
**Ordered By:** SHANE      **Order Date:** 12/18/24  
**Est. Ship Date:** 12/18/24      **Order #:** O8402951  
**Shipping From:** Spokane Warehouse      **Ship VIA:** OUR TRUCK

**Freight Terms:**

Line#	Item	Unit	Qty	Price	Ext. Price	Tax
1	12" BLACK END RING FOR 501 COUPLING ROMAC	EA	4	58.40	233.60	Y
2	12.70 - 12.80B BLACK SBR GASKET FOR 501 COUPLING ROMAC	EA	4	46.29	185.16	Y
3	12" MIDDLE RING FOR 501B COUPLING ROMAC	EA	2	129.19	258.38	Y
4	5/8" X 10-1/2" BOLT & NUT FOR 501 COUPLING ROMAC	EA	16	12.29	196.64	Y
5	14" YELLOW END RING FOR 501 COUPLING ROMAC	EA	2	93.67	187.34	Y
6	13.85 - 14 10B YELLOW SBR GASKET FOR 501 COUPLING ROMAC	EA	2	46.29	92.58	Y
8	** 14" MIDDLE RING FOR 501B 7" COUPLING ROMAC	EA	1	234.71	234.71	Y
9	5/8" X 11-1/2" BOLT & NUT FOR 501 COUPLING ROMAC	EA	9	12.78	115.02	Y
11	** 12" X 3 0" DIP SPOOL FLG X FLG, CEMENT LINED, ASPHALTIC COATING OUTSIDE	EA	2	1,371.29	2,742.58	Y
12	** 14" X 3 0" DIP SPOOL FLG X FLG, CEMENT LINED, ASPHALTIC COATING OUTSIDE	EA	1	2,018.26	2,018.26	Y
13	12" 1/8" FULL FACE GASKET, NSF-61 EPDM, 150#	EA	10	26.16	261.60	Y
14	14" 1/8" FULL FACE GASKET, NSF-61 EPDM, 150#	EA	5	48.88	244.40	Y
15	14" 1/8" RING GASKET RED RUBBER, 150#	EA	1	8.00	8.00	Y

Total 6,778.27  
Freight 0.00  
Tax 603.27  
Grand Total 7,381.54



**H.D. FOWLER  
COMPANY**

**Customer:** CONSOLIDATED IRRIGATION DISTRICT #19  
**Estimator:** Lance Lockmer  
**Job Name:** 10" METER MATERIAL  
**Location:** SPOKANE VALLEY, WA

**Estimate:** E576667  
**Bid Date:** 1/6/2025

Line	Qty	UoM	Description	Unit Price	Extended Price
1	2	EA	10" BLACK END RING FOR 501 COUPLING ROMAC	48.60	97.20
2	2	EA	10.70 - 10.80B BLACK SBR GASKET FOR 501 COUPLING ROMAC	36.20	72.40
3	1	EA	10" MIDDLE RING FOR 501B COUPLING ROMAC	107.61	107.61
4	7	EA	5/8" X 10-1/2" BOLT & NUT FOR 501 COUPLING ROMAC	12.29	86.03
5	1	EA	10" X 3'0" DIP SPOOL FLG X FLG, CEMENT LINED, BIT COATED	1,047.84	1,047.84
6	5	EA	10" 1/8" FULL FACE GASKET, NSF-61 EPDM, 150#	24.52	122.60
<b>Approximate Total</b>					<b>1,533.68</b>
Sales Tax					8.90%
\$					<b>1,670.18</b>

Cost for 1 Romac Coupling for a 10" meter change out = \$363.24  
 Cost for 1 10" x 3' spool needed for each 10" meter install = \$1,047.84  
 Misc. Gaskets for installat plus the bolts and nuts which were already provided  
 8.9Tax to be included

FACSIMILE TRANSMITTAL

All Western  
18225 E. Euclid Ave  
Spokane Valley, WA 99216

Telephone: (509) 924-6755  
Fax #: (509) 924-4538  
allwesternind@yahoo.com

Date: 11/15/2025

To: Consolidated Irrigation

Page: Share of \_\_\_\_\_

Attn: Russell

Email: consolidatedirrigation@comcast.net

From: \_\_\_\_\_ P.O. #: Quote

Phone #: (509) 924-1855

QUANTITY	DESCRIPTION	PRICE	AVAILABILITY
504 <del>720</del>	1"-8x5" Hex C/S Gr 5 zp	\$ <u>3.72</u> /ea	1-1/2 weeks
504 <del>720</del>	1"-8x5" Hex C/S Gr 8 zp * USA Domestic	\$ <u>9.36</u> /ea	1-1/2 weeks
<del>720</del> 720	7/8"-9x4 1/2" Hex C/S Gr 5 zp	\$ <u>2.32</u> /ea	3-5 days
720	7/8"-9x4 1/2" Hex C/S Gr 8 zp * USA Domestic	\$ <u>6.46</u> /ea	1-1/2 weeks
504	1"-8 2-H Heavy Hex Nut BIK	\$ <u>0.80</u> /ea	3-5 days
720	7/8"-9 2-H Heavy Hex Nut BIK	\$ <u>0.53</u> /ea	3-5 days
Grand Total:		\$ <u>13,698.72</u>	
Gr 5 Total:		\$ <u>3,545.28</u>	
Gr 8 Total:		\$ <u>9,368.64</u>	
Nuts Total:		\$ <u>784.80</u>	

# Letters of Support



IN REPLY REFER TO:

## United States Department of the Interior

BUREAU OF RECLAMATION  
Ephrata Field Office  
32 C Street NW  
Ephrata, WA 98823-0815



EPH-2002  
2.2.3.19

Shane Sheppard  
Consolidated Irrigation District 19  
120 North Greenacres Road  
Spokane, Washington 99016

Subject: Letter of Support for Consolidated 19 Irrigation District's Grant Application

Dear Mr. Sheppard,

I am writing on behalf of the Ephrata Field Office to express our strong support for the Consolidated 19 Irrigation District's application for the Small-Scale Water Smart Grant. As a Reclamation District under our jurisdiction, Consolidated 19 has consistently demonstrated its capability and commitment to efficient water management and infrastructure improvements.

Our office has worked closely with Consolidated 19 on a variety of projects, and through these collaborations, they have proven their ability to complete projects in a timely and efficient manner. The replacement of all 34 source turbine meters, as proposed in their current grant application, is expected to significantly enhance their water measurement capabilities and overall efficiency.

Consolidated 19 has always been an exemplary steward of water resources, continually seeking innovative methods to improve service delivery and manage costs effectively for their customers. The installation of new meters will not only improve their operational efficiency but will also contribute to better water conservation and resource management within the community.

We believe that the successful execution of this project will serve as a benchmark for other districts aiming to enhance water management practices. Therefore, we are pleased to support their grant application and look forward to the project's positive impact on our water management efforts.

Thank you for considering this application. We are confident that the Consolidated 19 Irrigation District will continue to make significant strides towards improved water resource management with the support of the Water Smart Grants.

Sincerely,

**CLYDE LAY** Digitally signed by CLYDE LAY  
Date: 2024.05.14 09:33:03 -0700

Clyde Lay  
Deputy Field Office Manager  
Ephrata Field Office

INTERIOR REGION 9 • COLUMBIA-PACIFIC NORTHWEST

IDAHO, MONTANA, OREGON, WASHINGTON  
PARTIAL



STATE OF WASHINGTON  
**DEPARTMENT OF HEALTH**  
*EASTERN DRINKING WATER REGIONAL OPERATIONS*  
*Temporary Mailing Address: 2714 N. Mayfair St., Spokane, W.I. 99207*  
*(509) 329-2100 • 711 Washington Relay Service*

May 13, 2024

To: Bureau of Reclamation

Subject: Consolidated Irrigation District #19; PWS ID # 10220 & 10221: Spokane County  
**Letter of Support**

Thank you for providing me the opportunity to support Consolidated Irrigation District's request for a Water Smart grant to upgrade 34 source production meters from propeller to electromagnetic meters. The Department of Health – Office of Drinking Water requires municipal water suppliers, such as Consolidated ID#19, to accurately measure all their water sources in addition to their service lines. Tracking this information allows public water systems to efficiently determine distribution system leakage and address leaks and breaks quickly to conserve water. This Water Smart grant will benefit the water system by allowing them to meet required monitoring by accurately measuring the amount of water produced and the ability to identify and address leaks quickly and efficiently.

Thank you for your consideration. If you have any comments or questions, please contact me at (509) 329-2122 or by email at [brenda.smits@doh.wa.gov](mailto:brenda.smits@doh.wa.gov).

Sincerely,

Brenda Smits  
Office of Drinking Water, Regional Planner