

WaterSMART Small-Scale Water Efficiency Projects

Funding Opportunity Announcement No. R24AS00059

Replacing Outdated Manual Meters with Automated Meter Reading (AMR) Meters



Colton Water District – Clackamas County – Oregon

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1.0 Technical Proposal

1.1 Executive Summary

Submission Date: July 9, 2024

Applicant: Colton Water District

Applicant City, County, State: Colton, Clackamas Oregon

Applicant Category A

The Colton Water District (CWD), located in northwest Oregon, is applying for grant funding to replace the District's 499 outdated manual-read water meters with advanced Automated Meter Reading (AMR) meters and the associated software for integration with the CWD's billing system. This technology will provide CWD and its water customers with the ability to identify and address leaks immediately, track water use, and significantly increase water efficiency. Approximately 85% of existing meters were installed between 1994-1995. The remainder were installed between 1964 and 1965.

This initiative supports CWD's comprehensive Water Management Plan and the recommendations set forth in the CWD's Water System Master Plan—specifically, the objective to modernize infrastructure and enhance sustainability in water resource management. It also represents a critical step towards modernizing the CWD's aging water infrastructure and achieving long-term sustainability goals.

The goals of this project are to increase the efficiency of the meter reading process, accurately account for metered water use, and reduce lost/unaccounted (non-revenue) water due to leaks. Additionally, this project aims to enhance water management and conservation efforts by providing accurate real-time water usage data, enabling prompt leak detection, and significantly **reducing CWD's current estimated water loss of 40% by 23% (5,273,860 gallons)**.

The project's timeline will begin on July 15, 2025, and be completed by April 15, 2026. This project is not located on a federal facility.

1.2 Background Information

The Colton Water District (CWD) was established in 1920 to serve a small number of residents in Clackamas County, Oregon. The original system consisted of an infiltration gallery on Canyon Creek with a hypochlorite feed system for disinfection added later. In 1965, CWD's water source was moved to Jackson Creek to improve water quality. Jackson Creek, a tributary of Milk Creek, originates in the foothills of the Cascade Mountain range near Goat Mountain (elevation 4,203 feet, Latitude 45.13151° N, Longitude -122.29675° W) and has no major tributaries.

The revised system included an intake rate of about 400 gallons per minute and a chlorinator for disinfection. During this period (1964-1965), the majority of the manual-read meters were installed. This treatment plant served the district until 1981 when a new treatment plant, distribution system improvements, and a new reservoir were constructed. This plant still serves the district but requires improvement or replacement.

CWD is governed by a five-member board serving four-year staggered terms. The Board of Directors is elected by residents within the boundaries of CWD. CWD serves approximately 1,500 people and maintains about nine miles of distribution mains ranging from 4 to 10 inches in diameter, located both underneath and adjacent to the existing road surfaces. Fire hydrants and pressure relief valves are distributed throughout the district (map included with attachments).

CWD produces, on average, 3,653,000 gallons of water in winter and 5,798,000 gallons in summer. Potable water is currently used for commercial and domestic consumption as well as firefighting. As mentioned previously, CWD's water loss is approximately 40%.

CWD is responsible for the management, treatment, and distribution of water to approximately 1,500 residents. For additional visual context, please refer to the topographical map on page 3 and the district map in the Attachments.

1.3 Technical Project Description

The project involves replacing all existing 499 customer manual-read water meters with advanced Automated Meter Reading (AMR) meters within the Colton Water District (CWD). The majority of CWD's current manual-read meters are 5/8" x 3/4", with a few larger connections serving commercial customers and three schools.

The CWD has selected the Master Meter BLMJ Multi-Jet meter, including registers and necessary components, the Allegro Mobile Laptop Reading System, and the Master Meter Harmony® Encore™ Meter Data Management software. This meter is a durable, accurate, and cost-effective water metering solution with robust AMR capabilities. It exceeds the AWWA C708 standard with sensitivity to measure water flowing as low as 1/8 gallon per minute. This meter is particularly suitable for CWD due to its reliable performance and affordability, without being encumbered with extensive advanced features that CWD does not require.

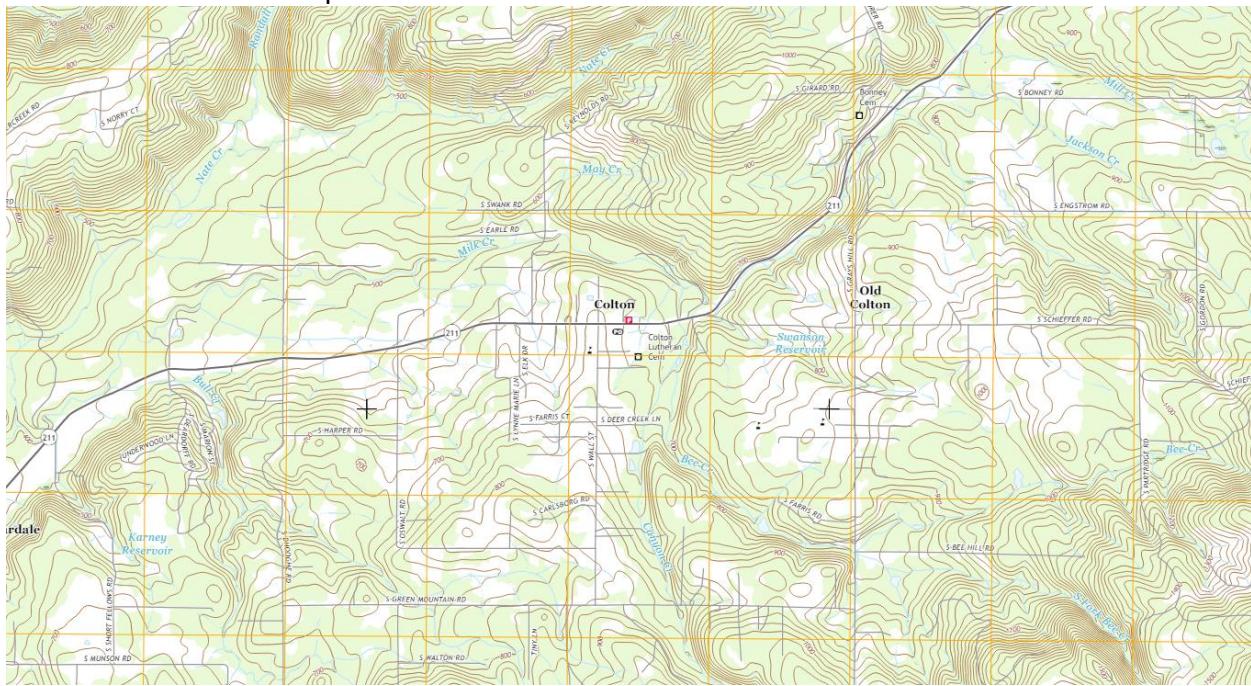
Installation of the new meters is straightforward. CWD will create a GPS mapping of all existing meters. Once GPS mapping is complete and the project implementation plan has been approved, the approved vendor will remove existing manual-read meters, clean debris out of the meter boxes, and install the new meters. All installation work will be executed by the contracted vendor.

It is estimated that this project will reduce unaccounted or non-revenue water by between 23% through improved efficiency and better water management.

Areas impacted by construction include primary and secondary roadways. This impact will be mitigated by the use of highway flaggers to ensure the safety of the installation team. Once the meters are installed, testing will be completed, followed by staff training.

1.4 Project Location

Colton Water District (CWD) is located in Clackamas County, in northwest Oregon. Colton is an unincorporated community located on Oregon Hwy 211 (between Estacada and Molalla). The project latitude is 45° 10' 19" N / 122° 26' 14" W. An additional district map is included with the Attachments.



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2.0 Evaluation Criteria

2.1 Evaluation Criterion A: Project Benefits (35 points)

Clearly explain the anticipated water management benefits to the Category A applicant's water supply delivery system and water customers. Consider: Will the project result in more efficient management of the water supply?

Yes. This project will definitely result in a more efficient management of water supply. The average age of the Colton Water District (CWD) meters are between 30-60 years old. By replacing the outdated, under-registering water meters, CWD will be able to reduce the lost/unaccounted (non-revenue) water by an estimated 23%. The improvements in water management efficiency include the following:

- **Enhance our water supply** by reducing the need for additional water sourcing helping to ensure a more reliable water supply during peak demands and drought conditions.
- **Provide enhanced metering accuracy** that will provide precise and reliable readings, significantly reducing inaccuracies associated with manual readings. This accuracy ensures that customers are billed correctly for their actual water usage, fostering trust and satisfaction.
- **Enables the district to monitor for leaks** in real-time and quickly identify leaks within the system. Early detection prevents prolonged water loss, conserving valuable resources and minimizing damage to infrastructure.
- **Provide customers access to detailed water usage data**, empowering them to manage their consumption more effectively and identify potential issues (leaks) early.
- **Improve operational efficiency** by reducing time required to read meters enabling the CWD to focus on maintenance and/or service improvements.
- **Provide costs savings** that can be reinvested into infrastructure improvements.
- Support our community's agricultural activities that aides in local food production.

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

The conserved water resulting from reducing lost water by 23% (an estimated 5,273,860 gallons) will remain in Jackson Creek. This conservation effort will benefit water quality, sustain river flows, and support the local ecosystem. By conserving this water, we ensure a healthier environment and more stable water resources for the community and wildlife.

To determine water savings, CWD used the annual total water produced, subtracted the water sold, and the backwash water to calculate the "lost" water (see Table 1 on page 6). Upgrading

CWD's water meters is a crucial step to decrease lost/unaccounted (non-revenue) water by 23%. This significant reduction from our average 40% water loss will enhance the overall efficiency of the water delivery system. The new metering and data management project will provide greater accuracy, earlier leak detection, and improved understanding of water usage, helping to reduce and manage water consumption in CWD's service area.

Table 1 – Colton Water District Water Loss

Month	Days	Total Water Use	Estimated Backwash	Estimated Non-Revenue	Total Water Loss	Water Loss %
Jan-23	491	4,193,700	1,663,235	275,000	2,255,465	54%
Feb-23	497	3,390,700	1,965,712	275,000	1,149,988	34%
Mar-23	492	3,574,400	1,746,940	275,000	1,552,460	43%
Apr-23	491	3,396,200	1,723,173	275,000	1,398,027	41%
May-23	492	5,123,900	1,979,522	275,000	2,869,378	56%
Jun-23	490	6,026,300	3,873,640	275,000	1,877,660	31%
Jul-23	491	7,449,300	3,947,906	275,000	3,226,394	43%
Aug-23	499	7,553,400	3,926,195	275,000	3,352,205	44%
Sep-23	498	4,637,200	3,827,423	275,000	534,777	12%
Oct-23	496	3,999,100	2,189,479	275,000	1,534,621	38%
Nov-23	495	3,819,000	1,779,556	275,000	1,764,444	46%
Dec-23	492	3,544,500	1,856,091	275,000	1,413,409	40%

* Backwash water estimate is based on 1.5 filter-to-waste per day (3,000 gal/cycle) and 14 backwash cycles per month (10,000 gals/cycle)

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

Customers are currently getting their full water right; however, ongoing and persistent drought in the region often results in water restrictions due to CWD water rights are junior to downstream water suppliers.

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

This project has significant potential to prevent both lawsuits and water-related service calls. One common cause of disputes and potential lawsuits is inaccurate billing due to faulty or outdated meters. The accuracy of the AMR meters will reduce billing errors, thereby decreasing the risk of disputes or legal action. Additionally, non-compliance with water usage and conservation regulations can lead to penalties and lawsuits. AMR technology will ensure CWD's compliance and adherence to mandated water usage reporting.

Outdated/faulty water meters can also lead to infrastructure failures that result in property damage, which can lead to liability claims.

Safety is another important consideration. Oregon Highway 211 through Colton is designated a Safety Corridor due to the high number of accidents, with a crash rate that was 166.5% of the statewide average between 2015 and 2019. Using mobile AMR technology allows meters to be read from the safety of a vehicle, providing a crucial safety benefit and reducing potential liability lawsuits.

By addressing these potential issues, CWD will significantly reduce the risk of lawsuits.

What are the consequences of not making the improvement?

The consequences of not making this improvement would have a significant effect in several areas, including:

- **Increased Water Loss:** The current meters' inaccuracies and inability to detect leaks have led to significant water loss. In 2023, CWD experienced nearly a 23 million gallon water loss, a trend that has continued in subsequent years. This does not align with CWD's vision for water conservation and sustainability.
- **Higher Operational Costs:** Manual meter reading is labor-intensive and prone to errors, such as under-registering or incorrect readings. Customer calls and complaints often require additional investigation or re-reads of meters, increasing labor costs and reducing operational efficiency.
- **Inaccurate Billing and Customer Disputes:** Continued use of inaccurate meters will result in dissatisfied customers and diminished trust in the CWD's capabilities. Often, leaks occur on the customer's side of the meter, making them financially responsible for the lost water.
- **Infrastructure Deterioration:** Failing to upgrade to more reliable AMR meters could lead to further deterioration of the water infrastructure. Undetected leaks can result in costly repairs and damage to public and private property.

Are customer water restrictions currently required?

Water restrictions are not common but have occurred over the past few years. Due to a combination of drought conditions, our downstream water supplier has imposed water restrictions on CWD. These restrictions limit the amount of water that customers can use for non-essential purposes.

Other significant concerns that support the need for the project.

The Colton Water District's infrastructure is considerably old, and a lack of resources hampers our efforts to update aging equipment. Securing federal grant assistance for this improvement would enable CWD to implement one of the many necessary upgrades. Additionally, CWD is located in a forested environment, which is subject to the threat of wildfires. CWD experienced the worst wildfire threat in years with the Riverside Fire in 2020. Conserving water that might be used to fight fires in the community is critical for all residents.

Broader Benefits: Describe the broader benefits that are expected to occur as a result of the project. Consider: Will the project improve broader water supply reliability at sub-basin or basin scale?

Yes. This project will provide substantial benefits to the Willamette River sub-basin and the broader basin scale. By keeping 5,290,000 gallons of water in the flow, several benefits will be realized. These benefits include enhanced water quality, sustained river flows, ecosystem support, agricultural stability, cost savings, improved water availability, and increased community resilience. By conserving water, CWD contributes to the ecological, economic, and social health of the Willamette River basin, ensuring a sustainable and prosperous future for the region.

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

The Colton Water District (CWD) regularly collaborates with neighboring water districts, such as Corbett Water District, Pleasant Home Water District, Molalla Water District, and Mulino Water District. Most of these districts have already implemented similar AMR technology and have provided valuable insights and best practices. By learning from their experiences, CWD can avoid common pitfalls, streamline the installation process, and optimize the performance of the new meters.

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.

As mentioned previously, CWD is experiencing droughts due to climate change and has had mandatory water restrictions applied. CWD is committed to water conservation for sustainability. This project will conserve 23% of the lost water – ***an estimated savings of 5,273,630 gallons of water every year.***

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. The project will benefit several species, including *Salvelinus confluentus* (Bull Trout), which is listed as threatened. Reducing water loss will provide more consistent water levels and flow in local waterways, which is crucial for maintaining habitat conditions for the Bull Trout. In addition, efficient water use will contribute to the overall health of the ecosystem for all aquatic species.

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 proposed project will positively impact various sectors within CWD's geographic area. Water conservation helps ensure that as much water as possible stays in our rivers, streams, and lakes. Colton is a popular destination for outdoor recreational enthusiasts, who are drawn to its beautiful forests, lakes, and rivers. These natural wonders provide ample opportunities for

exploration and enjoyment. Camp Colton, located on Canyon Creek, is surrounded by old-growth forests and lush habitats for forest animals. This venue hosts special events year-round, further highlighting the importance of preserving the natural environment for the enjoyment of residents and visitors alike. By implementing this project, we will support water conservation efforts that benefit our environment, enhance recreational opportunities, and sustain the local economy through tourism and special events.

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

This project enhances water conservation, sustainable management, agricultural support, and environmental protection, aligning well with the objectives of NRCS efforts. By implementing AMR meters, the proposed project will reduce water loss by 23%, ensuring more water remains in the watershed. This aligns with NRCS goals of conserving water resources and improving water use efficiency. Conserving water ensures a more reliable supply for agricultural use, directly supporting NRCS efforts to enhance agricultural productivity and sustainability. By maintaining water levels and reducing wastage, our project helps preserve local ecosystems, which aligns with NRCS's mission to protect and enhance natural resources.

2.2 Evaluation Criterion B: Planning Efforts Supporting the Project (25 points)

Plan Description and Objectives: Is your project supported by a specific planning document or effort? If so, describe the existing plan. When was the plan developed? What is the purpose and objective of the plan?

Plan Description and Objectives

Colton Water District (CWD) developed a comprehensive Water Master Plan in 2012 that outlines CWD's strategies for sustainable water use, necessary infrastructure improvements, and the importance of water resource conservation. Reducing CWD's water loss has been a priority since it was highlighted in the Water Master Plan. The plan specifically calls out "*inaccurate service meters*" as a significant cause of water loss. It also states, "*The Colton Water District should consider implementing a program that works to correct and account for lost water by replacing old water service meters.*"

This project was identified as a priority in the CWD's planning efforts for several years; however, funding is the crucial element. CWD is a very small water district that employs two part-time employees, services approximately 1,500 individuals, and relies on customer revenue to manage water treatment and distribution and fund infrastructure projects. Resource shortages have severely hampered attempts to address water loss.

This proposed project aligns with our goals by addressing the inefficiencies of outdated water meters and leveraging advanced AMR technology to enhance water management and water conservation.

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 development of this plan involved the CWD Board of Commissioners, incorporating valuable input from neighboring water districts and feedback from CWD customers. The geographic scope of the plan includes the entire CWD service area, focusing on replacing outdated water meters within CWD's boundaries. This project has been prioritized on CWD's infrastructure improvement list since 2012; however, attempts to complete this project have been hampered by a lack of resources.

Support for the Project: Describe to what extend the proposed project is supported by the identified plan. Consider: Is the project identified specifically by name and location in the planning effort? Is this type of project identified in the planning effort? Explain whether the proposed project implement a goal, objective, or address a need or problem identified in the existing planning effort?

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

As mentioned previously, this issue was highlighted in the CWD's Water Master Plan. Erwin Consulting Engineering, LLC specifically recommended replacing the existing meters to reduce significant water loss. Their assessment identified outdated meters as a major contributor to inefficiencies and water loss within the system. The Board of Directors, district manager, and superintendent have ensured that this project remains high on our priority list. Replacing the existing metering system to address a 40% water loss is critical to achieving our water conservation goals. This upgrade is essential for improving water management efficiency, reducing waste, and aligning with long-term sustainability objectives.

The CWD Board of Directors has also played an important role in the planning efforts by providing judicial oversight and reviewing contractual quotes. Their involvement has ensured that all aspects of the project are thoroughly examined. This oversight is crucial for maintaining transparency, securing the best value for CWD, and ensuring the successful implementation of the meter replacement project.

Community stakeholders and neighboring water districts, including Clackamas River Water Providers, Pleasant Home Water, and Mulino Water District were involved in the process. This collaborative approach not only strengthened the planning efforts but also fostered a sense of community and shared commitment to improving water management across the region.

Elected officials have shown support for this project. See attached Letters of Support.

2.3 Evaluation Criterion C: Implementation and Results (20 points)

The Colton Water District (CWD) has developed a detailed implementation plan for the installation of AMR meters shown below.

- **Project Initiation:**
 - Milestone: Project approval and securing of funds.
 - Timeline: Month 1 ~ July 15, 2025
 - Deliverables: Project plan, budget approval, and funding secured.
- **Site Assessment and Preparation:**
 - Milestone: Completion of site assessments for all 499 meter locations.
 - Timeline: Months 2 ~ August 2025
 - Deliverables: Assessment reports, meter mapping, site preparation plans.
- **Procurement of Equipment:**
 - Milestone: Purchase and receipt of Master Meters and other required parts.
 - Timeline: Months 3-4 ~ September-October 2025
 - Deliverables: Delivery confirmation of all meters and other required parts.
- **Meter Installation:**
 - Milestone: Installation of 499 AMR meters.
 - Timeline: Month 5 ~ November 2025
 - Deliverables: Installation records, initial operational testing results.
- **Staff Training and Customer Outreach:**
 - Milestone: Training of CWD staff and commencement of customer outreach programs.
 - Timeline: Month 6-7 ~ December 2025 – January 2026
 - Deliverables: Training documents and customer information materials.
- **System Integration and Testing:**
 - Milestone: Full integration of AMR meters with the central data system testing.
 - Month 6-7 ~ December 2025 – January 2026
 - Deliverables: System integration reports, testing results.
- **Project Completion and Evaluation:**
 - Milestone: Final project evaluation and reporting.
 - Timeline: Month 9-10 ~ February-April 2025
 - Deliverables: Project completion report, evaluation of project outcomes against objectives.

Budget Proposal - Summary of non-Federal and Federal Funding Sources

Source	Amount
Costs to be reimbursed by federal source	\$100,000.00
Costs to be paid by applicant	\$156,674.24
Total Estimated Project Cost	\$256,674.24

Budget Summary

All numbers included in the Budget Summary and the Budget Narrative are estimates.

Budget Item Description	Calculations		Qty Type	Total
	Unit Cost	Qty		
*INDIRECT COSTS - Salary and Wages	\$1,500.00	1	each	\$1,500.00
TOTAL INDIRECT COSTS			\$1,500.00	
Equipment				
Badger BLMJ Meter 5/8" x 3/4" Lead Free Body	\$303.27	484	each	\$146,782.68
Badger BLMJ 1" Lead Free Body	\$163.92	9	each	\$1,475.28
Flg MS Multi-Jet Meter 1-1/2" Lead Free Body	\$493.92	4	each	\$1,975.68
Flg MS Multi-Jet Meter 2" Lead Free Body	\$691.60	2	each	\$1,383.20
Allegro Mobile Laptop Reading System	\$12,270.90	1	each	\$12,270.90
Contractual				
FCC Mobil License Application Fee	\$1,237.50	1	each	\$1,237.50
Harmony® encore™ Software Training (2 days)	\$6,817.00	1	each	\$6,817.00
Harmony Mobile Annual Hosting & Support	\$1,430.00	1	each	\$1,430.00
Installation - 5/8" x 3/4"	\$93.00	484	each	\$45,012.00
Installation - 1"	\$93.00	9	each	\$837.00
Installation - 1.5"	\$300.00	4	each	\$1,200.00
Installation - 2"	\$300.00	2	each	\$600.00
Contingency (15%)	\$34,153.00	1		\$34,153.00
TOTAL DIRECT COSTS				\$255,174.24
ESTIMATED TOTAL PROJECT COSTS (Direct and Indirect Costs)				\$256,674.24
**Annual Estimated Program Income	\$43,637.94			

* Additional CWD Superintendent hours for installation contractor support – No grant funds will be used to pay CWD staff.

**Annual Estimated Program Income Calculation

District Resources: Includes time spent reading meters, addressing customer billing discrepancies, troubleshooting, and repairing meters.

Lost Revenue: Calculated based on the cost of lost water (23%) at the standard rate.

Budget Narrative

Colton Water District (CWD) confirms that there will be no pre-award requested costs for this project. All expenditures related to the replacement of outdated water meters will be incurred following the official award date of the grant. This ensures that the provided funding will be utilized exclusively for post-award activities, in compliance with the funding agency's guidelines.

Salaries and wages – No grant funds will be used toward salaries or wages. All installation work will be contracted. CWD has allotted additional time for the district superintendent to provide informational support for the installation, and this cost will be covered by CWD.

Fringe benefits and travel – No fringe benefits or travel are included as part of this proposal.

Equipment – Under contract.

Construction – This project will not require any construction.

Engineering – This project will not require any engineering. The project is just to replace existing meters with new technology AMR meters.

Contractual – This project will be put out for bid for the purchase and installation of meters. All installation, setup and training will be provided by the selected vendor(s).

Contingency – CWD added a 15% contingency to this project. Grant funds will not be used towards this contingency.

Indirect costs – Additional CWD Superintendent hours included to provide support for installation contractor. **No grant funds will be used to pay indirect costs.**

Environmental and regulatory compliance costs – Discussions with representatives of the Bureau of Reclamation have determined that there will likely be no Environmental Compliance costs associated with a project of this nature.

Permits and approvals – No permits or agency approvals are required for this project.

Property access – The majority of meters are accessed via public rights-of-way. A small percentage of meters are accessed through easements.

Total estimated project costs – The estimated total project cost for the new AMR meters and data management upgrade is \$256,674.24. The requested federal share is \$100,000 and the remaining balance of \$156,674.24 will be provided by CWD.

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

The Bureau of Reclamation's WaterSMART Sustain and *Manage America's Resources for Tomorrow* program is designed to support projects that save water, improve water efficiency, and support water sustainability.

The Colton Water District's (CWD) project aligns with the WaterSMART objectives:

- **Saving water** by reducing water loss through accurate metering and leak detection.
- **Improving efficiency** by enhancing operational efficiency with modern metering technology.
- **Supporting sustainability** by ensuring the long-term sustainability of CWD's water resources through better management and conservation practices.

The CWD's project aligns with the WaterSMART goals:

- **Efficient Water Use:** The project will lead to a more efficient use of water resources by providing accurate and timely data on water consumption, which will allow for prompt action on leaks.
- **Modern Infrastructure:** Upgrading to AMR meters is a modernization effort that aligns with the WaterSMART goal of improving water infrastructure to enhance reliability and sustainability.
- **Data-Driven Management:** The real-time data from AMR meters supports the goal of using data to drive water resource management decisions, improving overall water planning and response strategies.

The CWD's project to replace outdated manual meters with AMR meters has a clear nexus to Reclamation by contributing to water conservation, infrastructure modernization, enhanced data management, and regional water management goals. This alignment demonstrates the project's relevance and support for the broader objectives of federal reclamation programs, such as those under the WaterSMART initiative.

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

The Colton Water District's (CWD) project to replace outdated manual meters with AMR meters directly supports the objectives of Executive Order 14008: *Tackling the Climate Crisis at Home and Abroad* and Executive Orders 13985: *Advancing Racial Equity and Support for Underserved Communities through the Federal Government*.

Executive Order 14008: *Tackling the Climate Crisis at Home and Abroad* emphasizes the need for comprehensive actions to address climate change through the reduction of greenhouse gas emissions, resilience building, and sustainable infrastructure development. CWD's project aligns with these objectives in the following ways:

- **Water Conservation (Reduction in Water Loss):** This project will reduce water loss by 23%, which directly contributes to more sustainable water management practices. Conserving water reduces the energy required for water treatment, thereby lowering greenhouse gas emissions.
- **Improved Operational Efficiency:** AMR meters provide enhanced accuracy and early leak detection to reduce water loss. This will reduce labor costs and efforts and improve overall operational efficiency.
- **Infrastructure Modernization and Resilient Systems:** Updating the CWD water infrastructure with AMR meters helps protect against water scarcity (through water conservation) and ensures reliable service for the community, aligning with the goals of building sustainable and climate-resilient infrastructure.
- **Ecosystem Support:** By conserving water, CWD helps to maintain healthier ecosystems, which are necessary for absorbing carbon dioxide and mitigating climate change.

Executive Order 13985: *Advancing Racial Equity and Support for Underserved Communities through the Federal Government*.

Ensuring fair and equitable access to reliable water services for all residents is crucial.

Colton is a small community that includes vulnerable populations. According to the 2020 Census Data, 20% of Colton's population is over 65 years of age, and 28% of the population is considered low income.

CWD's project focuses on several key goals of this executive order:

Access to Water: Ensuring reliable and equitable access to water for all residents, including low-income and elderly populations, is a priority for CWD. Again, conserving and estimated 5,290,000 gallons of water per year is a significant step in water conservation.

Cost Savings: Reducing water loss and improving efficiency can lower operational costs, potentially resulting in lower water bills for customers. Additionally, reducing costs creates additional revenue for reinvestment in additional infrastructure improvements.

Community Involvement: Engaging CWD's community in project planning and implementation creates transparency and ensures that the needs of the community members, particularly those from vulnerable groups, are heard and addressed.

List of Attachments

Colton Water District Map

Official Resolution 2024-04

Colton Water 2023-2025 3-Y Additional CWD Superintendent hours for installation contractor support – No grant funds will be used to pay CWD staff.ear Budget

Letter of Support – Congresswoman Lori-Chavez DeRemer

*Letter of Support – Senator Jeff Merkley

Clackamas County Commissioner – Mark Shull

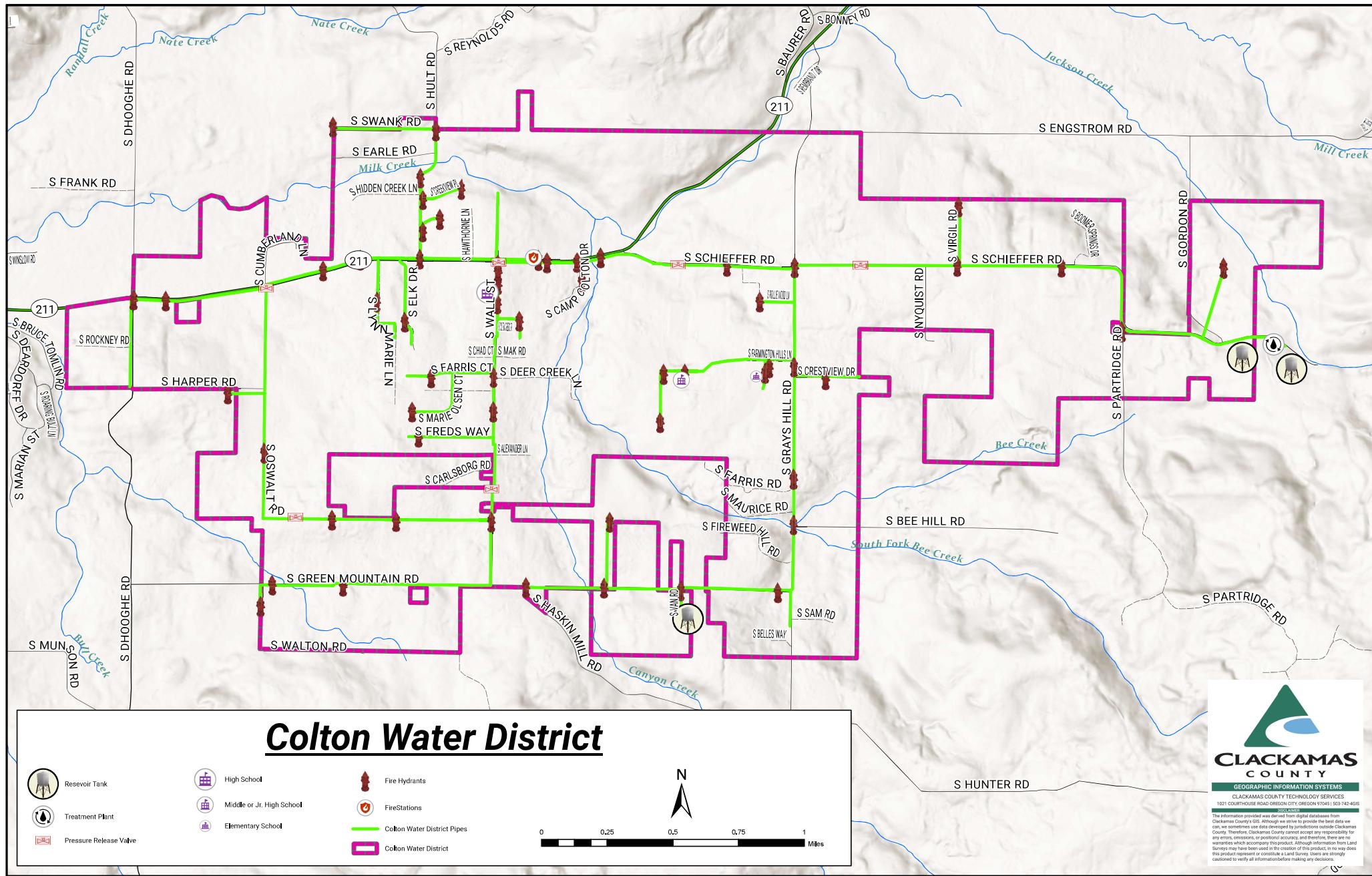
Letter of Support – OR State Representative Rick Lewis

Letter of Support – Clackamas River Water Providers

Letters of Support – Pleasant Home Water District

Letter of Support – Mulino Water District #1

* Senator Merkley's Letter of Support was delayed. His office is sending the letter directly to the Bureau of Reclamation.



Colton Water District



-  High School
-  Middle or Jr. High School
-  Elementary School

-  Fire Hydrants
-  Fire Stations
-  Colton Water District Pipes

A horizontal scale bar with numerical markers at 0, 0.25, 0.5, 0.75, and 1. The distance between 0 and 0.25 is labeled 'Miles'.



CLACKAMAS

C O U N T Y

GEOGRAPHIC INFORMATION SYSTEMS

CLACKAMAS COUNTY TECHNOLOGY SERVICES

1021 COURTHOUSE ROAD OREGON CITY, OREGON 97045 | 503-742-4GIS

The information provided was derived from digital databases from Clark County's GIS. Although we strive to provide the best data we

Clackamas County is also. Although we strive to provide the best data we can, we sometimes use data developed by jurisdictions outside Clackamas County. Therefore, Clackamas County cannot accept any responsibility for

County. However, Williamson County cannot accept any responsibility for any errors, omissions, or positional accuracy, and therefore, there are no warranties which accompany this product. Although information from Land

Warranted which accompany this product. Although information from Land Surveys may have been used in the creation of this product, in no way does this product represent or constitute a Land Survey. Users are strongly

Individuals representing or connected to a company should be strongly cautioned to verify all information before making any decisions.

Ge

11. *What is the primary purpose of the following statement?*

COLTON WATER DISTRICT

RESOLUTION #2024-04

RESOLUTION AUTHORIZING SUBMISSION OF A WATERSMART GRANT PROPOSAL TO THE
U.S. BUREAU OF RECLAMATION AND AUTHORIZING A COOPERATIVE AGREEMENT
WITH RECLAMATION AND GRANT MATCH FUNDS

WHEREAS, a goal of Colton Water District (hereinafter referred to as CWD), is to efficiently manage and conserve the use of the available water resources in the CWD distribution area.

WHEREAS, the installation of telemetry meters will aid in the reduction of water loss through the ability to audit the water system and send immediate notification of water flow fluctuations.

WHEREAS, desires to apply for WaterSMART: Small-scale Water Efficiency Projects to help offset some of the cost for this improvement to the water system in a management and efficiency project.

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

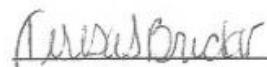
- A. The Board or governing body of CWD has reviewed and supports the proposal submitted;
- B. The Board has legal authority to enter into an agreement with the Bureau of Reclamation;
- C. CWD can provide the amount of funding and/or in-kind contributions, specified in the funding plan, not to exceed \$100,000; and
- D. If selected for this Water SMART grant, CWD will work with the District and Reclamation to meet established deadlines for entering into a cooperative agreement.

DATED: June 19, 2024



Ken Carroll, CWD Board President

ATTEST:



Teresa Bricker, Secretary

Letter of Support from Congresswoman Lori Chavez-DeRemer

LORI CHAVEZ-DEREMER
5TH DISTRICT, OREGON

1722 LONGWORTH HOUSE OFFICE BUILDING
WASHINGTON, DC 20515-3705
(202) 225-5711

Congress of the United States
House of Representatives
Washington, DC 20515-3705

621 HIGH STREET
OREGON CITY, OR 97045
(503) 387-8651

June 18, 2024

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

Dear Commissioner Touton,

I write in support of Colton Water District's grant application for federal funding to upgrade their water meters from the Bureau of Reclamation (BOR)'s Water Smart Small Scale Water Efficiency Projects.

As you know, the Small-Scale Water Efficiency Projects grant program provides federal investments in improving small water efficiency improvements for our local communities.

Currently, the Colton Water District is using outdated manual read water meters that have cause challenges to efficient water management. This has led to inaccuracies, delays in leak detection, and hinders conservation efforts. This upgrade will reduce seepage losses and identify new leaks. According to the applicant, this upgrade will reduce approximately twenty-three percent water losses and will meet the goals of their water management and conservation plan for fiscal year (FY) 2025-2026.

Colton Water District is located in rural Clackamas County where they provide high quality, safe drinking water for my constituents. As a former Mayor, I understand the need for investments in upgrading our water infrastructure. These upgrades are necessary and can be costly. This federal investment will help reduce the cost of these upgrades and prevent the costs being passed onto my constituents.

This key funding will bring more efficiency to Colton Water District's water management and safeguard the affordable access to safe and clean drinking water for my constituents.

Thank you for giving this grant application full and fair consideration. If you have any questions, please contact Colin Swanson in my district office at Colin.Swanson2@mail.house.gov or (971-403-4549).

Sincerely,



Lori Chavez-DeRemer
Member of Congress

Letter of Support from Clackamas County Commission Mark Shull



BOARD OF COUNTY COMMISSIONERS
PUBLIC SERVICES BUILDING
2051 KAEN ROAD | OREGON CITY, OR 97045

July 8, 2024

Bureau of Reclamation
Columbia-Pacific Northwest Regional Office
1150 N Curtis Rd
Boise, ID 83706

To whom it may concern;

Please accept my letter of support for Colton Water District's (CWD) request from the WaterSMART grant. CWD is a small district with limited resources serving a small rural community in Clackamas County. Federal support would make a meaningful impact to the program and ratepayers. As the Commissioner working on natural resources as part of my portfolio, I can attest to Clackamas County's commitment to advocate for natural resources and rural communities.

With this grant, CWD will replace 499 outdated manual-read water meters with advanced Automated Meter Reading (AMR) readers. This project aims to enhance water management and conservation efforts by providing accurate real-time water usage data, enabling prompt leak detection, and significantly reducing the district's current estimated water loss of 40% by 23%.

This initiative supports CWD's comprehensive master plan, by modernizing aging infrastructure and enhancing sustainability in water resource management. This upgrade will significantly improve water conservation, management efficiency, and improve billing accuracy.

I appreciate your consideration of Colton Water District's grant application.

Sincerely,

A handwritten signature in black ink that reads "Mark K. Shull".

Mark Shull, Commissioner
Clackamas County

Letter of Support from Clackamas County Commission Rick Lewis

RICK LEWIS
STATE REPRESENTATIVE
DISTRICT 18
OREGON'S CHRISTMAS TREE DISTRICT



HOUSE OF REPRESENTATIVES

July 1, 2024

To Whom It May Concern;

I am pleased to submit a letter of support for the following project in my Legislative District.

The Colton Water District in Colton, Oregon, is a small water district with very limited resources. They are submitting an application for a WaterSMART grant to help them with desperately needed infrastructure improvements. This is a Small-Scale Water Efficiency Project, NOFO R24AS00059.

The Colton Water District (CWD), located in northwest Oregon, will replace 499 outdated manual-read water meters with advanced Automated Meter Reading (AMR) meters. This project aims to enhance water management and conservation efforts by providing accurate real-time water usage data, enabling prompt leak detection, and significantly reducing the district's current estimated water loss of 40% by 23%. The benefits of this upgrade include:

- Improved water conservation by real-time leak detection
- Improved operation and management efficiency by reducing costs and increasing safety
- Enhanced customer service with improved accuracy in billing and water usage insights

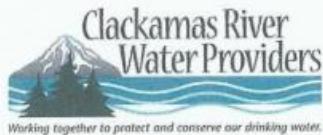
This initiative supports CWD's comprehensive Water Management Plan and recommendations set forth in the CWD's Water System Master Plan specifically the objective to modernize infrastructure and enhance sustainability in water resource management. This initiative also represents a critical step towards modernizing the district's water aging infrastructure and achieving long-term sustainability goals.

If approved, the project's timeline will begin on July 15, 2025 and be completed by April 15, 2026. I lend my strong support for this worthwhile and critically important project for the Colton Water District.

Sincerely;

A handwritten signature in blue ink that reads "Rick Lewis".

Letter of Support from Clackamas River Water Providers



June 24, 2024

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

To Whom It May Concern:

The Clackamas River Water Providers (CRWP) is a coalition of municipal drinking water providers that draw water from the Clackamas River in Oregon and is made up of representatives from the City of Estacada, the City of Lake Oswego, City of Tigard, Clackamas River Water, the North Clackamas County Water Commission (City of Gladstone and Oak Lodge Water District), South Fork Water Board (Oregon City and West Linn), and Sunrise Water Authority (Happy Valley and Damascus). Collectively we provide drinking water to over 300,000 people in Clackamas and Washington Counties.

I am writing today in full support for the Colton Water District's (CWD) grant proposal to replace outdated manual water meters with advanced Automated Meter Reading (AMR) meters. As the Water Resource Manager of the Clackamas River Water Providers, our member organizations understand the critical need for this projects such as this and its potential to significantly enhance water management, conservation, and customer service within our communities.

This project will bring numerous benefits to the residents of Colton. Through this grant implementation of AMR technology will provide accurate and timely water usage data that will empower customers to better understand and manage their consumption, leading to increased water conservation efforts. The enhanced operational efficiency resulting from remote meter readings will also reduce labor costs and improve overall service reliability. Importantly, the real-time leak detection capabilities of AMR meters will help prevent costly water damage and mitigate the environmental impact of water loss.

Sincerely,

Kim Swan
Water Resource Manager
Clackamas River Water Provider

Letter of Support from Pleasant Home Water District

Dan Fraijo
Manager
Pleasant Home Water District

PO BOX 870
Gresham OR, 97030
dan@pleasanthomewater.com
503-201-4341
06/26/2024

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

Dear Camille,

I am writing to express my enthusiastic support for the Colton Water District's (CWD) grant proposal to replace outdated manual water meters with advanced Automated Meter Reading (AMR) meters. As the Manager of Pleasant Home Water District, I have witnessed firsthand the critical need for this project and its potential to significantly enhance water management, conservation, and customer service within our community.

The CWD currently faces substantial water loss due to aging infrastructure and inefficient manual-read meters. This project aims to address these issues by implementing AMR technology, which will provide real-time data on water usage, enable immediate leak detection, and improve billing accuracy. Such advancements are essential for reducing the estimated 23% water loss the district currently experiences, translating to a savings of approximately 5,700,000 gallons of water annually.

This project will bring numerous benefits to the residents of Colton. Accurate and timely water usage data will empower customers to better understand and manage their consumption, leading to increased water conservation efforts. The enhanced operational efficiency resulting from remote meter readings will also reduce labor costs and improve overall service reliability. Importantly, the real-time leak detection capabilities of AMR meters will help prevent costly water damage and mitigate the environmental impact of water loss.

Thank you for considering this important project for funding. Please feel free to contact me at 503-201-4341 or dan@pleasanthomewater.com if you require any further information.

Sincerely,

Dan Fraijo
Manager
Pleasant Home Water District

Letter of Support from Mulino Water District #1

Yogi Trogdon]
S.O.M
Mulino Water District #1
P.O Box 867 Mulino Oregon 97042
mulinowater1@gmail.com

Office Phone 503-829-9787

06/24/2024

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

Dear Camille Calimlin Touton,

I am writing to express my enthusiastic support for the Colton Water District's (CWD) grant proposal to replace outdated manual water meters with advanced Automated Meter Reading (AMR) meters. As the Systems Operations Manager for The Mulino Water District #1, I have witnessed firsthand the critical need for this project and its potential to significantly enhance water management, conservation, and customer service within our community.

The CWD currently faces substantial water loss due to aging infrastructure and inefficient manual-read meters. This project aims to address these issues by implementing AMR technology, which will provide real-time data on water usage, enable immediate leak detection, and improve billing accuracy. Such advancements are essential for reducing the estimated 23% water loss the district currently experiences, translating to a savings of approximately 5,700,000 gallons of water annually.

This project will bring numerous benefits to the residents of Colton. Accurate and timely water usage data will empower customers to better understand and manage their consumption, leading to increased water conservation efforts. The enhanced operational efficiency resulting from remote meter readings will also reduce labor costs and improve overall service reliability. Importantly, the real-time leak detection capabilities of AMR meters will help prevent costly water damage and mitigate the environmental impact of water loss.

Thank you for considering this important project for funding. Please feel free to contact me at the contact information I have provided below.

Sincerely,

Yogi Trogdon

Mulino Water District # 1 mulinowater1@gmail.com -Phone 503-829-9787

P.O Box 867, Mulino Oregon 97042