

**WaterSMART: Small-Scale Water Efficiency Projects for FY2022  
Funding Opportunity Announcement No. R22AS00195**

# **Culinary Smart Metering Project**

Prepared for:

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## EXECUTIVE SUMMARY

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Date: April 20, 2022  
Applicant: Draper Irrigation Company  
City, County, State: Draper City, Salt Lake County, Utah

Project Name: Culinary Smart Metering Project  
Project Length: 1 year  
Estimated Construction Start Date: April 01, 2023  
Estimated Completion Date: April 01, 2024

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### PROJECT SUMMARY

Culinary Smart Metering is a small-scale on-the-ground efficiency project that implements municipal metering work previously identified in Draper Irrigation Company's (DIC) water planning efforts.

The project will use federal and private funds to install new ¾-inch and 1-inch ultrasonic meters with smart technology on existing metered culinary services and will span over a 12-month period. The project proposes installing 566 ultrasonic smart meters with cellular data transmission. The 566 existing culinary service laterals will be minimally impacted by replacing the existing meters with the new meters and endpoints.

Several other municipalities and DIC have successfully used these meters to improve reliability, accuracy, and efficiency. The meters improve detection of leaks and overuse, as well as system flow understanding. These benefits should reduce overall water use. The goal is to use these meters and data collection system for the entire culinary system.

The project is not located on a federal facility.

As an organization with water delivery authority, DIC is a Category A applicant.

# TECHNICAL PROPOSAL FOR CULINARY SMART METERING PROJECT

## BACKGROUND

Draper Irrigation Company (DIC) is a non-profit shareholder-owned company that provides culinary and pressure irrigation water to customers primarily within Draper City, Utah (see Figure 1). DIC is a public water supplier with municipal water rights.

In 1911, DIC began providing culinary water to residents within the Draper area of Salt Lake County in Utah, approximately 18 miles to the south of Salt Lake City. The area was mainly farmland and undeveloped land until the 1970s when residential development began as part of a general suburbanization trend along the Wasatch Front. Now the Draper area is primarily residential with approximately 8,181 connections to the culinary system and an estimated population in 2019 of 48,000. Available data from 2012 through 2020 shows the average annual usage for the system was 1,957 million gallons. Per DIC's 2019 Water Master Plan, the buildout projected water production requirement could be up to 2,486 million gallons per year.

The system consists of over 150 miles of water lines, a water treatment plant, five wells, nine water storage reservoirs, and three connections for supplemental water from Jordan Valley Water Conservancy District (JVWCD).

The existing connections to the culinary system are metered. A significant portion of the monthly meter readings are taken by physically reading meters. DIC is in the process of upgrading all meters to be capable of transmitting meter readings wirelessly over cellular infrastructure.

Culinary water for the DIC system comes from four sources: DIC's water treatment plant, JVWCD, DIC's wells, and surplus raw water from JVWCD and Metropolitan Water District of Salt Lake and Sandy (Metro).

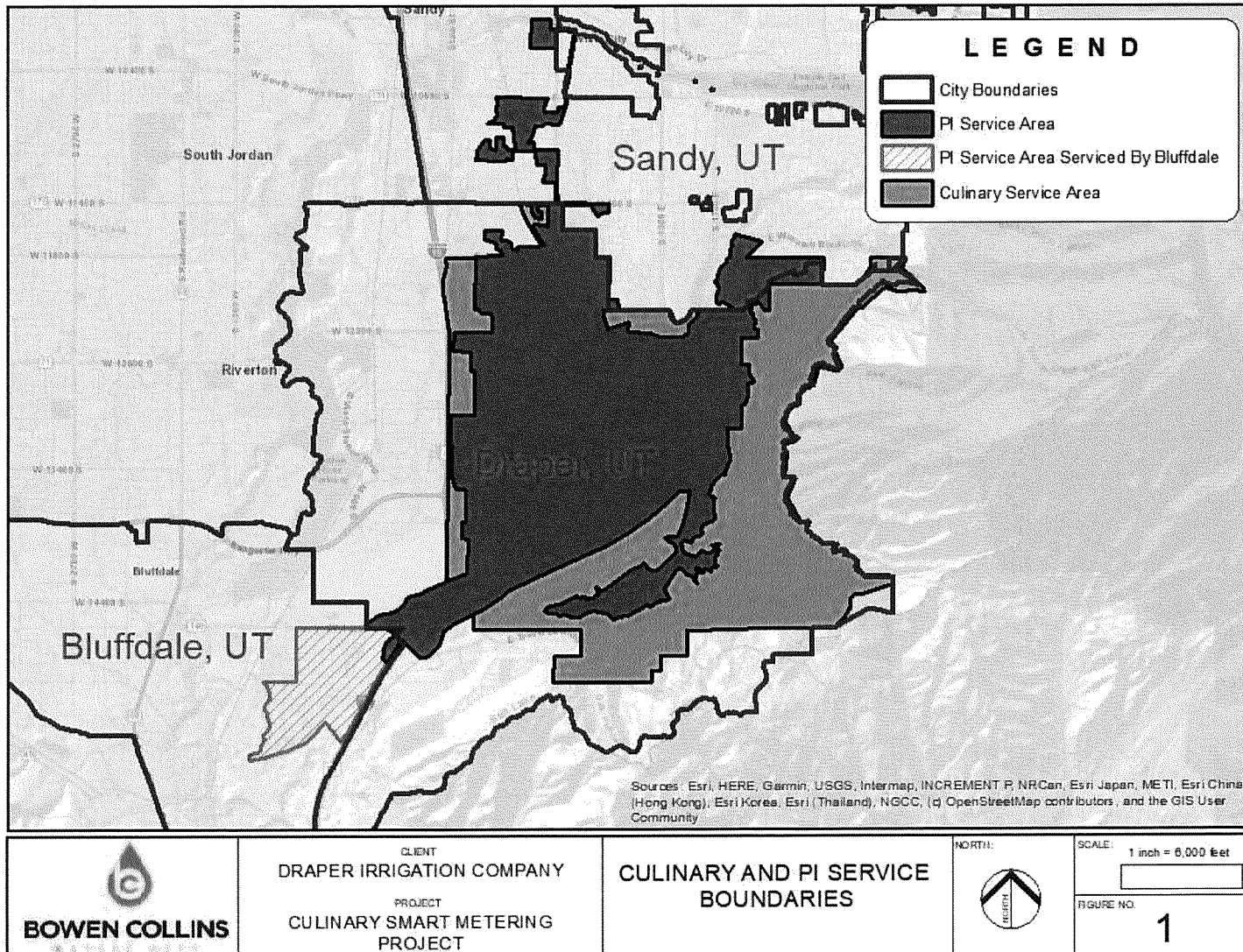
The culinary source categories are:

**Water Treatment Plant (WTP):** Most of the system's water comes from the WTP, which has a capacity of 8.0 million gallons per day with operation near or at capacity during spring runoff and during summer when demand is highest. Surface water originates from seven canyons along the Wasatch Front in the Draper and Sandy areas and is treated at the WTP, located at the northeastern part of the service area. DIC owns and operates the WTP.

**JVWCD:** DIC receives water from JVWCD at three separate connection points: 700 East, the WTP, and Autumn Ridge (a surplus backup connection used for emergencies). Water from JVWCD is mostly used in the summer months when demand is high due to outdoor use. DIC contracts with JVWCD to receive a perpetual yearly supply of 950 ac-ft of water with an option to use an additional 20 percent, for a total of 1,140 ac-ft. If more water is available, DIC may purchase more. DIC also has a contract with JVWCD to sell canyon water to JVWCD and buy banked water back at the lower of either the wholesale or operational cost.

**Wells:** Four wells, shown in Table 1, also provide water as needed.

**Figure 1 – Culinary and PI Service Boundaries**



**Table 1 - DIC Well Locations and Capacities**

<b>Location</b>	<b>Capacity (gpm)</b>
1300 East in Draper, Utah	835
Valle Di Villa	650
Hidden Valley	1,700
Water Treatment Plant	900

Table 2 shows DIC’s existing and active water rights and summarizes the status of each water right. DIC owns and operates eight storage tanks for the culinary water system, with a total capacity of 23,000,000 gallons as identified in the Table 3.

DIC has a contract with JWCD, which is affiliated with the Central Utah Project (CUP), a Bureau of Reclamation (BOR) project. Funding from CUP helped to develop the DIC pressurized irrigation system, which replaced an old flood irrigation system. In the past, DIC has also worked directly with the BOR, receiving a WaterSMART grant for work on the Bear Canyon Intake Structure. This intake structure, completed in November 2012, saved an estimated 672 acre-feet of water per year.

DIC has three on-going projects with WaterSMART grants from the BOR for the following:

1. Installation of 2,063 PI water meters (fiscal year 2018). This project is anticipated to be completed by the end of 2022.
2. Installation of 528 culinary water meters (fiscal year 2021). This project is anticipated to be completed by the end of 2024.
3. Installation of four shallow groundwater wells and associated 7,100-foot pipeline project (fiscal year 2022). The anticipated completion of these drought resiliency program projects is before the end of 2023.

## **PROJECT LOCATION**

This project will occur at 566 locations throughout DIC’s culinary system service boundaries within Salt Lake County, Utah. More specifically the culinary system is located within portions of Draper City, Sandy City, and Bluffdale City, Utah as shown on Figure 1.

## **TECHNICAL PROJECT DESCRIPTION**

The Culinary Smart Metering project includes designing and constructing a new culinary metering system using ultrasonic flow meters with cellular endpoints for transmitting data. The project includes 566 new meters. The new system will transmit meter readings to a computer system for near-instantaneous tracking and viewing, greatly reducing the manual labor required for meter reading and allowing faster detection of leakage and overuse.

The proposed meter project will include removing the existing meter and replacing it with the new meter and a cellular endpoint for transmitting the data. The Orion Cellular AMI Network is currently being used for collecting the data. With the system already in place, replacement should easily integrate with the existing services. It is anticipated that each service upgrade will require only installing a new meter and cellular endpoint.

DIC will self-install 566 of the 3/4-inch and 1-inch E-Series Ultrasonic Meters by Badger Meter. These meters include no internal moving parts. DIC selected Badger Meter ORION Water Endpoints (using the existing cellular communications network) to install with each Badger meter to transmit water meter data automatically to DIC.

**Table 2 - Culinary Water Rights**

Water Right Number	Status	Most Recent Change App. No. (s)	Common Name	Original Priority Date	Proof Due Date (or Cert. #)	Proof Due on change Application (or Cert. #)	Max. Flow (cfs)	Max Volume (ac-ft/yr)
57-2757	Certificate	a37443	Wells - From Wangard	10/10/1961	8550	8/31/2025	None	1,086.772
57-8185			Wells	2/4/1977	12518			
57-8227			Wells - From Fitzgerald	3/3/1977	12181			
57-8520			Wells - From Riverton City	3/31/1980	13890			
57-10170			Wells - From Keogh	6/13/1972				
57-10302			Wells - From Naylor Well	3/4/1971	11553			
57-10331			Wells - From Toone	9/22/1961	7323			
57-8835	Certificate	a37447	Wells - From Zabriskie	12/3/2003		9/30/2025	None	21
57-10297	Approved	a37442	Wells - From Teerlink	6/13/1972	9/30/2022		None	15
57-10327	Approved	a37441	Wells - From Teerlink	6/13/1972	9/30/2022		None	23.4
57-7839	Certificate	a38167	Wells - South Minuteman Dr.	7/17/1972	12704	8/31/2026	None	25.856
57-3098	Certificate	a39939	Wells - Mount Jordan Corp	8/22/1960	11087	10/31/2019	3.58	240
57-10397	Diligence Claim	a40952	Wells - Dunyon Springs	1872		2/28/2022	None	64.13
57-10466								
57-2449	Certificate		Well	6/15/1954			None	None
57-3410 <sup>1</sup>	Diligence Claim	a37445	Corner Canyon	1880		9/30/2025	None	801.46
57-10191 <sup>1 3</sup>	Certificate	a37915	Mountain Streams (& Utah Lake)	10/27/1908	5629	4/30/2026	None	6,342.44
57-443 <sup>1 3</sup>			Mountain Streams	9/5/1940	9215			
57-3364	Certificate	a39978	Bear Canyon Spring & Creek	4/30/1964	12412	2/29/2020	1.113	None <sup>2</sup>
57-10439	Decree			1869				
<b>Total</b>								<b>9,425.83</b>

<sup>1</sup>Source used for both culinary and pressure irrigation systems.

<sup>2</sup>For volume calculation of total water rights, the max flow was assumed to flow the entire year (actual yield may be less).

<sup>3</sup>For purposes of source production, it is assumed all of the water is obtained through the mountain stream points of diversion, not Utah Lake



**Table 3 - DIC Storage Facilities**

<b>Tank Description</b>	<b>Tank Location</b>	<b>Storage Capacity (gallons)</b>
Northeast Bench Tank (WTP)	2558 Wasatch Blvd	1,000,000
Treatment Plant Tank	2558 Wasatch Blvd	7,000,000
Cove of Bear Canyon Sub. Tank	12300 South 2300 East	250,000
South Mountain Tank	1420 E Rambling Road	3,000,000
Traverse Ridge Road Tank	700 East Traverse Ridge Rd	3,000,000
Little Valley Tank	1430 East Traverse Ridge Rd	750,000
Corner Canyon Tanks (Qty 2)	13496 South Corner Canyon Rd	8,000,000
<b>TOTAL STORAGE</b>		<b>23,000,000</b>

**EVALUATION CRITERIA**

**Evaluation Criterion A: Project Benefits (35 Points)**

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 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.*
  1. Reducing time and energy for meter reading.
  2. Reducing time to repair system deficiencies due to reduction in time spent reading meters, therefore improving system reliability.
  3. Reducing time for leak detection and thus reducing water losses.
  4. Increased metering accuracy and reliability due to meter technology advancements.
  5. Better understanding of overall water usage and supply reliability throughout the system.
  6. Increased collaboration, information sharing, and customer service due to software that enables interactive, real-time flow measurements accessible by DIC and the customer.
  
- *Explain the significance of the anticipated water management benefits for the Category A applicant’s water delivery system and customers. Consider:*
  - *Are the customers not currently getting their full water right at certain times of year?*

Utah is currently in one of the most severe droughts in recorded history. With low snowpack, and diminished precipitation, customers are at risk of encountering

water shortages. As documented in DIC's 2018 Water Rights Master Plan, there is not enough reliable water rights/source capacity to meet all demands during drought conditions. By completing this project, customers and DIC will be able to track water more efficiently, make conservation decisions when it comes to water use, identify leaks more quickly, and ultimately reduce water consumption. Any reduction in water use will mitigate the drought impact and lower the potential for running out of water for outdoor landscape irrigation.

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

Groundwater rights in the Salt Lake Valley have been over-allocated. Surface water rights for sources in the DIC area have also been over-allocated in many cases. Lowering customer water usage will reduce DIC's water needs and diminish the potential for water conflicts. The leak detection features of these meters could potentially eliminate or limit damage property (and potential lawsuits) due to large leaks.

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

By not making the improvements outlined in this project, DIC and its customers run the risk of overusing water and potentially having water shortages per DIC's 2018 Water Rights Master Plan. Water conflicts and decreased collaboration are all potential consequences of not reducing DIC's water usage.

- *Are customer water restrictions currently required?*

DIC does not have the legal authority to enforce water restrictions on its users. However, in the recent past DIC has physically run out of water and had to shut off outdoor irrigation system earlier in the year than was planned. DIC instead has an ongoing public awareness campaign to help promote water conservation among its users and update them on the current water situation.

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

Drought conditions in Utah have strained water supplies across the state. The peak daily median snowpack for the area is usually early April. After, the snowpack begins to melt, and produce runoff. As of April 12, 2022, the snow water equivalent for the area mountains is at 64% of the median from 1991-2020. With the lack of an ample snowpack, another low water year is in store for Utah this summer. By having the technology in place to monitor water use, conservative water use can be practiced by DIC and its customers to help extend the water supply to later in the year.

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

The project will increase collaboration, information sharing, and customer service due to software that enables interactive, real-time flow measurements accessible by DIC and the customer.

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

The project will increase collaboration, information sharing, and customer service due to software that enables interactive, real-time flow measurements accessible by DIC and the customer. Improved system reliability and water conservation will benefit not only DIC customers, but also the wider region served by JWCD water by decreasing the strain on water sources and increasing information sharing about water usage.

- *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.*

The proposed project will not complement any work being done in coordination with NRCS in the area.

- *Will the project help address drought conditions at the sub-basin or basin scale? Please explain.*

Improved system reliability and water conservation will benefit not only DIC customers, but also the wider region served by JWCD water by decreasing the strain on limited water sources and increasing information sharing about usage.

### **Evaluation Criterion B: Planning Efforts Supporting the Project (30 Points)**

Up to 30 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, 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 Development:** Describe how your project is supported by an existing planning effort. Identify the planning effort and who developed it. If the planning effort was not developed by the Category A applicant, describe the Category A applicant's involvement in developing the planning effort.

**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 in the planning effort?*

DIC has a system-wide Water Conservation Master Plan (updated in 2020) that directly supports smart water metering of the culinary water system.

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

DIC has a system-wide Water Conservation Master Plan (updated in 2020) that directly supports smart water metering and the common goal of the BOR CUP’s water conservation goal of 25 percent water usage reduction by 2025, which is directly applicable to the contract between JVWCD and DIC. The reduction in water usage, improved leak detection, and reduction of DIC staff efforts to collect meter data are the main conservation tactics for this project.

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

Automated flow meter data collection will be an asset for the system with respect to the aging of the infrastructure and the anticipated growth within the area. It will enable DIC to detect leaks and other deficiencies more quickly and react more efficiently. Upgrading the system to the new meters with smart technology is a priority because it will take several years and several stages due to the large number of connections.

**Evaluation Criterion C: Implementation and Results (20 Points)**

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

1. *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.*

DIC is ready to proceed with the proposed project once a financial assistance agreement is reached with the BOR. Once BOR grant funding to DIC is established, planning, scheduling, and environmental compliance/permitting is established, then construction/meter replacement is estimated to begin April 2023 with completion anticipated by April 2024.

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

DIC will obtain all necessary permits before beginning this project. As permits are expected to be needed from local municipalities with jurisdiction, DIC will coordinate with all involved municipalities. Environmental permitting is described later.

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

The engineering work has already been completed in the form of standard details and specifications. There may be some engineering and design work required for installation issues that arise in the field and situations where typical installation is not feasible; however, none is expected at this time due to the simplicity of the project.

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

Customers will need information about the new meters. DIC does not anticipate that the billing structure or rates will change; however, the software may require that DIC transition existing customers to the newer billing methodology for smart meters. DIC anticipates that once the entire system has smart meters installed, some policies will require updating.

5. *Describe the timeline for completion of environmental and cultural resource compliance. Was the timeline for completion of environmental and cultural resource compliance discussed with the local Reclamation office?*

DIC has completed the environmental and cultural resource compliance requirements for similar projects in 2018, 2019, and 2021. DIC anticipates minimal environmental and regulatory compliance costs. DIC will promptly complete all requirements after reaching a financial assistance agreement and before any meter replacement activities begin in April 2023.

#### **Evaluation Criterion D: Nexus to Reclamation (5 Points)**

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? Please consider the following:*
  - *Does the applicant receive Reclamation project water?*
  - *Is the project on Reclamation project lands or involving Reclamation facilities?*
  - *Is the project in the same basin as a Reclamation project or activity?*
  - *Will the proposed work contribute water to a basin where a Reclamation project is located?*

DIC has a contract with JWCD, which is affiliated with CUP, a BOR project. Therefore, any improvement in conservation or water management in DIC's system is indirectly connected to BOR. DIC has an agreement with CUP and provides updates to CUP on water conservation totals.

DIC also received funding from BOR for the Bear Canyon Intake Relocation project to construct a new intake structure resulting in estimated annual water savings of 672 acre-feet. The project was funded through both BOR and DIC and was completed in November 2012. Increased water savings from that project could be further achieved because of this new proposed metering project since Bear Canyon is a DIC water source.

### **Evaluation Criterion E: Presidential and Department of the Interior Priorities (10 Points)**

Up to 10 points may be awarded based on the extent that the project demonstrates support for the Biden-Harris Administration's priorities, including E.O. 14008: *Tackling the Climate Crisis at Home and Abroad*, E.O. 13985: *Advancing Racial Equity and Support for Underserved Communities Through the Federal Government*, and the President's memorandum, *Tribal Consultation and Strengthening Nation-to-Nation Relationships*. Points will be allocated based on the degree to which the project supports the priorities listed, and whether the connection to the priority(ies) is well supported in the application. **Without repeating benefits already described in previous criteria, describe in detail how the proposed project supports a priority(ies) below.**

#### ***Sub-criterion No. E1 Climate Change***

Points will be awarded based on the extent the project will reduce climate pollution; increase resilience to the impacts of climate change; protect public health; and conserve our lands, waters, oceans, and biodiversity. Address the following as relevant to your project.

#### **Combating the Climate Crisis**

E.O. 14008: *Tackling the Climate Crisis at Home and Abroad*, focuses on increasing resilience to climate change and supporting climate-resilient development. For additional information on the impacts of climate change throughout the western United States, see: <https://www.usbr.gov/climate/secure/docs/2021secure/2021SECUREReport.pdf>. Please describe how the project will address climate change, including:

- *Please provide specific details and examples on how the project will address the impacts of climate change and help combat the climate crisis.*

With most of the western United States in the most severe drought in decades. That drought may be one of many impacts of climate change. By reducing water consumption through this proposed project, the impacts of climate change can be lessened to DIC's users. The proposed project will help combat the climate crisis by reducing vehicle carbon emissions by instead allowing all water meters to be automatically and remotely read by cellular service.

- *Does this proposed project strengthen water supply sustainability to increase resilience to climate change? Does the proposed project contribute to climate change resiliency in other ways not described above?*

This project will give DIC and its customers the infrastructure to better track and manage water usage and will ultimately provide tools to conserve water during periods of drought. By tracking water use, water waste can be reduced to a minimum and the water supply can be stretched out for use later in the water year. This will provide increased resiliency to the impacts of climate change.

***Sub-criterion No. E2 Disadvantaged or Underserved Communities***

Points will be awarded based on the extent to which the Project serves economically disadvantaged or underserved communities in rural or urban areas.

- *Will the proposed project serve or benefit a disadvantaged or historically underserved community? Benefits can include, but are not limited to, public health and safety by addressing water quality, new water supplies, or economic growth opportunities.*

Additional water sources made available through conservation could potentially be marketed to rural communities during non-dry year conditions.

- *Please describe in detail how the community is disadvantaged based on a combination of variables that may include:*
  - *Low income, high and/or persistent poverty*
  - *High unemployment and underemployment*
  - *Racial and ethnic residential segregation, particularly where the segregation stems from discrimination by government entities*
  - *Linguistic isolation*
  - *High housing cost burden and substandard housing*
  - *Distressed neighborhoods*
  - *High transportation cost burden and/or low transportation access*
  - *Disproportionate environmental stressor burden and high cumulative impacts*
  - *Limited water and sanitation access and affordability*
  - *Disproportionate impacts from climate change*
  - *High energy cost burden and low energy access*
  - *Jobs lost through energy transition*
  - *Access to healthcare*

There is insufficient documentation available to demonstrate that the community directly benefiting from the proposed project falls under any of the above variables.

- *If the proposed project is providing benefits to an underserved community, provide sufficient information to demonstrate that the community meets the underserved definition in E.O. 13985, which includes populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life*
- There is insufficient documentation available to demonstrate that the community directly benefiting meets the underserved definition in E.O.13985.

***Sub-criterion No. E3 Tribal Benefits***

Points will be awarded based on the extent to which the Project will honor the Federal government's commitments to Tribal Nations.

- *Does the proposed project directly serve and/or benefit a Tribe? Will the project improve water management for a Tribe?*

The proposed project does not directly serve nor benefit a Tribe. The proposed project will not improve water management for a Tribe.

- *Does the proposed project support Tribal resilience to climate change and drought impacts or provide other Tribal benefits such as improved public health and safety by addressing water quality, new water supplies, or economic growth opportunities?*

The proposed project will not support Tribal resilience to climate change and drought impacts, nor will the project provide any other Tribal benefits like the ones mentioned above.



# BUDGET PROPOSAL FOR THE CULINARY SMART METERING PROJECT

## FUNDING PLAN AND LETTERS OF COMMITMENT

1. DIC seeks a \$100,000 grant from BOR for this metering project. DIC will fund the remaining \$119,059 from its cash reserves and in-kind services.
2. There are no costs incurred before the anticipated project start date that will be included in this project.
3. DIC has not requested any other Federal funds for the proposed project.
4. There are no other pending funding requests. Table 4 summarizes all funding sources for the project.

DIC will be funding this project itself with no commitments from other partners. No letters of commitment are therefore required.

**Table 4 - Summary of Non-Federal and Federal Funding Sources**

FUNDING SOURCES	AMOUNT
<b>Non-Federal Entities</b>	
1. Draper Irrigation Company: In-Kind Labor/Wages*	\$22,425
2. Draper Irrigation Company: Cash	\$96,634
<b>Non-Federal Subtotal</b>	<b>\$119,059</b>
<b>Other Federal Entities</b>	
1. None	\$0
<b>Other Federal Subtotal</b>	<b>\$0</b>
<b>REQUESTED RECLAMATION FUNDING</b>	<b>\$100,000</b>
<b>TOTAL PROJECT COST</b>	<b>\$219,059</b>

**BUDGET PROPOSAL**

Table 5 shows the proposed budget for the project.

**Table 5 - Proposed Project Budget**

BUDGET ITEM DESCRIPTION	COMPUTATION		QTY TYPE	TOTAL COST
	\$/UNIT	QTY		
<b>Salaries and Wages</b>				
Steve Cunningham - Project Manager	\$63.31	75	Hours	\$4,748
Meter Technician	\$27.53	425	Hours	\$11,686
<b>Fringe Benefits</b>				
Steve Cunningham - Project Manager	\$17.10	75	Hours	\$1,283
Meter Technician	\$11.09	425	Hours	\$4,708
<b>Supplies and Materials</b>				
1-inch Meter	\$230.28	112	Each	\$25,792
3/4-inch Meter	\$169.41	454	Each	\$76,913
Cellular Endpoint for Meter	\$159.50	566	Each	\$90,278
<b>Contractual</b>				
Engineering Consultant - Bowen Collins & Associates	\$182.50	20	Hours	\$3,650
<b>TOTAL ESTIMATED PROJECT COSTS</b>				<b>\$219,059</b>

**BUDGET NARRATIVE**

The project will include installation of 566 total new 3/4-inch and 1-inch water meters. Installation of all 566 meters and cellular endpoints will be completed by DIC.

**Salaries and Wages**

The proposed budget (Table 5) includes estimated time for DIC employees administering and overseeing the project. That includes project meetings and consultations with the engineers, project visits, all required paperwork, reporting, and other duties involved with the project. DIC will prepare the following reports and submit them to Reclamation: SF-425 Federal Finance Report, an interim performance report, and a final report. Salaries and wages are based on 2022 figures and will be a donation in-kind by DIC. The labor rates included in the budget proposal represent the actual labor rates of the identified personnel.

**Fringe Benefits**

The provisional fringe benefit rate for DIC personnel is roughly 30% of salary and wages for the listed employees as shown in Table 5. Fringe benefits include Social Security, Medicare, retirement, life and disability insurance, workers’ compensation, sick leave, health insurance premiums, cell phone costs, and vehicle allowances. Fringe benefits anticipated for the project will be a donation in-kind by DIC.

## **Equipment**

No new equipment is required for installing new smart meters and cellular endpoints.

## **Materials and Supplies**

The project costs include the purchase of 566 meters and cellular endpoints for construction. Costs associated with this category are based on recent DIC experience purchasing these items in 2021. Estimates of costs and quantities for all materials and supplies is shown in Table 5

## **Contractual**

DIC anticipates contracting with Bowen, Collins & Associates, Inc. (the current contracted consultant engineer for DIC) for any necessary design work required for issues that arise in the field during construction and to assist with reporting/coordinating with BOR. The proposed budget in Table 5 is estimated time for Bowen Collins & Associates to assist with the project. That includes project meetings, consultations, project visits, required paperwork, reporting, and other support duties involved with the project.

## **Total Costs**

The estimated total project cost for the culinary metering project is \$219,059. The requested federal share is \$100,000; the total non-federal share is \$119,059. A copy of the SF424A, Budget Information for Non-Construction Programs is included in the application.

## ENVIRONMENTAL AND CULTURAL RESOURCES COMPLIANCE

DIC will not commence any ground-disturbing activities on this project before the environmental compliance process is complete and BOR explicitly authorizes work to proceed.

1. The project will install meters on existing culinary service laterals. Therefore, no soil excavation will be required. As the service laterals and meter boxes were previously installed, much of the excavated area was previously disturbed. Little to no impacts are expected on the surrounding environment due to soil, air, water, etc.
2. The U.S. Fish and Wildlife Service's Information Planning and Conservation System website provides information within the area of interest. The Canada Lynx (*Lynx canadensis*), Yellow-billed Cuckoo (*Coccyzus americanus*), June Sucker, (*Chasmistes liorus*), and Ute Ladies-tresses (*Spiranthes diluvialis*) may potentially be affected by activities in Salt Lake County. Meters will be installed on existing culinary service laterals. These locations are already highly disturbed and minimize any potential animal habitat availability. No threatened or endangered species will be impacted by the proposed project.
3. The project will potentially disturb only urban landscaping; this project will not affect wetlands or waters of the U.S.
4. The culinary water delivery system was constructed between 1911 to the present.
5. This project will not make any modifications to irrigation system features.
6. There may be historic sites within the project area; however none are known at this time. DIC will check with the State Historic Preservation Office prior to starting the project. No buildings or facilities in the project area will be impacted by the project as work will only occur inside existing meter boxes.
7. There are no known archeological sites in the proposed project area.
8. The project will not disproportionately affect low income or minority populations.
9. There are no known sacred sites or tribal land within the project area. The project will not limit access or affect tribal lands.
10. The project may disturb very small areas of existing residential landscaping. Introduction, continued existence, or spread of noxious weeds or invasive species is not expected.

## REQUIRED PERMIT OR APPROVALS

As outlined in the environmental compliance cost description of the project budget, DIC will further evaluate the environmental requirements prior to commencing construction.

### **NEPA – National Environmental Policy Act**

DIC does not anticipate any impacts on the environment and will fit within a Categorical Exclusion to NEPA. Best management practices will minimize environmental impacts.

### **NHPA – National Historic Preservation Act**

DIC will contact the State Historic Preservation Office before beginning any work in the project area. There will be no negative impacts to historic sites as a result of this project.

### **ESA – Endangered Species Act**

No critical habitat or endangered species are anticipated to be affected by this project.

### **State Permits**

No State permits will be required for the project.

### **Local Permits**

All appropriate approvals and permits for the project fall under the jurisdiction of Draper City, Sandy City, and Bluffdale City. All applicable city ordinances and procedures will be followed, and necessary approvals obtained.

## LETTERS OF PROJECT SUPPORT

Appendix B has letters from Jordan Valley Water Conservancy District and Draper City.

## OFFICIAL RESOLUTION

The official resolution approved by the DIC Board of Directors is not included with this application. A copy of the official resolution that was presented at the board meeting on April 20th is included in Appendix A. That official resolution passed at the board meeting; however, as the board meeting was virtual, the signatures have not been able to be collected from all board members at this time. That official resolution provides support for this application, designates an authorized official, commits DIC to the amount of funding and in-kind contributions specified in the proposed project funding plan, and commits DIC to meeting established deadlines for entering into a grant agreement with the BOR. Once fully signed, that official resolution will be sent to the BOR separately from this application.

**Official Resolution of Draper Irrigation Company Regarding Participation in Funding for a U.S. Department of the Interior: Bureau of Reclamation WaterSMART Grant Project**

Whereas, the Bureau of Reclamation under its Small-Scale Water Efficiency Projects program has made available to qualifying applicants grant funding on a matching fund basis for water conservation projects and whereas, Draper Irrigation Company has identified a project that exemplifies the objectives of the grant program for the purpose of water conservation through the installation of culinary water meters and cellular endpoints;

It is hereby Resolved, dated April 20, 2022, by the Draper Irrigation Company Board of Directors:

- That Steve Cunningham is identified as the official with legal authority to represent Draper Irrigation Company and to enter into an agreement resulting from a successful application for this grant, and is specifically authorized to do so.
- That Steve Cunningham and the Board of Directors have reviewed and support the application submitted.
- That Draper Irrigation Company has the financial capability to provide the amount of funding and in-kind contributions specified in the funding plan of the application.
- That Draper Irrigation Company will work with Reclamation to meet established deadlines for entering into a grant or cooperative agreement.

This resolution shall take effect immediately upon passing. Signed and approved:

\_\_\_\_\_  
George Greenwood, President

\_\_\_\_\_  
Kent S. Ware, Director

\_\_\_\_\_  
Dale Smith, Vice President

\_\_\_\_\_  
Thomas Ward, Director

\_\_\_\_\_  
Greg J. Matis, Secretary

\_\_\_\_\_  
Stephen L. Tripp, Director

\_\_\_\_\_  
Ryan Daw, Past President

801.565.4300  
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jvwcd.org

8215 South 1300 West  
West Jordan, UT 84088



**JORDAN VALLEY WATER**  
CONSERVANCY DISTRICT

April 20, 2022

Financial Assistance Support Section  
Bureau of Reclamation, Department of the Interior

To whom it may concern:

Jordan Valley Water Conservancy District (JVWCD) understands that Draper Irrigation Company (DIC) is seeking federal funds for a proposed Culinary Water Metering Project through the Bureau of Reclamation's (BOR) Water SMART grant program. DIC currently has a wholesale water purchase contract with JVWCD for M&I water deliveries to DIC's retail service area.

As a water conservancy district and a wholesale water provider, JVWCD is committed to the protection and efficient use of our current and future water supplies. JVWCD originally adopted a conservation goal to reduce M&I water use by 25% by 2025, and the goal was updated with our 2019 Conservation Plan Update to achieve further reductions in per capita use to match the Utah Regional Conservation Goals by 2030. DIC has indicated that this project will result in significant quantifiable water savings, improve management of their culinary water system, and help ensure the sustainability of their source supply. In addition, this project will directly help JVWCD to reach its goals in the following way:

- Help sustain and conserve existing M&I water supplies, including those provided by federal projects such as the Central Utah Water Project and the Provo River Project.
- Reduce the per capita water usage of DIC customers and overall per capita usage within JVWCD's service area.
- Allow our current water purchase contract with DIC to supply water for future DIC users.
- Reduce the need for upgrades or additions to water supply infrastructure.

We understand that DIC has completed a significant amount of research on meters and has found a culinary meter with cell point technology to allow remote reading. The new meters feature application software that allows customers to monitor water usage in real time, set usage goals, and create alarms to inform them of overuse. These meters will help improve efficiency, conserve water, and improve customer relations while encouraging customers to be proactive in conserving water. We therefore recommend BOR's joint funding of this project to help ensure its success.

Please do not hesitate to call me at (801) 565-4300 if you have any questions.

Respectfully,

A handwritten signature in black ink, appearing to read "Alan Packard". The signature is fluid and cursive, with the first name "Alan" being more prominent and the last name "Packard" following in a similar style.

**Alan Packard**  
Assistant General Manager  
Jordan Valley Water Conservancy District



March 10, 2021

Darren Olson, Grants Management Specialist  
Financial Assistance Support Section  
Bureau of Reclamation, Department of the Interior

**RE: WaterSmart: Water & Energy Efficiency Grants for FY2019  
Draper Irrigation Company – Culinary Water Metering Project**

Dear Mr. Olson:

Draper City understands that Draper Irrigation Company (DIC) is seeking federal funds for a proposed Culinary Water Metering Project through the Bureau of Reclamation's (BOR) WaterSMART grant program.

DIC is currently operating under a franchise agreement with Draper City, and Draper City is one of its largest customers. It is important for us to support DIC in providing service to our customers and in exercising best management practices. One of these practices is to provide metering services that will engage and encourage customers in conserving water. We work closely with DIC in water conservation practices, such as educating schoolchildren and providing ordinances to support conservation efforts in Draper City.

We understand that DIC has completed a significant amount of research on meters, and has found a culinary meter with cell point technology to allow remote reading. The new meters feature an app that allows customers to monitor water usage in real time, set usage goals, and create alarms to inform them of overuse. Using these meters will help improve efficiency, conserve water, and improve customer relations while encouraging customers to be proactive in conserving water. We therefore recommend BOR's joint funding of this project to help ensure its success.

Please do not hesitate to call me at (801) 576-6513 if you have any questions.

Respectfully,

Troy Walker  
Mayor