Culinary Smart Metering Project

Prepared for:
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July 23, 2018
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A Official Resolution

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EXECUTIVE SUMMARY

Date: July 23, 2018
Applicant: Draper Irrigation Company
City, County, State: Draper City, Salt Lake County, Utah

Project Name: Culinary Smart Metering Project
Project Length: 1 year
Estimated Completion Date: June 1, 2020

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 over a 12-month period. The project proposes installing 490 ultrasonic smart meters with cellular data transmission. The 490 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.
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 10,583 connections to the culinary system and an estimated population in 2016 of 45,830. The connections to the culinary system are metered and most monthly readings are taken by physically locating and reading meters. Available data from 2009 through 2016 shows the average annual usage for the system was 141 million gallons.

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 (JWVCD).

Culinary water for the DIC system comes from four sources: DIC’s water treatment plant, JWVCD, DIC’s wells, and surplus raw water from JWVCD through 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.

**JWVCD:** DIC receives water from JWVCD at three separate connection points: 700 East, the WTP, and Autumn Ridge (a surplus backup connection used for emergencies). Water from JWVCD is mostly used in the summer months when demand is high due to outdoor use. DIC contracts with JWVCD 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 JWVCD to sell canyon water to JWVCD and buy banked water back at the lower of either the wholesale or operational cost.
Figure 1 – Culinary and PI Service Boundaries
Wells: Five wells, shown in Table 1, also provide water as needed.

Table 1 - DIC Well Locations and Capacities

<table>
<thead>
<tr>
<th>Qty.</th>
<th>Location</th>
<th>Capacity (gpm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1300 East in Draper, Utah</td>
<td>950</td>
</tr>
<tr>
<td>1</td>
<td>Valle Di Villa</td>
<td>650</td>
</tr>
<tr>
<td>1</td>
<td>Hidden Valley</td>
<td>3,000</td>
</tr>
<tr>
<td>2</td>
<td>Water Treatment Plant</td>
<td>1,100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>220</td>
</tr>
</tbody>
</table>

Table 2 shows DIC’s existing and active water rights and summarizes the status of each water right. DIC owns and operates nine storage tanks for the culinary water system, with a total capacity of 23,120,000 gallons as identified in the Table 3.

DIC has a contract with JVWCD, which is affiliated with the Central Utah Project (CUP), a Bureau of Reclamation (BOR) project. CUP funding helped to develop the DIC PI system, which replaced an old flood irrigation system. DIC has also worked directly with 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 received a WaterSMART grant from the BOR for installation of 395 PI water meters in fiscal year 2017. DIC anticipates completion of this project in 2019.

PROJECT LOCATION
This project will occur at 490 locations in 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 490 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. In addition, the lead-free ultrasonic flow meters will improve accuracy, keep maintenance low, and increase reliability. The ultimate goal is to convert the entire culinary service area to this “smart” type of metering.

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 already used for collecting the data. Because the system is 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.
<table>
<thead>
<tr>
<th>Water Right Number</th>
<th>Status</th>
<th>Most Recent Change App. No. (s)</th>
<th>Common Name</th>
<th>Original Priority Date</th>
<th>Proof Due Date (or Cert. #)</th>
<th>Proof Due on change Application (or Cert. #)</th>
<th>Max. Flow (cfs)</th>
<th>Max Volume (ac-ft/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>57-2757</td>
<td>Certificate</td>
<td>a37443</td>
<td>Wells - From Wangard</td>
<td>10/10/1961</td>
<td>8550</td>
<td>None</td>
<td>1,086.772</td>
<td></td>
</tr>
<tr>
<td>57-8185</td>
<td>Wells</td>
<td></td>
<td>Wells</td>
<td>2/4/1977</td>
<td>12518</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>57-8227</td>
<td>Wells</td>
<td></td>
<td>Wells - From Fitzgerald</td>
<td>3/3/1977</td>
<td>12181</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>57-8520</td>
<td>Wells</td>
<td></td>
<td>Wells - From Riverton City</td>
<td>3/31/1980</td>
<td>13890</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>57-10170</td>
<td>Wells</td>
<td></td>
<td>Wells - From Keogh</td>
<td>6/13/1972</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>57-10302</td>
<td>Wells</td>
<td></td>
<td>Wells - From Naylor Well</td>
<td>3/4/1971</td>
<td>11553</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>57-10331</td>
<td>Wells</td>
<td></td>
<td>Wells - From Toone</td>
<td>9/22/1961</td>
<td>7323</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>57-8835</td>
<td>Certificate</td>
<td>a37447</td>
<td>Wells - From Zabriskie</td>
<td>12/3/2003</td>
<td>9/30/2025</td>
<td>None</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>57-10297</td>
<td>Approved</td>
<td>a37442</td>
<td>Wells - From Teerlink</td>
<td>6/13/1972</td>
<td>9/30/2022</td>
<td>None</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>57-10327</td>
<td>Approved</td>
<td>a37441</td>
<td>Wells - From Teerlink</td>
<td>6/13/1972</td>
<td>9/30/2022</td>
<td>None</td>
<td>23.4</td>
<td></td>
</tr>
<tr>
<td>57-7839</td>
<td>Certificate</td>
<td>a38167</td>
<td>Wells - South Minuteman Dr.</td>
<td>7/17/1972</td>
<td>12704</td>
<td>8/31/2026</td>
<td>None</td>
<td>25.856</td>
</tr>
<tr>
<td>57-3098</td>
<td>Certificate</td>
<td>a39939</td>
<td>Wells - Mount Jordan Corp</td>
<td>8/22/1960</td>
<td>11087</td>
<td>10/31/2019</td>
<td>3.58</td>
<td>240</td>
</tr>
<tr>
<td>57-10397</td>
<td>Diligence Claim</td>
<td>a40952</td>
<td>Wells - Dunyon Springs</td>
<td>1872</td>
<td></td>
<td></td>
<td>None</td>
<td>64.13</td>
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<tr>
<td>57-10466</td>
<td>Diligence Claim</td>
<td>a37446</td>
<td>Well</td>
<td>6/15/1954</td>
<td></td>
<td></td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>57-34101</td>
<td>Diligence Claim</td>
<td>a37445</td>
<td>Corner Canyon</td>
<td>1880</td>
<td></td>
<td></td>
<td>None</td>
<td>801.46</td>
</tr>
<tr>
<td>57-1019123</td>
<td>Certificate</td>
<td>a37915</td>
<td>Mountain Streams (&amp; Utah Lake)</td>
<td>10/27/1908</td>
<td>5629</td>
<td>4/30/2026</td>
<td>None</td>
<td>6,342.44</td>
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<tr>
<td>57-44323</td>
<td>Certificate</td>
<td>a37915</td>
<td>Mountain Streams</td>
<td>9/5/1940</td>
<td>9215</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>57-3364</td>
<td>Certificate</td>
<td>a39978</td>
<td>Bear Canyon Spring &amp; Creek</td>
<td>4/30/1964</td>
<td>12412</td>
<td>2/29/2020</td>
<td>1.113</td>
<td>None</td>
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<tr>
<td>57-10439</td>
<td>Decree</td>
<td></td>
<td></td>
<td>1869</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1Source used for both culinary and pressure irrigation systems.
2For volume calculation of total water rights, the max flow was assumed to flow the entire year (actual yield may be less).
3For purposes of source production, it is assumed all of the water is obtained through the mountain stream points of diversion, not Utah Lake.

Total 9,425.83
Table 3 - DIC Storage Facilities

<table>
<thead>
<tr>
<th>Tank Description</th>
<th>Tank Location</th>
<th>Storage Capacity (gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast Bench Tank (WTP)</td>
<td>2558 Wasatch Blvd</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Treatment Plant Tank</td>
<td>2558 Wasatch Blvd</td>
<td>7,000,000</td>
</tr>
<tr>
<td>Southeast Bench Tank</td>
<td>13800 South 1100 East</td>
<td>500,000</td>
</tr>
<tr>
<td>Cove of Bear Canyon Sub. Tank</td>
<td>12300 South 2300 East</td>
<td>250,000</td>
</tr>
<tr>
<td>South Mountain Tank</td>
<td>1420 E Rambling Road</td>
<td>3,000,000</td>
</tr>
<tr>
<td>Centennial Tank (10% of tank)</td>
<td>15400 South 300 East</td>
<td>120,000</td>
</tr>
<tr>
<td>Traverse Ridge Road Tank</td>
<td>700 East Traverse Ridge Rd</td>
<td>3,000,000</td>
</tr>
<tr>
<td>Little Valley Tank</td>
<td>1430 East Traverse Ridge Rd</td>
<td>750,000</td>
</tr>
<tr>
<td>Corner Canyon Tanks</td>
<td>13496 South Corner Canyon Rd</td>
<td>8,000,000</td>
</tr>
<tr>
<td><strong>TOTAL STORAGE</strong></td>
<td></td>
<td><strong>23,120,000</strong></td>
</tr>
</tbody>
</table>

\(^1\) The Southeast Bench Tank is at an elevation between two of the zones and therefore cannot be used by DIC; it is not included in the total storage capacity.

DIC will install 490 Badger Meter ¾ and 1-inch E-Series Ultrasonic Meters. These meters include no internal moving parts. DIC selected 490 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.

The expected outcome is that DIC (and the customers with the new smart metered connections) will be able to monitor and track usage more accurately. This type of technology can increase leakage detection and sustainability of DIC’s water supply by saving water through informed use. DIC anticipates that with the additional data from the meters, they can detect maintenance issues and make repairs before larger failure occurs.

**EVALUATION CRITERIA**

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

The anticipated benefits of this project include:

1. Reducing time and energy for meter reading
2. Reducing time to repair system deficiencies due to reduction in time reading meters, therefore improving system reliability
3. Reducing time for detecting leakage and reacting to it
4. Increased metering accuracy and reliability due to technology advancements of the new meters
5. Better understanding of the 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

**Evaluation Criterion B: Planning Efforts Supporting the Project (35 Points)**

DIC has a system-wide Water Conservation Master Plan that supports this proposed project and the common goal of the Bureau of Reclamation’s Central Utah Project’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 leakage detection, and reduction of DIC staff efforts to collect meter data are the main conservation tactics for this project.

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 leakage 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: Project Implementation (10 Points)**

DIC is ready to proceed with the proposed project once a financial assistance agreement is reached. Planning, scheduling, and required funding by DIC is established. Construction/meter replacement would begin June 2019 with completion anticipated by June 2020.

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.

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.

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 creates new templates for billing. DIC anticipates that once the entire system has smart meters installed, some policies will require updating.

Environmental Compliance costs have been estimated at 3% of the total project costs. DIC anticipates minimal environmental and regulatory compliance costs, and the budgeted amount for compliance is part of the recipient cost share. Compliance costs will include the cost incurred by BOR to determine the level of environmental compliance required for the project, the cost of BOR and DIC personnel to prepare any necessary environmental compliance documents or reports, the cost of BOR to review any environmental compliance documents prepared by DIC, the cost of DIC to acquire any required approvals or permits, and/or implementing any required mitigation measures.

**Evaluation Criterion D: Nexus to Reclamation (10 Points)**

DIC has a contract with JVWCD, 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 still has an agreement with CUP and provides updates to CUP on conservation totals.

DIC also received funding from BOR for the Bear Canyon Intake Relocation project, to construct a new intake structure resulting in estimated 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.

The project will not benefit any local tribes.

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

*Subcriterion 5 a.: Support White House Public/Private Partnership Initiative to modernize U.S. infrastructure.*

*Make Targeted Federal Investments* – The White House indicates that focusing Federal dollars on the most transformative projects and processes stretches the use and benefit of taxpayer funds. The White House also acknowledges that Federal funds should go to projects that address problems that are a high priority. The calculated percentage of Federal funding to total project cost is 43.2%. DIC is funding the majority of the project costs and is above the 50% minimum percentage of non-Federal funding.

*Encourage Self Help* – The White House recognizes that localities are better equipped to understand the right level and type of infrastructure investment needed for their communities. Through internal investigations and experience with smart metering, DIC has concluded that culinary system smart meters are a worthwhile investment.

*Modernizing U.S. Infrastructure* – This project will modernize the existing culinary water tracking infrastructure. The 490 customers will go from having limited access to water use data to having highly accurate ultrasonic meters with cellular endpoint units allowing automatic wireless remote meter reading that provides nearly real-time flow data monitoring available online. DIC will be able to educate customers regarding water use, detect leaks, and identify other areas where additional conservation may be possible.
BUDGET PROPOSAL FOR THE
CULINARY SMART METERING PROJECT

FUNDING PLAN AND LETTERS OF COMMITMENT

1. DIC seeks a $75,000 grant from BOR for this metering project. DIC will fund the remaining $98,697 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

<table>
<thead>
<tr>
<th>FUNDING SOURCES</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Federal Entities</td>
<td></td>
</tr>
<tr>
<td>1. Draper Irrigation Company: In-Kind Labor/Wages</td>
<td>$21,923</td>
</tr>
<tr>
<td>2. Draper Irrigation Company: Cash</td>
<td>$76,774</td>
</tr>
<tr>
<td>Non-Federal Subtotal</td>
<td>$98,697</td>
</tr>
<tr>
<td>Other Federal Entities</td>
<td></td>
</tr>
<tr>
<td>1. None</td>
<td>$0</td>
</tr>
<tr>
<td>Other Federal Subtotal</td>
<td>$0</td>
</tr>
<tr>
<td>REQUESTED RECLAMATION FUNDING</td>
<td>$75,000</td>
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</table>
BUDGET PROPOSAL

Table 5 shows the proposed budget for the project.

<table>
<thead>
<tr>
<th>Table 5 - Proposed Project Budget</th>
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</thead>
<tbody>
<tr>
<td><strong>BUDGET ITEM DESCRIPTION</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Salaries and Wages</strong></td>
</tr>
<tr>
<td>David Gardner - PM/Assistant General Manager</td>
</tr>
<tr>
<td>Steve Cunningham - Office Manager</td>
</tr>
<tr>
<td>Meter Technician</td>
</tr>
<tr>
<td><strong>Fringe Benefits</strong></td>
</tr>
<tr>
<td>David Gardner - PM/Assistant General Manager</td>
</tr>
<tr>
<td>Steve Cunningham - Office Manager</td>
</tr>
<tr>
<td>Meter Technician</td>
</tr>
<tr>
<td><strong>Travel</strong></td>
</tr>
<tr>
<td>Project Visits (local travel)</td>
</tr>
<tr>
<td><strong>Supplies and Materials</strong></td>
</tr>
<tr>
<td>1-inch Meter</td>
</tr>
<tr>
<td>3/4-inch Meter</td>
</tr>
<tr>
<td>Cellular Endpoint for Meter</td>
</tr>
<tr>
<td><strong>Contractual/Construction</strong></td>
</tr>
<tr>
<td>Environmental and Regulatory Compliance (% of Total Direct Costs)</td>
</tr>
<tr>
<td><strong>TOTAL DIRECT COSTS</strong></td>
</tr>
<tr>
<td><strong>Indirect Costs</strong></td>
</tr>
<tr>
<td>WaterSMART Grant Application Consultant</td>
</tr>
<tr>
<td><strong>TOTAL ESTIMATED PROJECT COSTS</strong></td>
</tr>
</tbody>
</table>

BUDGET NARRATIVE

The project will include installation of 490 total new ¾-inch and 1-inch water meters. All 490 meters and cellular endpoints will be purchased and installed 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 design 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 2018 figures and will be a donation in-kind by DIC.
Fringe Benefits
The provisional fringe benefit rate for DIC personnel is roughly 32% of salary and wages for the listed employees. 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.

Travel
Travel costs were calculated using the 2018 Internal Revenue Service (IRS) reimbursement rate of $0.545 per mile. Costs include approximately 980 miles for construction coordination, site visits, construction, and meter installations. Travel costs are a portion of the recipient cost share. DIC headquarters is located inside the project area, so travel costs will be relatively low and only include mileage costs.

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

Materials and Supplies
DIC will purchase all 490 meters and cellular endpoints.

Contractual
DIC anticipates contracting with Bowen, Collins & Associates, Inc. (the current contracted consultant engineer for DIC) to develop construction plans and bid documents, administer project bidding, and assist with reporting/coordinating with BOR. Preliminary cost estimates for engineering consultant work are based on a fixed percentage of construction costs for this application. That cost will be refined if a grant award is received.

Environmental and Regulatory Compliance Costs
Environmental Compliance costs have been estimated to be 3% of total project costs. DIC anticipates minimal environmental and regulatory compliance costs. Compliance costs will include the cost incurred by BOR to determine the level of environmental compliance required for the project, BOR and DIC personnel to prepare any necessary environmental compliance documents or reports, BOR review of any environmental compliance documents prepared by DIC, DIC acquiring approvals or permits, and/or implementing any required mitigation measures.

Indirect Cost
The only indirect costs included in this application are for an engineering consultant to assist in preparing the application and developing data necessary to support the application.

Total Costs
The estimated total project cost for the PI metering project is $173,697. The requested federal share is $75,000; the total non-federal share is $98,697. A copy of the SF424C, Budget Information-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, 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 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 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.

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 during project design.

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 included with this application in Appendix A. The board meeting was held July 18th, 2018. The 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.
APPENDIX A

OFFICIAL RESOLUTION
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 for FY 2018 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 July 18, 2018, by the Draper Irrigation Company Board of Directors:

- That David A. Gardner 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 David A. Gardner 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:

Kent S. Ware, President

Ryan Daw, Vice President

George Greenwood, Secretary

Stephen L. Tripp, Past President

Thomas Ward, Director

Dale Smith, Director

Greg J Marks, Director
APPENDIX B

LETTERS OF PROJECT SUPPORT
July 17, 2018

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

RE: WaterSMART: Water & Energy Efficiency Grants for FY 2018
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. These 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, Draper City
July 16, 2018

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

RE: WaterSMART: Water & Energy Efficiency Grants for FY 2018
Draper Irrigation Company – Culinary Water Metering Project

Dear Mr. Olson:

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) WaterSMART 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, we are committed to protection and efficient use of our current and future water supply, and have a conservation goal to reduce M&I water use 25% by 2025. 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 ways:

• Help sustain and conserve existing M&I water supplies, including those provided by federal projects such as the Central Utah Project and the Provo River Project.
• Reduce the per capita 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 to 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,

Alan Packard
Assistant General Manager
Jordan Valley Water Conservancy District