Twin Loups Irrigation District
Gate Automation and Metering Upgrades

Scotia, Nebraska

April 24, 2019
## Table of Contents

### Technical Proposal and Evaluation Criteria

Executive Summary........................................................................................................3

Background Data........................................................................................................3

Project Location........................................................................................................4

Technical Project Description and Milestones...............................................................6

Evaluation Criteria

  Evaluation Criterion A: Project Benefits.................................................................6
  Evaluation Criterion B: Planning Efforts Supporting the Project..............................7
  Evaluation Criterion C: Project Implementation.......................................................8
  Evaluation Criterion D: Nexus to Reclamation.......................................................9
  Evaluation Criterion E: Department of the Interior Priorities...................................10

Environmental and Cultural Resources Compliance.....................................................10

Official Resolution....................................................................................................12

Project Budget...........................................................................................................13

  Funding Plan........................................................................................................13
  Budget Narrative...................................................................................................14

Unique Entity Identifier and System for Award Management........................................14

Attachments.............................................................................................................15-17
Technical Proposal and Evaluation Criteria

Executive Summary

Date: Application due date: April 24, 2019

Applicant: Twin Loups Irrigation District
Scotia, Greeley County, Nebraska

Project Title: Twin Loups Irrigation District Automation and Metering Upgrades

Project Summary:

Twin Loups Irrigation District (TLID) is located in central Nebraska. We serve irrigated crop ground and occasional cattle tanks where the canal system cuts thru pasture land. The project was built in the late 1980's and early 90's. The system was built with no automation or remote communications. The meters that were installed for the farm turnouts were adequate at the time, however were not well-suited for surface water delivery. With this grant we will continue the process of upgrading our water delivery system by adding meters that are better suited for surface water measurement and installing automated gates to regulate flow along bottom reach of the Scotia Canal.

Approximate Length: One Year

Completion Date: May 15, 2020

Federal Facility: This project is located on a Federal facility

Background Data

For several years, TLID has cooperated in the development of the Voluntary Integrated Management Plan (IMP) for the Lower Loup Natural Resources District. This was done in conjunction with the Lower Loup NRD, the Nebraska Department of Natural Resources (NDNR), and several other representatives of municipal and industrial water users within the local NRD. On January 9, 2004, Nebraska Legislative Bill (LB) 92 was passed, which required the NDNR and the NRDs to collaborate on the management of groundwater and surface water as a single integrated resource. LB 962 requires the development of an IMP if a river basin, sub-basin, or reach is determined to be fully appropriated by the NDNR.

On December 16, 2008, the NDNR made a preliminary determination that the Lower Platte River Basin, which includes the Lower Loup NRD, was fully appropriated. A basin is considered fully appropriated when certain conditions for hydrologically connected surface and groundwater are met under Neb. Rev. Stat. §46-713(3) including; surface water supply to be insufficient to sustain beneficial uses over the long term for existing appropriations, insufficient streamflow for beneficial uses related to wells constructed in aquifers dependent upon recharge from the river, or reduction in the flow of a river or stream to cause non-compliance by the state
of Nebraska with an interstate compact or decree.

In early 2009 a hearing was held to seek additional information on the preliminary fully-appropriated determination by the NDNR for the Loup and several other basins. New information was presented that allowed the NDNR to reverse its earlier fully appropriated preliminary determination.

In 2010, Nebraska Legislative Bill (LB) 764 was passed allowing NRDs and the NDNR to work together in a voluntary integrated management planning process. In 2014, the Lower Loup NRD Board of Directors took a proactive stance and adopted a motion to inform the NDNR that the Lower Loup NRD intended to develop a voluntary IMP and request NDNR’s participation. All of the TLID lies within the Lower Loup NRD. The request was approved and the development of the IMP began with the involvement of TLID and other water users in the Loup River Basin.

The IMP establishes goals designed to promote water use efficiency and continue public education and cost share programs to encourage water conservation and adoption of BMPs. The Plan also calls for acquiring groundwater and surface water supply data for improved water management. This project is consistent with the goals set forth in the Lower Loup NRD Integrated Management Plan.

Project Location

The map provided show the location of the Twin Loups Irrigation Districts in central Nebraska. Twin Loups was built as part of the Pic-Sloan Missouri Basin Program. Known as the North Loup Division, construction began in 1980 and completed in 1991. Currently, the District serves 55,561 acres. Water is supplied by two rivers; the North Loup River and the Calamus River. Water is diverted using three structures, The Virginia Smith Dam, Davis Creek Dam & the Kent Diversion Dam located on the North Loup River. Combined they have the storage capacity of 150,000 acre feet and the diversion capability of 1,660 cfs to feed 162 miles of canal and 212 miles of pipelines.

Two other main features of the District include 19 miles of concrete canal, five miles is shared with an earlier existing district, (North Loup Public Power & Irrigation District) and the Geranium Pump Plant. This pumping plant lifts canal water 120 ft. to serve 11,000 acres. The Gate Automation proposed on the Scotia Canal is located at the intersection of the canal and the Loup River as noted on the following map of the Twin Loups Irrigation District.
Technical Project Description and Milestones

TLID intends to improve operations within the district through two projects with assistance from the WaterSMART Small-Scale Efficiency Grant.

**Scotia Canal Automation:** TLID proposes to install dual automated gates at the point where the Scotia Canal crosses the Loup River. One gate will control the wasteway or return flow to the river while the other will control releases back into the Scotia Canal to regulate flows in the last 17.4 miles of the canal and improve the efficiency of the ditch rider on the canal. Gates at this location are currently only manually controlled by turning a wheel by hand to open and close gates. The equipment to be installed will have electric motors powered by solar-charged batteries controlled by actuators contained in a weather-proof enclosure. Ditchriders or other TLID staff will be able to control actuators remotely by cellular communications or by manual backup.

Installation of the automated gates will be scheduled for December, 2019 to allow enough time for shipment following the end of water delivery in mid-September.

**Meter Upgrades:** During construction of TLID several different contractors were involved. One contractor that installed part of the underground pipelines and turnouts used a mechanical propeller meter that was better-suited for indoor or clean groundwater applications. Many of these meters are non-repairable due to unavailability of parts. The district proposes to implement Phase One of the process to upgrade each of these mechanical meters to electromagnetic meters with no moving parts. This will prevent meters from malfunctioning due to turbidity, sediment,
and vegetation in the water and from damage due to freezing temperatures during the off season.

The proposed project will upgrade old mechanical meters to a meter with no moving parts with datalogging capabilities. The new meters will also reduce the amount of staff time required for meter service and repairs. Meter down-time compared to the older mechanical meters will be reduced improving water use records at TLID. The district is proposing to upgrade forty mechanical propeller meters with electromagnetic meters. Most of the meters planned to be installed will be the McCrometer McMag3000 electromagnetic meter. The McMag3000 is an insertion-style meter with a saddle similar to the propeller meters being replaced for ease of installation. These meters will provide operational advantages to the district as well as improving data collected for water management in the Loup River Basin.

Meters will be ordered in late November/December of 2019 and installation of meters will be scheduled for January/February, 2020 during the off-season.

**Evaluation Criteria**

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

Describe the expected benefits and outcomes of implementing the proposed project.

- What are the benefits to the applicant’s water supply delivery system?

TLID proposes the installation of two automated gates where Scotia Canal crosses the Loup River. One gate will be used to control the wasteway or return flows back into the Loup River while the other will be used to control releases into the remaining length of Scotia Canal. The Scotia Canal runs for 30 miles before and 17.4 miles after this point. In this final 17.4 mile reach of the canal four checks are in the first five miles, while only two are in the last 12.4 miles making the final reach of the canal difficult for ditch riders to manage without automation. Automated gates will limit the amount of water spilled back to the river and improve the timing of water diverted in the final 17.4 miles of canal for the ditch rider that manages nearly 50 miles of canal.

- If other benefits are expected explain those as well. Consider the following:
  - Extent to which the proposed project improves overall water supply reliability

Automated gates will improve the efficiency of the ditchrider along the entire length of the Scotia Canal and therefore improve the reliability of water supply for all patrons in the TLID along the canal.
Since TLID delivers water to its patrons by flow rate, the new meters will provide more accurate flow measurements to ensure that the amount ordered for the turnout is correct and ensure that individuals aren’t taking more that their allotment. Farmers will also be able to see how much water is being used for on-farm irrigation management purposes.

The District is focusing on gravity-irrigated fields which have the most opportunity for improved conservation. Each time the water is moved to irrigate different rows the flow changes at the turnout. These meters will help the user to reset to the correct flow ordered. This will improve on-farm water management and distribution along the length of the canal. If we find that this type of meter is a good fit for the District, as budgeting allows and depending on grant availability, more will be deployed in the district.

- The expected geographic scope benefits from the proposed project (e.g., local, sub-basin, basin)

The new meters and gate automation will have significant effects across the entire TLID which stretches approximately 75 miles from Burwell, NE to Fullerton, NE. Improved water management will have benefits within the district as well as for downstream water users that will experience sustained flows due to automation.

- Extent to which the proposed project will increase collaboration and information sharing among water managers in the region

The new meters proposed are better suited for surface water with a probe that is angled backwards in the flow to allow moss or vegetation to shed off of the sensor probe and reduce any clogging in the pipeline. These meters also have no moving parts and consequently will not stop or clog due to sand, silt, or vegetation. Standard equipment for the new meters also includes an internal datalogger which the district can use for recording water deliveries to patrons during the irrigation season. The datalogging feature will enable the district to improve data collection on water use in the Loup Basin consistent with the LLNRD’s IMP.

- Any anticipated positive impacts/benefits to local sectors and economies (e.g., agriculture, environment, recreation, tourism)

Gate Automation and metering in the TLID will improve distribution of water within the district and therefore uniformity across the district. Improved uniform water application across the district will mean that more fields will be watered more efficiently for better productivity.

- Extent to which the project will complement work done in coordination with NRCS in the area (e.g., with a direct connection to the district’s water supply). Describe any on-farm efficiency work that is currently being completed or is anticipated to be completed in the future using NRCS assistance through EQIP or other programs.

New meters also have pulse-output capability in case farmers want to integrate flow data into their irrigation system. Having meters at individual turnouts will facilitate EQIP applications for such practices as soil moisture monitoring, surge valves, pivot nozzle conversions, etc. This is consistent with a separate goal of the IMP to improve on-farm irrigation efficiency in the LLNRD.

Evaluation Criterion (B) Planning Efforts Supporting the Project: Up to 35 points may be

WaterSMART: Small-Scale Water Efficiency Grants for FY 2019
Twin Loups Irrigation District: Scotia, NE
awarded based on the extent to which the proposed on-the-ground project is supported by an applicant's existing water management plan, water conservation plan, System Optimization Review (SOR), or identified as part of another planning effort led by the applicant. This criterion prioritizes projects that are identified through local planning efforts and meet local needs.

Describe how your project is supported by an existing planning effort.

Does the proposed project implement a goal or address a need or problem identified in the existing planning effort?

Yes, Goal #1 of the Lower Loup NRD's IMP is to “Promote and support a water supply and use inventory based on the best available data and analysis”. This includes Objective 1.1: Develop and maintain a comprehensive inventory of the location and source of the District’s current and future water supplies, water uses, and outflows. The first action item listed under this objective is to “collect and record relevant groundwater and surface water supply data in mutually agreeable units”.

The installation of meters at turnouts under the proposed project is consistent with and a direct product of this goal and objective set forth in the local NRD’s IMP. The new meters will improve the data collected on volumes of water delivered to farms within the TLID.

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

The TLID Board of Directors has resolved at its April 4, 2019 board meeting to pursue the improvements at the Scotia Canal and initiate meter upgrades. The board considers measuring water as accurately as possible to be a priority consistent with the Lower Loup NRD IMP. Accurate water measurement will improve our relationship with all farmers and the North Loup Public Power & Irrigation District. A portion of our canal is comibled between the two diversions and then separate the flow again at a downstream location. Accurate water measurements will make it easier to leave more water in the rivers and lakes for the public use.

Evaluation Criterion (C) Project Implementation: Up to 10 points may be awarded based upon the extent to which the applicant is capable of proceeding with the proposed project upon entering into a financial assistance agreement. Applicants that describe a detailed plan (e.g., estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates) will receive the most points under this criterion.

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

July, 2019: Successful notification of award from the Bureau
August, 2019: Sign contract with the Bureau
October, 2019: Order Gate Automation equipment from contractors
November, 2019: Order flowmeters from manufacturer
December, 2019: Install Scotia Canal Automated Gates

Jan-Feb, 2020: Install new meters at farmer turnouts

May, 2020: Prepare Final Project Report for Bureau

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

No permits will be required for this project.

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

Approximately six turnouts will need to be reduced in diameter. This work will be done in our welding shop to accept meters that are more appropriately sized.

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

No new policies are needed.

* Describe how the environmental compliance estimate was developed. Have the compliance costs been discussed with the local Reclamation office?

No Environmental Compliance is needed. TLID expects environmental costs to be minimal since both projects will be using the same footprint as current projects.

**Evaluation Criterion (D) Nexus to Reclamation:** Up to 10 points may be awarded based on the extent that the proposal demonstrates a nexus between the proposed project and a Reclamation project or activity. Describe the nexus between the proposed project and a Reclamation project or activity, including:

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

Yes. TLID is a Reclamation District.

* Does the applicant receive Reclamation project water? Is the project on Reclamation project lands or involving Reclamation facilities?

Yes. TLID receives Reclamation water and equipment will be installed on various pipelines, canals, and returns owned and managed by TLID.

* Is the project in the same basin as a Reclamation project or activity?

Yes. All installations of equipment will be within the Reclamation and TLID boundaries.

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

Yes. This project will have the potential of improving water availability to the North Loup Irrigation District of Ord, NE.

* Will the project benefit any tribe(s)?

No. No tribes reside in this part of Nebraska.
Evaluation Criterion (E) Department of the Interior Priorities: Up to 10 points may be awarded based on the extent that the proposal demonstrates that the project supports the Department of the Interior priorities. Please address those priorities that are applicable to your project. It is not necessary to address priorities that are not applicable to your project. A project will not necessarily receive more points simply because multiple priorities are addressed. Points will be allocated based on the degree to which the project supports one or more of the Priorities listed, and whether the connection to the priority(ies) is well supported in the proposal.

I. Creating a conservation stewardship legacy second only to Teddy Roosevelt.
   d. Review DOI water storage, transportation, and distribution systems to identify opportunities to resolve conflicts and expand capacity;

TLID’s project complies by using technology to record usage and improve the distribution of irrigation water being used to maintain water in our reservoirs and canals for future needs.

3. Utilizing our natural resources
   b. Expand the lines of communication with Governors, state natural resource offices, Fish and Wildlife offices, water authorities, county commissioners, Tribes, and local communities.

TLID has spent a significant amount of time with the State of Nebraska and the Lower Loup NRD during the development of the IMP for the LLNRD. The proposed project is consistent with and furthers the goals of the IMP of obtaining water use data for improved surface/groundwater management in TLID and the LLNRD.

5. Modernizing our infrastructure
   c. Prioritize DOI infrastructure needs to be highlighted.

   3. Deferred maintenance

This project demonstrates maintaining and modernizing the infrastructure of this federal project with the addition of automated gates for more efficient water distribution and new meters with datalogging capability by combining district funds with grant funds from the Bureau.

Environmental and Cultural Resources Compliance

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

The projects we plan to accomplish are upgrades and in the same locations and any impacts will be minimal. All work to be done are above ground installations.

Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area? If so, would they be affected by any activities associated with the proposed project?
No, Endangered species will not be affected.

Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as "Waters of the United States?" If so, please describe and estimate any impacts the proposed project may have.

No

When was the water delivery system constructed?

From 1984 to 1991

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

A few of the turnouts that are larger than needed in diameter will be reduced in size from 14” to 10”. This will require disassembly of a section between valves to receive a different meter.

Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? A cultural resources specialist at your local Reclamation office or the State Historic Preservation Office can assist in answering this question.

No

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

No

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

No

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

No

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

No
Twin Loups Irrigation District
Resolution for the WaterSMART Grant
Resolution NO.2019-APR-04

WHEREAS, the United States Department of Interior, Bureau of Reclamation, has announced the WaterSMART Grants for Small-Scale Water Efficiency Projects for Fiscal Year 2019.

WHEREAS, Twin Loups Irrigation District has the need for funding for the use of automation, meters and upgrading of existing facilities as part of the Twin Loups Project Upgrades.

NOW, THEREFORE, BE IT RESOLVED that the Twin Loups Irrigation District Directors agree to and authorize the following;

➢ The Twin Loups Irrigation District Directors have reviewed and support the proposal submitted;
➢ The Twin Loups Irrigation District is capable of providing the amount of funding needed for the matching grant from the WaterSMART Grant; and
➢ If selected for a WaterSMART Grant, Twin Loups Irrigation District will work with the Reclamation to meet the established deadlines for entering into a cooperative agreement.

DATED: April 30, 2019

Joe Novotny, President
Twin Loups Irrigation District

ATTEST:

John Kluthe, Secretary/Treasurer
Twin Loups Irrigation District
## Project Budget

### Funding Plan

**Table 1 - Total Project Cost Table**

<table>
<thead>
<tr>
<th>Funding Sources</th>
<th>% of Total Project Cost</th>
<th>Total Cost by Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs to be reimbursed with the requested federal funding</td>
<td>47.1%</td>
<td>$65,271</td>
</tr>
<tr>
<td>Costs to be paid by applicant, TLIID</td>
<td>52.9%</td>
<td>$73,427</td>
</tr>
<tr>
<td>Value of Third Party Contributions</td>
<td>0.00%</td>
<td>$0</td>
</tr>
<tr>
<td><strong>TOTAL PROJECT COST</strong></td>
<td>100%</td>
<td><strong>$138,698</strong></td>
</tr>
</tbody>
</table>

### Table 2 - Budget Proposal

<table>
<thead>
<tr>
<th>Budget Item Description</th>
<th>Computation</th>
<th>Quantity Type</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Salaries and Wages</strong>*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>District Manager</td>
<td>33.5</td>
<td>19 hours</td>
<td>$637</td>
</tr>
<tr>
<td>Operations Manager</td>
<td>27.05</td>
<td>17 hours</td>
<td>$460</td>
</tr>
<tr>
<td>Ditch Riders</td>
<td>19.53</td>
<td>226 hours</td>
<td>$4,414</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td></td>
<td>$5,510</td>
</tr>
<tr>
<td><strong>Fringe Benefits</strong>*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full Time Employees</td>
<td>5400.63</td>
<td>45% percent</td>
<td>$2,430</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td></td>
<td>$2,430</td>
</tr>
<tr>
<td><strong>Travel</strong>*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mileage to Install Meters</td>
<td>0.54</td>
<td>400</td>
<td>$216</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td></td>
<td>$216</td>
</tr>
<tr>
<td><strong>Equipment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6&quot; McMag3000 Electromagnetic Meter</td>
<td>$1,640.00</td>
<td>6 ea</td>
<td>$9,840</td>
</tr>
<tr>
<td>8&quot; McMag3000 Electromagnetic Meter</td>
<td>$1,834.00</td>
<td>22 ea</td>
<td>$40,348</td>
</tr>
<tr>
<td>10&quot; McMag3000 Electromagnetic Meter</td>
<td>$2,229.60</td>
<td>11 ea</td>
<td>$24,526</td>
</tr>
<tr>
<td>10&quot; DuraMag Electromagnetic Meter</td>
<td>$1,961.60</td>
<td>3 ea</td>
<td>$5,885</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td></td>
<td>$80,598</td>
</tr>
<tr>
<td><strong>Supplies and Materials</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Datalogger Software &amp; Cable</td>
<td>$260.00</td>
<td>1 ea</td>
<td>$260</td>
</tr>
<tr>
<td>Grounding Rods for Mag Meters</td>
<td>$27.34</td>
<td>40 ea</td>
<td>$1,094</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td></td>
<td>$1,354</td>
</tr>
<tr>
<td><strong>Contractual/Construction</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scotia Canal Automated Gates</td>
<td>$44,550.00</td>
<td>1</td>
<td>$44,550</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td></td>
<td>$44,550</td>
</tr>
<tr>
<td><strong>Total Direct Costs</strong></td>
<td></td>
<td></td>
<td>$134,658</td>
</tr>
<tr>
<td><strong>Indirect Costs</strong></td>
<td></td>
<td>3%</td>
<td>$4,039.75</td>
</tr>
<tr>
<td><strong>Total Estimated Costs</strong></td>
<td></td>
<td></td>
<td>$138,698</td>
</tr>
</tbody>
</table>

*Potential Matching Funds*
Funding for our project will be provided by the WaterSMART grant and the Twin Loups Reclamation and Irrigation Districts. No letters of commitment from outside sources will be needed.

**Budget Narrative**

The estimated project cost is $138,698. Upon delivery of the supplies, the grant funds from the BOR will help pay for the equipment purchased from the meter distributors, automation component distributors. Quotes for meters and gate automation equipment have been obtained from distributors and are included in Attachments 2 and 3.

Twin Loups ID in-kind contributions will reflect all the labor, heavy equipment, trucks and the materials needed for the alterations at the sites to accommodate the new equipment. This will amount to approximately $8,156 as noted in the Budget Proposal. The costs used are from Twin Loups employees wage rates, mileage rates, equipment cost per hour and metal fabrication costs for the steel pipe and the time welding. Other labor is from contracted technicians to install and program the equipment.

In-kind contributions that do not cover our share will be made up by the Twin Loups Operating fund. The expenditures benefit the project by improving TLID’s ability to monitor and deliver constant water flows to the farmers and to our own canals and laterals.

**Total Costs**

The district requests $65,271 from the Bureau’s Small-scale Water Efficiency Grant. The remaining $73,427 will come from the Twin Loups Irrigation District in a combination of cash and in-kind sources.

**Unique Entity Identifier and System for Award**

Twin Loups Irrigation District is registered on the SYSTEM for Award Management (SAM). The unique entity identifier is 3PJW7. The Twin Loups Irrigation District will maintain an active SAM registration throughout the project.
April 12, 2019

Twin Loups Irrigation District
P. O. Box 98
Scotia, Nebraska 68875

Attention: Mike Wells, General Manager

Dear Mr. Wells:

Re: Bureau of Reclamation Small-Scale Water Efficiency Application
“Twin Loups Irrigation District Automation and Metering Upgrades”

The Lower Loup NRD (LLNRD) strongly supports the project entitled “Twin Loups Irrigation District Automation and Metering Upgrades”. This project is consistent with the goals and objectives set forth in the LLNRD’s Voluntary Integrated Management Plan (IMP) to collect and record relevant surface water supply data.

The Twin Loups Irrigation District has been a valued partner in the development of Lower Loup NRD’s and the Nebraska Department of Natural Resources Voluntary Integrated Management Plan.

The LLNRD applauds the Twin Loups Irrigation District in taking the steps to modernize the data collection and surface water delivery for their district.

Thank you for the consideration of this application.

Respectfully,

Russell Callan
District Manager
### Hydro Optimization and Automation

2601 West "L" Street, Ste. 1, Lincoln, NE 68522  
Phone: 402-467-3750  Fax: 402-467-1568

<table>
<thead>
<tr>
<th>Date</th>
<th>Proposal Submitted to:</th>
<th>Quote#</th>
<th>Terms</th>
<th>JOB</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/11/2019</td>
<td>Twin Loups Irrigation District</td>
<td>397</td>
<td>Net 30</td>
<td>River Crossing</td>
</tr>
</tbody>
</table>

**Exp. (see below)**

**To:**  
Company: Twin Loups Irrigation District  
Contact: Mike Wells  
Address: 80309 487th Ave  
State/Zip Code: Scotia, NE 68875  
Phone: (308)245-3171

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Description</th>
<th>Quantity</th>
<th>Unit Price</th>
<th>Total Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dual Gate Control Site</td>
<td>1</td>
<td>$44,550.00</td>
<td>$44,550.00</td>
</tr>
</tbody>
</table>

**Includes:**  
- Solar Power System - Sized for Application  
- Mounting Rack  
- Control Enclosure  
- Remote Access Device for control and monitoring  
- 1 Season of Cellular Connection  
- Two (2) Actuators for gates at site  
- Level Sensor  
- Programming  
- Installation  
- Startup  
- Training  
- Travel

**NOTE:**  
Quote includes all installation. This quote is for a turn key system. No other contractors will need to be involved. Due to quote purpose being a budgetary number for grant expiration date is negotiable within reason.

Signature: Date:  

Delivery: TBD

**Disclaimer:**  
MFG. Restocking fee(s) will apply.  
Expiration Date: Wednesday, July 10, 2019  
Authorized by: Randy Shotkoski

---

WaterSMART: Small-Scale Water Efficiency Grants for FY 2019  
Twin Loups Irrigation District: Scotia, NE
Quotation

Quote Number: 155183  Rev0

Company: TWIN LOUPS RECLAMATION DIST
Address: PO BOX 98
City: SCOTIA
State: NE
Postal Code: 68875

Quoted By: Cherish Stack
Date Quoted: 4/3/2019
Expires: 5/3/2019
Payment Terms: TO BE ADVISED (TBA)
Shipping Terms: FCA SELLER'S PREMISES (FCA)

Following is the information requested

<table>
<thead>
<tr>
<th>Line #</th>
<th>Item Number</th>
<th>Description</th>
<th>Qty</th>
<th>UM</th>
<th>List Price</th>
<th>Disc</th>
<th>Net Price</th>
<th>Ext. Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 000</td>
<td>G306-2</td>
<td>6&quot; McMag 3000 Battery Powered No Outputs</td>
<td>1</td>
<td>EA</td>
<td>$2,050.00</td>
<td>20%</td>
<td>$1,640.00</td>
<td>$1,640.00</td>
</tr>
<tr>
<td>2 000</td>
<td>G308-4</td>
<td>8&quot; McMag 3000 Battery Powered No Outputs</td>
<td>1</td>
<td>EA</td>
<td>$2,293.00</td>
<td>20%</td>
<td>$1,834.40</td>
<td>$1,834.40</td>
</tr>
<tr>
<td>3 000</td>
<td>G310-6</td>
<td>10&quot; McMag 3000 Battery Powered No Outputs</td>
<td>1</td>
<td>EA</td>
<td>$2,787.00</td>
<td>20%</td>
<td>$2,229.60</td>
<td>$2,229.60</td>
</tr>
<tr>
<td>4 000</td>
<td>DM10</td>
<td>10&quot; DURA MAG Battery Powered No Outputs</td>
<td>1</td>
<td>EA</td>
<td>$2,452.00</td>
<td>20%</td>
<td>$1,961.60</td>
<td>$1,961.60</td>
</tr>
<tr>
<td>5 000</td>
<td>G3COM01</td>
<td>McMag 3000 Data logger Data Logger software and cable</td>
<td>1</td>
<td>EA</td>
<td>$260.00</td>
<td></td>
<td>$260.00</td>
<td>$260.00</td>
</tr>
</tbody>
</table>

All Prices are in US Dollars (USD)

Total List Quoted: $9,842.00
Total Net Quoted: $7,925.60

****Above price does not include tax or shipping cost****

This quotation applies to equipment cost and does not include freight, site visits for pipe measurement, cable run evaluations, equipment start-up, and user training or submittals. These value added services will be quoted separately through your local McCrometer Factory Representative.

McCrometer, Inc.’s Standard Terms and Conditions of Sale for Products and Services
REV. 1.4 04/17

Section 1: Product Sales and Field Services

Article 1: The Contract

Any Preprinted Terms and/or Conditions on Buyer's Purchase Order or Invoice Shall Not Apply and

Printed on 4/3/2019 8:50:15 AM
Page 1 of 10
Continues on next page

WaterSMART: Small-Scale Water Efficiency Grants for FY 2019
Twin Loups Irrigation District: Scotia, NE