

D.2.2.2. Title Page

DUPUYER CREEK DIVERSION AUTOMATION PROJECT

BUREAU OF RECLAMATION

WaterSMART Grants: Small-Scale Water Efficiency Projects Grant Application

Funding Opportunity Announcement No. R21AS00300

Applicant:

Pondera County Canal & Reservoir Company
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Project Location: Pondera County, Montana

Congressional Districts of Applicant: Montana At-Large

Congressional Districts of Project Area: Montana At-Large

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1.0 TECHNICAL PROPOSAL AND EVALUATION CRITERIA

1.1 EXECUTIVE SUMMARY

Date: March 17, 2021

Applicant Name: Pondera County Canal and Reservoir Company (PCCRC)

City, County and State: Valier, Pondera County, Montana

Applicant Type: The PCCRC is a Category A applicant, designated as other organizations with water or power delivery authority.

Project Summary: The PCCRC is requesting funding for the automation of the Dupuyer Creek Diversion structure's gates and the remote monitoring of stream and canal flows both upstream and downstream of the Diversion. The Dupuyer Creek Diversion serves as the primary diversion structure at the head of the main conveyance canal for the PCCRC system. Water that flows through the Diversion via the D-Canal services approximately 84% of the total PCCRC system (67,870 acres of a total 80,480 acres). The PCCRC currently operates the Diversion manually several times each day during the irrigation season. The project proposal is to automate the gate controls, install several flow monitoring stations, and install a Supervisory Control and Data Acquisition (SCADA) system that can be monitored and controlled from the PCCRC office in Valier, Montana. The proposed project would allow for the annual conservation of up to 4,460 acre-feet of water within Birch Creek Reservoir and the capture of approximately 535 acre-feet of extra Dupuyer Creek water (during the off-season) for storage within Lake Frances. The project would provide significant irrigation efficiency improvements, increase crop production, reduce operation and maintenance requirements by approximately 744 annual man-hours per year, and preserve the ability to supply municipal water (from Lake Frances) to the incorporated communities of Valier, Conrad, and Brady, Montana. The project meets the goals of the PCCRC's Water Management and Conservation Plan.

Length of Time and Estimated Completion Date for the Proposed Project including the Construction Start Date (month/year): The project is expected to be completed in approximately 12 months. This projected timeline includes all permissions, design, bidding, and construction for the project.

- Length of Time: 12 Months
- Proposed Construction Start Date: March 1, 2022
- Estimated Completion Date: December 30, 2022

Whether or not the Proposed Project is located on a Federal Facility: No

1.2 PROJECT LOCATION

The Dupuyer Creek Diversion is located approximately 8 miles southwest of Valier, MT in Section 28, Township 29 North, Range 6 West at an approximate latitude and longitude of 48.23885°N and 112.38795°W in Pondera County, Montana. Exhibit 1 provides a general location map of the Dupuyer Creek Diversion.

1.3 PROJECT DESCRIPTION

The diversion from Dupuyer Creek consists of a concrete structure with five (5) 6-foot wide by 5-foot-tall steel gates through the Diversion and one 6-foot by 5-foot steel gate that returns flows back to the natural Dupuyer Creek channel. It also incorporates a full concrete spillway that safely channels uncapturable flood flows downstream and away from the facility. The PCCRC currently operates the Diversion manually several times throughout each day during the irrigation season. The project proposal is to automate the gate controls, equip several flow monitoring stations with monitoring equipment (both upstream and downstream), and install a Supervisory Control and Data Acquisition (SCADA) system that can be monitored and controlled from the PCCRC office in Valier, Montana.

Problems and Needs

Through their Water Conservation Plan (WCP), a capital improvement planning document), the PCCRC has identified the Dupuyer Creek Diversion Automation Project as the top capital improvement priority within the PCCRC system. The Diversion's location upstream of Lake Frances and near the head of the irrigation system makes it one of the most important pieces of the PCCRC's infrastructure. The structure operates in series with several other structures to both convey irrigation water to the PCCRC's irrigated acres upstream of Lake Frances; supply Lake Frances with storage water; and divert base flows within Dupuyer Creek into the PCCRC's irrigation system. These critical functions require constant monitoring and meticulous, timely adjustments. Due to the difficulty in precisely regulating flows through the Diversion, the PCCRC has been required to release excess water from the upstream Birch Creek Reservoir (Swift Dam) to ensure system demands downstream of the Diversion are adequately met without interruptions in service. Flow measurements at this location are critical to determine water availability for both PCCRC and downstream use. The proposed project will solve this problem by allowing the PCCRC staff to instantaneously monitor stream and diverted flows as well as make up-to-the-minute adjustments in gate positions and greatly improve their ability to regulate outflows and precisely match the real-time demands for water. The gaging station, SCADA system, and corresponding electrical system upgrades would increase the efficiency of the Dupuyer Creek Diversion by allowing PCCRC staff to closely monitor the outlet gate and make instantaneous adjustments to the gate height to ensure the outflow is optimum for the present conditions. Gate adjustments could also be automated to occur dozens of times each day based upon information from networked flow monitoring devices.

To operate the headgates and monitor flows at the Dupuyer Creek Diversion, PCCRC staff must travel approximately 30 minutes to the site from the PCCRC office in Valier. With gate adjustments and flow monitoring occurring while on site, this trip amounts to an approximate two-hour roundtrip that occurs at a minimum frequency of once per day during the irrigation season and several times per week during the off-season. These visits use up valuable man-hours that could be applied to improving water use efficiency in other portions of the PCCRC's systems. The Dupuyer Creek Diversion is located in a remote location and is often difficult to access when weather conditions are poor due to rain, snow, or other precipitation events. During these times, flows at

the diversion may not be adjusted for several days, and significant operational inefficiencies can occur during these times. Further, the Diversion often becomes inaccessible during high precipitation events, during which the access road becomes too muddy to traverse. As a result, adjustments in gate positions and downstream canal flows can be delayed for several days. Due to current safety and access limitations associated with manual control, the PCCRC can be forced to waste water and often misses critical opportunities for diverting larger flows into Lake Frances for storage and later use.

Expected Outcomes

The primary goal of this project is to enhance the existing Dupuyer Creek Diversion through the installation of a Supervisory Control and Data Acquisition (SCADA) system and gate automation components that will allow for remote stream flow monitoring and operation of the Diversion. The following examples explain how this project will further the PCCRC's and the BOR's shared mission to manage, develop, and protect water in an environmentally and economically sound manner.

By implementing this new technology, the PCCRC would be able to operate the Dupuyer Creek Diversion in a much more efficient manner; conserve water through better regulation of canal and bypass flows; minimize irrigation wastewater and canal evaporation; plan for—and safely mitigate—excess flood flows with minimal staff exposure; and more accurately match deliveries with the real-time demands for water within the majority of its service area. In addition, because the B-Canal conveys Birch Creek Water into the Dupuyer Creek Channel immediately upstream of the Dupuyer Creek Diversion, the proposed telemetry upgrades would provide an avenue for conflict risk mitigation by way of improved (and more frequent) record keeping. These changes would help increase operational transparency amongst all of the stakeholders involved in Dupuyer Creek and Birch Creek Water use.

Through this installation, the PCCRC will also conserve water during its off-season operation. Automation will provide a tool by which to maximize efficiency during storage water transfers between Birch Creek Reservoir at Swift Dam and Lake Frances. Water efficiency improvements during the off-season will be utilized to augment water supply by increasing storage behind Swift Dam and within Lake Frances through the winter months. A fully automated diversion will also allow the PCCRC to better take advantage of elevated winter flows within Dupuyer Creek over very short warming periods through the cold season. As it stands now, the manual operation and ice cutting/melting efforts and safety concessions required to capitalize on such brief wintertime diversion opportunities places too large a burden on the Company's limited manpower and equipment resources to be effectively and safely implemented during the average year. Flow monitoring telemetry, automated gate seal heaters, and remote gate operation will minimize these burdens and better allow the PCCRC to accommodate short bursts of diversion into Lake Frances during favorable times throughout the cold and icy winter months. The ability to more quickly and efficiently make short wintertime diversions into Lake Frances from Dupuyer Creek baseflows will increase off-season storage thereby improving the entire irrigation project's draught

resiliency. More water held in Lake Frances and Birch Creek Reservoir year after year will translate to larger and more consistent irrigation allotments. Larger, more reliable irrigation allotments will allow producers to more effectively plan their cropping rotations and produce more dependable and sustained high crop yields, which will bolster the local and regional agricultural economies.

1.4 EVALUATION CRITERIA

Evaluation Criterion A - Project Benefits (35 points)

As demonstrated in the previous narrative, the proposed project will result in water conservation, drought resiliency, enhanced staff safety, improved water supply and management, and increased irrigation efficiency. Diversion automation is expected to increase available water to the PCCRC irrigators by nearly 5,000 acre-feet during an average water year. This water is normally lost to inefficiencies and poorly timed deliveries relating to manual operation of the diversion in conjunction with Swift Dam releases. The proposed upgrades would also provide value by reducing manual operation and maintenance input to the site by approximately 744 annual man-hours per year. Furthermore, automation of the Dupuyer Creek Diversion will help preserve the PCCRC's ability to supply municipal water from Lake Frances to the communities of Valier, Conrad, and Brady, Montana. Additional project benefits will include improved crop production. Using their Annual Crop Census Report, the PCCRC has estimated that a water savings of 5,000 ac-ft per year would translate to an approximate 7% increase in crop yield. If realized, the projected yield improvements could produce a regional agricultural revenue increase of \$2,048,900 per year.

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

In 1985, the existing Dupuyer Creek Diversion was rehabilitated in conjunction with the USDA Soil Conservation Service (SCS) as part of the Lower Birch Creek Watershed Plan. Through this partnership, the previous diversion was replaced with a new concrete structure, emergency flood conveyance, parapet floodwalls, and high-strength hand-operated Watermen bulkhead-style gates. Currently, the diversion's six large gates can only be operated on-site by PCCRC staff. This method of operation requires daily (and twice daily) 22-mile round trips to the diversion structure to check water flows and make necessary adjustments to the gate heights. PCCRC strives to operate its irrigation system in the most efficient manner possible. However, the PCCRC is currently limited in the number of man-hours available to optimize operations at the Dupuyer Creek Diversion. Full-scale automation of this diversion would benefit PCCRC's water supply. Through more frequent stream flow measurement transmissions, the PCCRC would be able to improve its operational efficacy by performing more frequent and automatic gate position adjustments. Because the Dupuyer Creek Diversion is located a significant distance from the Valier Office, the PCCRC does not often have the ability to dedicate the manpower needed to make on-demand gate adjustments within short timeframes. This manpower and resource shortfall means that critical adjustments in response to precipitation events, power outages, or unforeseen changes in stream flows within Dupuyer Creek have to wait until staff can be made available to visit the site. Further, due to its remote location, the Diversion often becomes inaccessible during high precipitation events

where the two-track access road becomes too muddy to traverse. As a result, adjustments in gate positions and downstream canal flows are often delayed from several hours up to several days during these events, and the PCCRC misses critical opportunities for diverting larger flows into Lake Frances for storage and later use.

Through remote monitoring and control of flows at the Diversion, the PCCRC will save substantial operation and maintenance hours that can be allocated to other work and minor efficiency improvements throughout the system. The project would help minimize delivery inefficiencies and also provide the PCCRC with more robust water management capabilities thereby helping to get more irrigation water to downstream users. Further, the project would provide conflict risk mitigation through transparency in water use for all stakeholders who utilize Dupuyer Creek and Birch Creek Waters.

If other benefits are expected, explain those as well. Consider the following:

Extent to which the proposed project improves oval water supply reliability:

The PCCRC's irrigation project allots its shareholders irrigation water based upon reservoir storage, the available snowpacks (SNOTEL) in the Dupuyer Creek and Birch Creek Basins, as well as streamflow forecasts developed by the Bozeman, Montana NRCS Office. As discussed, by achieving efficiency through automation, this project could increase the amount of water delivered to producers by as much as 7%. Therefore, the proposed project would minimize inefficient water diversion, providing the ability to store more water in Swift Reservoir and Lake Frances, which would provide more reliable water to users during drought conditions and periods of peak irrigation demand.

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

The proposed project is expected to benefit the overall PCCRC system. Users will have a more reliable source of irrigation water, improved efficiency, improved drought preparedness, increased crop production and crop revenue, as well as improved overall management of the PCCRC system. The proposed project will increase agricultural revenues throughout the region, resulting in associated economic improvements and continued usage of the Lake Frances and Swift Reservoir recreational areas.

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

The PCCRC is a responsible steward of Montana's water that actively communicates, collaborates, and shares information with the other regional ditch associations (Bureau of Indian Affairs, Montana Water Resources Association, the Montana Association of Dam and Canal Systems, and local Dupuyer Creek and Birch Creek water users), as well as the Pondera County Conservation District, the Montana Department of Natural Resources and Conservation (DNRC), and the Natural Resource Conservation Service (NRCS). Benefits and lessons learned are shared for the betterment of the overall system, the region, and the irrigated West. The proposed automation project would provide more timely diversion and flow data that could be shared with all stakeholders and interested parties.

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

The proposed project will provide benefits to several local sectors including the local and regional economies, agriculture, and the environment. As mentioned, the PCCRC's service area incorporates more than 80,000 acres of irrigable ground. In any given year, the Company can deliver water to up to 72,000 acres of this irrigable land total. The acres served by the PCCRC currently generate approximately \$29,269,700 in revenues each year. During the past 3 irrigation seasons, an average of 10 inches of water was allotted annually to each irrigated acre. The average annual projected increase in water for irrigators as a result of the proposed telemetry project (roughly 5,000 ac-ft) would create an additional 0.74 inches of water for each irrigated acre within PCCRC's project. This approximate 7% increase in water for the project would yield an estimated total annual revenue of \$31,318,600, resulting in an approximate increase of \$2,048,900. The project will also provide an economic boost both during construction and after the project is completed. During construction, the proposed project will have a positive economic impact on the local community due to purchased materials and professional services provided. Once complete, users of the system will be able to increase crop production due to increased water availability. Increases in crop production will lead to increased revenue. The primary crops grown within the PCCRC service area are alfalfa, barley, wheat, canola, and Pulse crops. The proposed project will lead to a 7% increase in production of these crops, therefore sustaining the agricultural economy in the area, providing food (barley and wheat) for the citizens of the State of Montana, and providing forage crops (hay) to feed livestock in the region, which in turn provides meat to the citizens of Montana. An economic analysis of the downstream acres impacted by this project estimated an increased annual agricultural revenue of \$2,048,900 because of the 7% increase in crop production. Additional revenues of up to \$4,550,000 generated from increased beef production within the region could also be supported by improved local crop production for livestock feed as a result of automating the Dupuyer Creek Diversion.

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.

In 1985, the existing Dupuyer Creek Diversion was rehabilitated in collaboration with the USDA SCS (now the NRCS) as part of the Lower Birch Creek Watershed Plan. Through this partnership, the previous diversion was replaced with a new concrete structure, emergency flood conveyance, parapet floodwalls, and high-strength hand-operated Watermen bulkhead-style gates. The structural components implemented during that work are still in excellent shape. The PCCRC's Engineer estimates that the existing concrete diversion will be serviceable and fully operable for at least 50 years into the future.

Between 1980 and 1990, the PCCRC and the NRCS worked together to implement millions of dollars in other critical infrastructure replacements and repairs across the

Pondera County Canal & Reservoir Company's then aging systems. These projects were part of the collaborative Lower Birch Creek Watershed Plan through the (then) Soil Conservation Service.

In addition, the State of Montana and the Federal Government have developed multiple programs for the promotion of renewable resource conservation on a more producer-focused level. These programs generally target projects in which a need is demonstrated, including the demonstration of an increase in citizen and resource benefits. The Montana NRCS EQIP program is an example of one of these programs and provides cost share money for projects that increase resource conservation (although now changed to be implemented through Targeted Implementation Plans). Over the past 15 years, dozens of irrigators within the Company's service area have pooled resources with PCCRC (matching their cash funds with the Company's in-kind staff and equipment contributions) in order to make on-farm improvements using the NRCS EQIP program. The additional water saved by the proposed telemetry and automation project will further promote efforts by PCCRC users to seek assistance from the NRCS (and other funding sources) for on-farm improvements. In addition, the proposed telemetry work—once implemented—will free PCCRC resources that could instead be used in partnership with local producers to help implement EQIP (and other) projects.

Evaluation Criterion B - Planning Efforts Supporting the Project (35 points)

The PCCRC recently completed an update (2021) of their Water Conservation Plan (WCP), an excerpt of which is included appended to this grant submittal. Each year, and as part of the WCP capital planning update, the PCCRC conducts a system review, which provides them with a planning and prioritization process for economically feasible projects. The goal of the WCP is to better plan for capital investments that will improve the overall efficiency, conservation efforts, and water delivery of the PCCRC's systems. The PCCRC's WCP is a living document that is constantly evolving for the best application of limited funds throughout PCCRC's extensive systems.

The PCCRC has taken a proactive approach to addressing problems and implementing improvements within their irrigation system that are consistent with their ongoing water management, conservation, and drought resilience planning. Within the past 10 years, the PCCRC has successfully completed the following planning, design, and construction projects, which have been completed to conserve water and benefit Montana's renewable resources. Please refer to the Water Conservation Plan (WCP) excerpt included with the grant application for further details:

- L9 Concrete Chute Rehabilitation. The existing L9 chute is a mile-long rectangular concrete chute that is roughly 60 years old. Cracking and settlement of the inlet and outlet structures for the chute allowed canal water to wash below the structure. This damage resulted in appreciable irrigation water loss and threatened to compromise the integrity of the structure. PCCRC crews, equipment, and finances were used to successfully repair the structure in

February of 2021. These repairs have sealed off previous washes/seeps thereby protecting the structure for years to come. The rehabilitated inlet is expected to conserve as much as 4 ac-ft per day in previously lost seepage water.

- Big Flat Coulee Wasteway Pipeline. Historic drifting, snowmelt, and runoff in the spring of 2018 and 2019 severely damaged the existing Big Flat Coulee Wasteway Chute at the S-Siphon. Due to the age, deteriorated condition, failed outlet works, and poor subgrade support of the existing concrete chute, PCCRC determined that full rehabilitation (or in-place replacement) will be cost infeasible. PCCRC submitted a DNRC Irrigation Development Grant (IDG) application and was successfully awarded funds to offset the capital cost of designing and constructing a new Wasteway Pipeline in the approximate location of the failed chute. PCCRC's on-staff civil engineer performed project design services. PCCRC Crews and Equipment were utilized to complete the project. The double-barreled, broken-backed pipeline, including new concrete inlet structure and a new energy dissipation structure was finalized in April 2020. This structure provides critical off-season and flood protection for the PCCRC's 6-foot diameter siphon across Big Flat Coulee.
- Phase I - Swift Dam Primary Spillway Repairs. Concrete Floor Patch. During the 2018 annual inspection of Swift Dam, several sections of the primary concrete spillway floor were observed to be structurally damaged. With a full reservoir and projected early runoff season looming, the PCCRC quickly coordinated with Rocky Mountain Belzona to select and install a specialty high strength patch solution that would bond to the existing concrete floor while providing superior shear resistance and weatherability for a short-term (10-year) repair. PCCRC crews removed the damaged sections of floor and repaired them in May 2019 at a total cost of \$12,000. PCCRC's Watershed Improvement Fund paid for this work. The spillway flowed following the repairs in both 2019 and 2020 water seasons. The repairs are closely monitored. To date, they have performed admirably. The spillway repairs are currently being evaluated in coordination with the BOR's dam structure specialists and the PCCRC's technical consultants in order to plan for (and budget) a permanent floor repair for a long-lasting solution (Future, Phase II).
- Emergency Operating Gate Repairs: East Dam Lake Frances. Repeated cycling and bolt fatigue caused the operating gate frame pedestal to shear completely off of the gate house wall. This failure occurred at the peak of the 2018 irrigation season and rendered the gate completely inoperable during a time of heavy water demand. The PCCRC Engineer and Construction Foreman designed and fast-tracked a robust solution to permanently repair the gate operating structure. Within a period of 3 weeks, the solution was designed; the dam house was dewatered; scaffolding was erected, the pedestal repaired; and automation and control systems were updated. The total time of canal shutdown during these repairs was only 12 days. PCCRC staff completed all construction activities with a subconsultant performing telemetry repair work during the month of August (2018) at a total cost of \$9,000. PCCRC's Watershed Improvement Fund was utilized to perform this work.

- C-5 Canal Lateral-To-Pipeline Conversion. Working together, the Pondera County Conservation District (PCCD) and the PCCRC received a grant through the Montana DNRC, Renewable Resource Grant and Loan Application (RRGL) program for this project. This section of elevated canal caused appreciable seepage, which diminished crop productivity and decreased accessibility for the adjacent landowners. In 2017, the PCCRC utilized in-kind crews and equipment leveraged against RRGL grant income in order to convert this problem ditch into an efficient, water conserving pipeline.
- Swift Dam Outlet Gate Rehabilitation. In 2015, the PCCRC worked with a BOR-recommended contracting specialist to rehabilitate Swift Dam's primary operating gates, frames, and seals. This work was performed to remediate significant and increasing leakage that had been observed beginning in 2010. During the 2020 Engineer's inspection of the operating gates, the repairs were found to be in excellent condition with very tight seals. This project was successful in measurably conserving water and improving storage within Birch Creek Reservoir behind Swift Dam.
- Seepage Abatement Projects. Smaller scale projects have also been performed by the PCCRC to reduce seepage issues throughout the irrigation system. Small projects involve the annual application of CANAL SEAL™ within observed seepage locations along mainline conveyances. Permanent seepage abatement projects have also been completed. These projects include the C-Canal Rehabilitation Project north of Highway 44 and the KB2 Canal Rehabilitation Project (both of which were funded by the DNRC RRGL Program in 2012 and 2014, respectively).

As the PCCRC operates a complex irrigation system, it requires various local, state, and Federal organizations to work in cooperation; for the system to function at a desirable level. The following agencies cooperate in the annual operation of the PCCRC: Montana DNRC; Pondera County Conservation District; NRCS; and Pondera County. The Montana DNRC has provided significant assistance to irrigation districts throughout Montana. Many irrigation projects, including the PCCRC, receive funding for capital projects through the DNRC's Renewable Resource Grant (RRGL) program. Although the PCCRC is neither a Reserved Works nor a Transferred Works facility, they have worked with the BOR since Reclamation rebuilt Swift Dam following the 1964 flood disaster. The PCCRC owns and operates Swift Dam, but Reclamation has provided remote stage-storage monitoring of Swift Dam and Lake Frances in the past as well as technical assistance on an as-needed basis.

The BOR also provides funding assistance to various organizations with the purpose of obtaining technical assistance for resource conservation projects. PCCRC recently completed the first phase in the construction of a regulating reservoir on the E-Canal as a result of a WaterSMART grant obtained through the BOR. All monitoring and compliance tasks have been completed. The dam's emergency spillway and outlet works have been fully installed. The embankment work is roughly 60% completed. The E-Canal system will be fully operational during the 2021 water season with final

completion of the reservoir embankment being constructed Spring-Summer 2021. Initial filling of the reservoir is expected for Fall of 2021. It is PCCRC's hope to continue developing its relationship with the BOR. The Company hopes that this small-scale WaterSMART Grant will help offset the capital costs of construction for the described Dupuyer Creek Diversion Automation Project. The PCCRC needs the BOR's sustained support in order to continue achieving their water conservation goals.

The PCCRC is a responsible steward of Montana's water and has actively pursued improvements that are consistent with their ongoing water management, conservation, and drought resiliency planning. As discussed below, the planning efforts made by the PCCRC, and the proposed project, reflect their desire to conserve water by improving management and infrastructure within their delivery system.

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

Yes. The primary objective of the overall project is to automate the Dupuyer Creek Diversion that delivers water diverted from Swift Dam via Birch Creek and Dupuyer Creek baseflows to customers along the majority of the PCCRC system. *The main goal of the Dupuyer Creek Diversion Automation Project is to provide remote automation of the Dupuyer Creek Diversion and remote streamflow monitoring upstream of the Diversion to provide conservation, management, development, and preservation benefits.* This project will enable the PCCRC to attain the following specific objectives:

1. **Conservation** - Conserve an estimated 4,460 acre-feet (1.45 billion gallons) of water in the Birch Creek Reservoir (upstream of the Dupuyer Creek Diversion) per irrigation season by reducing the excess releases from the reservoir into Birch Creek to ensure adequate water for downstream users; Capture an estimated 535 acre-feet (174 million gallons) of additional water within Lake Frances at the start of each irrigation season by diverting additional off-season Dupuyer Creek flows within Dupuyer Creek during the winter and spring.
2. **Management** - Minimize maintenance and labor requirements for the operation of the Dupuyer Creek Diversion. The proposed project would greatly enhance the operational efficiency of the structure and provide an estimated savings of 744 man-hours each year while allowing the PCCRC to make instantaneous adjustments to gate heights per day, thereby further improving efficiency and **management** based upon stream flow, canal loss, and water demand fluctuations.
3. **Development** - Maximize water savings within Birch Creek Reservoir and Lake Frances and use this water savings to increase the annual allotment of water by approximately 0.74 inches over the current average of 10 inches per acre per year. A 7% increase in annual water allotment is assumed to translate to a 7% improvement in crop productions throughout the PCCRC's (up to) 72,000 irrigated acres.
4. **Preservation** - Preserve critical aquatic habitat within the interconnected network of Birch Creek, Birch Creek Reservoir, and Lake Frances by ensuring

efficient operation of the water delivery systems. These efforts will sustain an important source of fish and wildlife habitat as well as recreation for Montana residents and tourist by providing camping, fishing, and boating opportunities; **Preserve** the ability of Lake Frances to continue to serve as the primary municipal water supply for the Town of Valier, Town of Brady, and City of Conrad. By better managing water levels within the Lake Frances reservoir, the proposed project will ensure a long-term municipal water supply for these Montana communities.

5. **Public Health & Safety** - The Dupuyer Creek Diversion currently requires frequent on-site visits to both the structure itself as well as upstream flow measurement locations. During the winter months, the roads are often snow-packed and icy, and travel on these roadways presents a risk to PCCRC staff during winter month operation. Further, the current manual operation of the canal gates requires PCCRC staff to walk on the existing structure above running water which presents inherent risks to PCCRC personnel. The proposed project will provide a supervisory control and data acquisition (SCADA) system at the Dupuyer Creek Diversion for the purposes of providing remote gate automation capabilities as well as remote streamflow monitoring capabilities both upstream and downstream of the structure. Through this implementation, the number of trips to the site for O&M will be dramatically reduced. Therefore, *the Dupuyer Creek Diversion Automation Project will provide direct safety and health benefits to the PCCRC's staff via a large reduction in O&M trips required to the Diversion and streamflow measurement locations.* Improved safety and health benefits will correlate with reduce O&M requirements associated with the structure, and these reductions in O&M requirements will be measurable via PCCRC employee log records.

The PCCRC has identified several projects throughout their system that have been earmarked to be completed in the next five to ten years. The proposed project has been classified as the highest priority due to the severe water inefficiencies and challenging management issues. Before selecting a project, the PCCRC utilizes its WCP to conduct a thorough review of the proposal to ensure that it is in line with existing water conservation and drought resiliency goals. The PCCRC's primary goals when selecting a project are to conserve and deliver more water, improve management, increase irrigation efficiency, maintain infrastructure, provide drought resilience, improve water supply, and to improve staff as well as public safety. The proposed project will:

- Conserve approximately 5,000 acre-feet of water normally lost to inefficient water delivery, leading to increased efficiency, and ensuring improved water delivery to downstream users.
- Provide conflict risk mitigation via the new SCADA system that will provide real-time flow data to share with the various stakeholders who have interests in Dupuyer Creek and Birch Creek water.
- Improve the safety of the PCCRC system by reducing the number of trips and eliminating the need for manual adjustment of the gate systems. This will improve

public safety with quicker response times during emergency (flood) events as well as reducing the overall exposure of PCCRC employees to potential hazards.

- Improve water management within the PCCRC's systems in order to deliver more water, more efficiently. As well as providing more water in storage such that it can be delivered to downstream users during critical summer watering periods, thereby enhancing drought preparedness.

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

To best prioritize and select capital investment projects, the PCCRC utilizes its WCP to conduct thorough reviews of all project proposals. This helps ensure that selected project(s) are in keeping PCCRC's primary goals, which include water conservation and improved drought resiliency. The proposed Dupuyer Creek Diversion Automation Project would conserve water and improve drought resiliency as less water would be wasted and more water would be stored within Birch Creek Reservoir and Lake Frances. This additional water storage would allow more water to be applied to irrigated lands, thereby increasing crop yields. After each irrigation season, and before the beginning of the next irrigation season, PCCRC personnel take inventory of potential projects for the next year. This project is the PCCRC's highest priority due to its water inefficiency and potential to impact nearly the entire project.

Evaluation Criterion C - Project Implementation (10 points)

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.

To successfully implement the proposed project, the following tasks will be necessary:

Task 1 - WaterSMART Grant Award. It is anticipated that the grant awards will be released in Fall 2021.

Task 2 - Contracting. The PCCRC will contract with the BOR to complete all aspects of the proposed automation Project. This task will be completed between November and December 2021. *Please note that PCCRC is prepared to begin this and other phases sooner depending upon the BOR and DNRC's commitments and funding availability. The schedule presented herein is based primarily upon past interactions with granting authorities.

Task 3 - SCADA System Design. The PCCRC will contract with a licensed Professional Engineer to develop the final SCADA system design and to prepare a competitive bid letting package for the contracted work meeting all applicable local, state, and federal procurement statutes. This task will be completed between January 2022 and February 2022.

Task 4 - Regulatory Compliance. The PCCRC, with assistance from the Engineer, will obtain the required permissions and ensure that the project meets applicable regulatory requirements. The project is being constructed entirely within the PCCRC's existing property, rights-of-way, and easements. Because the addition of actuated

motors, electric relays, radio communications, and other automation components to the existing structure will not involve any new site disturbances, and no stream or riparian disturbances, we anticipate no environmental hurdles. This task will run concurrently with Task 3, from January 2022 through February 2022.

Task 5 - SCADA System Installation & Grant Administration. The selected Contractor will install the SCADA system according to the plans and specifications. This task will be completed between April 2022 and October 2022, depending on water delivery operations.

Task 6 - SCADA System Testing and Training. The local or regional contractor/supplier for the SCADA system will work with the PCCRC to provide testing of the system and training on the new gate automation and communication system. This task will be completed between October 2022 and November 2022.

Task 7 - Construction Closeout. PCCRC will work with the Engineer and the Contractor to ensure that all issues with construction have been addressed. Any punch-list items that may come up will be completed by the Contractor prior to the project completion certification. The Engineer will also develop a set of as-built plans and/or Standard Operating Procedures (SOPs). Construction closeout is anticipated to occur between October 2022 and November 2022

Task 8 - Grant Closeout. PCCRC will work with the Engineer to assure that proper documentation including invoices, reports, etc. have been submitted, and the grant will be closed. Grant closeout will be completed in November 2022.

Task 9 - Project Completion. The estimated project completion is December 2022.

**The estimated schedule and task are subject to refinements and other changes.*

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

Please see Sections 3.0 and 4.0 of this application for required permits.

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

The PCCRC will contract with a licensed Professional Engineer to complete the design of the Dupuyer Creek Diversion Automation Project. The Engineer will be responsible for the design of the proposed project, which will include, but is not limited to, environmental considerations, permitting, design and construction administration duties. The Engineer will work with regulatory agencies to achieve environmental compliance. The Engineer will provide a final plan set and specifications for the proposed project to facilitate construction. The Engineer will also provide advisory services during construction of the project to assure proper installation.

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

The proposed project will not require new policies or administrative actions to be implemented.

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?

The environmental compliance estimate was based on our collective experience with recent, similar efforts and projects. We anticipate this effort to take several months during the design process but should be expedited due to the low level of effort anticipated. Jim Forseth from the local Reclamation office was contacted and indicated that since the project is only adding to an existing irrigation structure, the environmental and cultural resource compliance should be very straight forward and simple. The Dupuyer Creek Diversion was completely rebuilt in 1985, and there will be no new site disturbances, thus will not require SHPO compliance. Mr. Forseth indicated that he would check with the Reclamation archaeologist to get general thoughts on this and the potential implications for a non-federal project. Since the project will be completed within the confines of existing irrigation and measurement structures, environmental permitting should not be required.

Evaluation Criterion D - Nexus to Reclamation (10 points)

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

The PCCRC and BOR worked together last year to implement and administer funds for the construction of the E-Canal Regulating Reservoir within the PCCRC system. This work is slated to be successfully completed Fall 2021. Although the PCCRC is neither a Reserved Works nor a Transferred Works facility, the Company has worked with the BOR since Reclamation rebuilt Swift Dam following the 1964 flood disaster. The PCCRC owns and operates Swift Dam, but Reclamation has provided remote stage-storage monitoring of Swift Dam and Lake Frances and technical consultations regarding concrete spillway repairs, gate operation and rehabilitation, and other issues on an as-needed basis.

Does the applicant receive Reclamation project water?

The PCCRC does not receive Reclamation project water.

Is the project on Reclamation project lands or involving Reclamation facilities?

The project is not located on Reclamation lands, nor does it involve Reclamation facilities.

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

Yes. The project is situated in the upper Marias River watershed and upstream of Tiber Reservoir, which is associated with Reclamation.

The Dupuyer Creek Diversion is positioned across Dupuyer Creek. Dupuyer Creek flows into Birch Creek downstream of the diversion. Birch Creek later flows into the Two Medicine River. Even farther downstream, the Two Medicine River feeds into the Marias River. Therefore, the operation of the Dupuyer Creek Diversion and Swift Dam directly affect the Reclamation's project at the Tiber Reservoir.

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

The proposed project is located within the Marias River watershed and Reclamation is associated with Tiber Dam, also within the Marias River watershed. The proposed

project has the potential to conserve water in the Marias River. By eliminating the almost 5,000 acre-feet of water normally lost to inefficient water delivery, the PCCRC will be able to better manage storage. Improved water management by the PCCRC could result in water conservation for other users in the watershed.

Will the project benefit any tribe(s)?

The southern border of the Blackfeet Reservation is formed by Birch Creek. The Blackfeet Tribe possesses reserved Birch Creek Water Rights. The PCCRC also has significant valid water rights within Birch Creek. As mentioned, the B-Canal conveys much of PCCRC's Birch Creek Water into the Dupuyer Creek Channel immediately upstream of the Dupuyer Creek Diversion. Birch Creek Water is stored in both Swift Dam and Lake Frances and is utilized throughout many areas of the irrigation project. The Blackfeet Tribe would benefit indirectly from the described automation project. The proposed telemetry upgrades would provide an avenue for conflict risk mitigation by way of improved and more frequent measurement and record keeping. These changes would help increase operational transparency amongst all of the stakeholders involved the use of Birch Creek and Dupuyer Creek Waters.

The proposed project has no known direct benefit to the tribes.

2.0 PROJECT BUDGET

2.1 FUNDING PLAN AND LETTERS OF COMMITMENT

The PCCRC staff has the capability and extensive experience to oversee construction activities that will be required for the proposed project. The current PCCRC staff includes one Project Manager in addition to an administrative staff person. Approximately two external contracts for services will be required for the proposed project. PCCRC will need to solicit for an engineering consultant to assist with environmental compliance, design, grant administration, and conduct construction administration for all aspects of the project. Legal counsel may also be necessary to review contracts. In addition, the PCCRC will have to solicit for construction/implementation of the SCADA and automation components. A letter of commitment/official resolution is attached.

The amount of funding commitment

Along with the \$74,736 requested in this grant application, the PCCRC has applied for \$125,000 from the Montana DNRC Renewable Resource Grant and Loan Program and will contribute funds as needed to this project.

The date the funds will be available to the applicant

The PCCRC will commit to the cash reserves necessary to complete this project at the time of this application's writing. These funds are available immediately.

Any time constraints on the availability of funds

There will be no time constraints on availability of funds.

Any other contingencies associated with the funding commitment

There are no other contingencies associated with the funding commitment.

How you will make your contribution to the cost-share requirement, such as monetary and/or in-kind contributions and source funds contributed by the applicant (e.g., reserve account, tax revenue, and/or assessments).

Monetary contributions will come from the PCCRC's capital improvement and project reserve fund.

Describe any donations or in-kind costs incurred before the anticipated Project start date that you seek to include as project costs. For each cost, identify:

No costs incurred before the anticipated Project start date will be included.

Describe any funding requested or received from other Federal partners. Note: other sources of Federal funding may not be counted towards the cost share unless otherwise allowed by statute.

There are no other sources of Federal funding for the proposed project.

Describe any pending funding requests that have not yet been approved; and explain how the project will be affected if such funding is denied.

In partnership with the Pondera County Conservation District (PCCD), the PCCRC has applied for a \$125,000 grant through the Montana DNRC, Renewable Resource Grant and Loan Application (RRGL) program. This grant application is pending approval by the Montana Legislature. This grant application was ranked 14th out of 76 projects received for the 2021 Biennium and it is anticipated that this project will be funded.

Regardless of the outcome of the RRGL grant, the PCCRC has committed the appropriate cash and in-kind services to complete the project.

2.2 BUDGET PROPOSAL

The total project cost was determined with the use of the most up-to-date billing rates for various employees, material costs from local and regional suppliers, bid tabs of similar lines items, past project experience, etc. As a result, the anticipated construction costs were determined from unit prices that account for contractor costs, professional costs, materials, supplies, etc.

Table 2.1 - Total Project Cost Table

FUNDING SOURCES	AMOUNT
Costs to be reimbursed with the requested Federal Funding	\$74,736
*Costs to be paid by the applicant	\$0
Value of third-party contributions (DNRC RRGL Grant)	\$125,000
TOTAL PROJECT COST	\$199,736
*Applicant will pay for any costs in the event that the DNRC RRGL Grant is not awarded	

Table 2.2 - Budget Proposal

BUDGET ITEM DESCRIPTION	COMPUTATION		Quantity Type	Total Cost
	\$/Unit	Quantity		
Salaries and Wages				
N/A	-	-	-	\$ -
Fringe Benefits				
N/A	-	-	-	\$ -
Equipment				
N/A	-	-	-	\$ -
Supplies and Materials				
N/A	-	-	-	\$ -
Contractual/Construction				
SCADA CONTRACTOR				
Gate Control Actuators	\$15,000	5	EA	\$75,000.00
Modifications to Existing SCADA system & workstation	\$4,950	1	EA	\$4,950.00
PLC and HMI Programming	\$15,300	1	EA	\$15,300.00
Licensing and Software	\$6,950	1	EA	\$6,950.00
Dupuyer Creek Diversion CTU w/PLC, radio, sensors & interface	\$27,410	1	EA	\$27,410.00
Sontek Weir Data Integration	\$4,950	1	EA	\$4,950.00
New Weir Headwater Sensor on B Canal	\$3,950	1	EA	\$3,950.00
Upstream flow monitoring system	\$14,150	1	EA	\$14,150.00
Mobilization/Demobilization (5%)	\$7,133	1	LS	\$7,133.00
Contingency (15%)	\$21,399	1	LS	\$21,399.00
SCADA CONTRACTOR TOTAL:				\$171,192.00

BUDGET ITEM DESCRIPTION	COMPUTATION		Quantity Type	Total Cost
	\$/Unit	Quantity		
ENGINEERING CONSULTANT				
Principal Engineer	\$154	12	HR	\$1,848.00
Project Manager	\$121	100	HR	\$12,100.00
Senior Engineer	\$132	4	HR	\$528.00
Project Surveyor	\$121	20	HR	\$2,420.00
Technician	\$79	12	HR	\$948.00
Grant Administrative	\$74	80	HR	\$5,920.00
GPS Survey Equipment	\$350	1	HR	\$350.00
Miscellaneous Expenses	\$1,530	1	EA	\$1,530.00
ENGINEERING CONSULTANT TOTAL:				\$25,644.00
ATTORNEY				
Legal Counsel	\$1,000	1	LS	\$1,000.00
LEGAL COUNCIL TOTAL:				\$1,000.00
CULTURAL RESOURCES				
Cultural Resources Consultant	\$1,500	1	LS	\$1,500.00
CULTURAL RESOURCES TOTAL:				\$1,500.00
Other				
Printing/Copying	\$0.10	2,000	EA	\$ 200.00
Postage	\$150	1	LS	\$ 200.00
TOTAL OTHER COSTS				\$400.00
TOTAL DIRECT COSTS				\$199,736.00
Indirect Costs				
N/A	-	-	-	\$ -
TOTAL ESTIMATED PROJECT COSTS				\$199,736.00

2.3 BUDGET NARRATIVE

Salaries and Wages

The PCCRC anticipates that all services to perform this project will be contracted out, and therefore, the proposed project budget does not include salary and wage costs.

Fringe Benefits

As with salaries and wages, the PCCRC anticipates that all services to perform this project will be contracted out. Therefore, the proposed project budget does not include fringe benefit costs.

Travel

Travel costs are not included in the proposed budget because they are not eligible for reimbursement under this NOFO.

Equipment

All work will be performed by a Contractor. No PCCRC equipment will be used or purchased for this project and therefore, equipment costs are not included in the proposed budget.

Materials and Supplies

The existing site will only require installation of equipment by a SCADA Contractor. Therefore, material and supplies costs are included in the proposed budget within the unit prices found in the Contractual/Construction section of Table 2.2 - Budget Proposal.

Contractual/Construction

The PCCRC will contract with an engineering consultant to assist with environmental compliance, design, and conduct construction administration for all aspects of the project. The PCCRC may also utilize legal counsel as needed for review of contractual items. Construction and installation of equipment will be performed by a selected SCADA Contractor; therefore, a contract with a construction company will also be required. A breakdown of the proposed SCADA Contractor, Engineering Consultant and Attorney's time, rates, supplies, and materials are included in the Contractual/Construction section of Table 2.2 - Budget Proposal.

Third-Party In-Kind Contributions

The PCCRC has applied for a Montana DNRC Renewable Resource Grant in the amount of \$125,000. This grant application is pending approval by the Montana Legislature. This grant application was ranked 14th out of 76 projects received for the 2023 Biennium and it is anticipated that this project will be funded. However, if this grant is not awarded, PCCRC will commit funds as necessary to complete this project.

Environmental and Regulatory Compliance Costs

The environmental costs have been incorporated into the construction and engineering oversight costs. The environmental and regulatory compliance costs were estimated to be approximately 1% of the total project budget due to the minimal effort required as this project will only require installation of equipment that is either on existing irrigation structures or directly adjacent to irrigation structure on ground previously disturbed that is used for access and parking for the irrigation structure. These costs are included in Table 2.2 (Budget Proposal).

Other Expenses

No other costs will be incurred for the proposed project.

Indirect Costs

The PCCRC does not have a federally approved indirect cost; therefore, no indirect cost will be taken.

Total Cost

The following summarizes the estimated amount of project costs, including the potential Federal and non-Federal cost share amounts.

Total requested funds from Reclamation:	<u>\$ 74,736.00</u>
Total requested funds from Montana DNRC:	<u>\$125,000.00</u>
Potential total of requested funds:	\$199,736.00
Total funded by PCCRC cash contributions:	<u>\$ as needed to fund</u>
Total estimated amount of the project:	\$199,736.00

3.0 ENVIRONMENTAL AND CULTURAL RESOURCES COMPLIANCE

The following questions will address the impacts to environmental and cultural resources from the Project:

Impacts to surrounding environment: Impacts will be those associated with the installation of SCADA components on existing irrigation and measurement structures. The proposed project is expected to have minimal impacts and, in some cases, may even have a positive impact on the environment. Care will be taken to minimize impacts and limit the construction footprint wherever possible. Dust may be generated during construction; however, this is expected to be minimal and temporary. Dust control measures will be implemented during construction as needed. The proposed project is expected to conserve water through improved management.

Threatened or endangered species: Results from the Montana Natural Heritage Program (MTNHP) and the USFWS indicate that the only threatened or endangered species with potential to frequent the proposed project area are the grizzly bear and golden eagle. No direct observations were found within this area. Care will be taken to limit construction activities to the installation of SCADA equipment on and directly adjacent to the existing diversion and measurement structures.

Wetlands and waters of the United States: A search was conducted on the National Wetlands Inventory (NWI) website to determine if any wetlands existed near the Proposed Project Area. The search showed that there are three general wetland delineated areas that occur near the diversion structure. These include a freshwater forested/shrub wetland located downstream on Dupuyer Creek and two freshwater emergent wetlands that occur both east and west of the diversion structure. None of these prescribed wetlands will be disturbed by construction related activities. The disturbances from construction will be contained in and immediately adjacent to the diversion structure. The site visit conducted by WWC Engineering previously at this location confirmed the identified wetland areas closest to the structure and verified that construction activities are unlikely to negatively impact the wetland areas.

Water delivery system construction date: The date of initial construction of the original Dupuyer Creek Diversion (no longer in existence) occurred coincidentally with the PCCRC's irrigation system's creation in the late 1800s. The existing Dupuyer Creek Diversion location, including gate and hand crank operation system, was rehabilitated with a new high-strength concrete structure in 1985 through a partnership with the USDA Soil Conservation Service.

Modifications to individual features of irrigation system: The proposed project will include the automation of the existing gates within the Dupuyer Creek Diversion. The existing gates will be retrofitted in the dry with actuators to be able to remotely operate the gates. SCADA equipment and sensors will be added at the diversion location and measurement locations upstream and downstream to facilitate remote operation and monitoring. PCCRC will maintain records of flow readings that can be utilized to quantify the amount of water conserved each year. The original diversion structure was initially constructed in the late 1800s. The current diversion structure

was most recently replaced with a new concrete structure and gate system at its current location in 1985.

Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? There are no buildings, structures, or features eligible for listing in the vicinity of the project location.

Archaeological sites: The PCCRC is not aware of any archeological sites in the proposed project area. If any archeological sites are discovered during construction, work will be temporarily halted, and the appropriate environmental process will be followed.

Impacts on low income or minority populations: The proposed project will not have a disproportionately high and adverse effect on low income or minority populations.

Tribal lands: The proposed project will not limit access to or ceremonial use of Indian sacred sites; or result in other impacts on tribal lands.

Noxious weeds or non-native invasive species: Care will be taken to prevent the continued existence or spread of noxious weeds or non-native invasive species. If revegetation is needed due to disturbance, only approved native seed mixtures will be used. The PCCRC's existing weed management strategies will continue to be implemented.

4.0 REQUIRED PERMITS OR APPROVALS

For each of the permits listed below, the PCCRC will work with each permitting agency to determine whether a formal permit is needed for the construction of the proposed project. If needed, the following permits will be obtained with assistance from the engineer during the design process:

318 Authorization: The Short-Term Water Quality Standard for Turbidity requires a permit for any construction activities that will cause temporary violations of state surface water quality standards for turbidity. The project will have little or no effect on the turbidity of the nearby waterbodies. Earth-disturbing work will be minimal due to the nature of the project and all work will take place prior to the irrigation season with no water in the canal. The work should not require 318 authorization, but PCCRC will confirm this statement with State of Montana authorities.

Storm Water Discharge General Permit: State Storm Water Rules require a storm water discharge permit for any construction project over 1 acre in total disturbance that discharges into State waters. The proposed project will disturb less than one acre and will therefore not require a permit.

Montana Sage Grouse Habitat Conservation Program - In response to Senate Bill 261 and Executive Orders 10-2014 and 12-2015, all construction projects in counties hosting sage grouse habitat must include a letter of comment from the Department of Natural Resources and Conservation Sage Grouse Habitat Conservation Program. The program's role is to implement Montana's Sage Grouse Conservation Strategy including the conservation, restoration, and mitigation of changes to sage grouse habitat because of development. Using the DNRC sage grouse area mapping program located at <https://sagegrouse.mt.gov/projects/>, it was determined that the project location is not located in a sage grouse EO habitat area.

Although wetlands are located adjacent to the project; construction is not anticipated to be conducted outside the confines of the existing irrigation structures. An Army Corps of Engineer's permit is not expected to be needed for this project.

5.0 OFFICIAL RESOLUTION

An official resolution is included with this application. Letters of support are also provided.

Resolution # 2021-01

**RESOLUTION COMMITTING IN-KIND LABOR, PROJECT
MANAGEMENT & EQUIPMENT SERVICES**

For

Dupuyer Creek Diversion Automation Project

WHEREAS, The Pondera County Canal & Reservoir Company (PCCRC) has the legal authority to enter into an agreement, and intends to submit a small-scale Water Efficiency grant to the United States Bureau of Reclamations' (USBR) WaterSMART Program in 2021;

WHEREAS, The Pondera County Canal & Reservoir Company, located in Valier, Montana commits to implementing the construction of, operation of, and performing of future maintenance for the Dupuyer Creek Diversion Automation Project per the stipulations of the foregoing grant application (if successful and awarded);

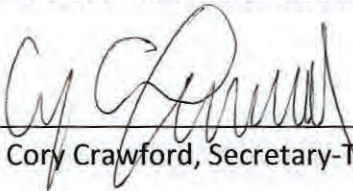
WHEREAS, the PCCRC contributions in management, labor, & equipment services for the preferred alternatives of the aforementioned grant application have been estimated at up to 51% (including some cash contributions and coupled with companion grant receipts) of the total project costs per the Budgeting Forms included in the WaterSMART Grant Application;

NOW, THEREFORE, BE IT RESOLVED, by the PCCRC Board of Directors that the PCCRC commits to supply the in-kind labor, management, equipment, and cash matches as stipulated in the WaterSMART Grant Application submittals for the Dupuyer Creek Diversion Automation Project.

Passed and approved this 4th day of March, 2021

BOARD OF DIRECTORS

PONDERA COUNTY CANAL & RESERVOIR COMPANY

Signed: 
Cory Crawford, Secretary-Treasurer

March 4, 2021
Date

Signed: 
Kyle Dean, Vice-President

March 4, 2021
Date

Witnessed: 
Myrna Wright

March 4, 2021
Date

TOWN OF VALIER

Civic Center
514 Montana Street
PO Box 512, Valier, MT 59486

406.279.3721

Fax 406.279.3428

Mayor Glenn Wunderlich

March 5, 2021

Mathew Reichert – WaterSMART Administrator
United States Bureau of Reclamation
7794 Folsom Dam Rd
Folsom, California 95630
Delivered Electronically Via Grants.Gov

Dear WaterSMART Selection Committee,

I am writing to express my support of the grant application being submitted by the Pondera County Canal & Reservoir Company (PCCRC) for the Dupuyer Creek Diversion Automation Project. The PCCRC's plan to automate control of this existing stream diversion will benefit the agricultural sector of the local economy by improving water accountability and delivery efficiency. The project will also aid the Canal Company in their continued water conservation efforts and future-proof their infrastructure against drought.

The PCCRC needs the Bureau of Reclamation's help to get this work done. As a community leader in one of Montana's small towns, I can attest to the presence of the Pondera Canal Company in our hometown. Lake Frances, which is operated by the PCCRC, is the sole source of municipal water for our community members. This project would improve and protect the continued viability of this critical water resource for municipal, recreational, and agricultural purposes.

I urge you to help make this project possible through a funding award.

Thank you for your consideration of this important work.

Sincerely,
Mayor Glenn Wunderlich



DAVID ZIMBELMAN
Public Works Director

AGNES FOWLER
Finance Officer

City Judge

DUSTIN KIRKBRIDE
Acting Police Chief

CITY OF CONRAD

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WENDY JUDISCH
Mayor

KARLA BREDING

A. DAVID CATES

NATHAN HUNSUCKER

RONALD WIDHALM

Aldermen

March 12, 2021

Mathew Reichert – WaterSMART Administrator
United States Bureau of Reclamation
7794 Folsom Dam Rd
Folsom, California 95630
Delivered Electronically Via Grants.Gov

Dear WaterSMART Selection Committee,

I am writing to express my support of the grant application being submitted by the Pondera County Canal & Reservoir Company (PCCRC) for the Dupuyer Creek Diversion Automation Project. The PCCRC's plan to automate control of this existing stream diversion will benefit the agricultural sector of the local economy by improving water accountability and delivery efficiency. The project will also aid the Canal Company in their continued water conservation efforts and future-proof their infrastructure against drought.

The PCCRC needs the Bureau of Reclamation's help to get this work done. As a community leader in one of Montana's small towns, I can attest to the presence of the Pondera Canal Company in our hometown. Lake Frances, which is operated by the PCCRC, is the sole source of municipal water for our community members. This project would improve and protect the continued viability of this critical water resource for municipal, recreational, and agricultural purposes.

I urge you to help make this project possible through a funding award.

Thank you for your consideration of this important work.

Sincerely,



Wendy Judisch
Mayor of Conrad

Valier Volunteer Fire Department

Jerry Sullivan, Chief

(406) -3310
(406) 357-2199 (Fax)

508 Montana St
Valier, MT 9486

March 1, 2021

Mathew Reichert – WaterSMART Administrator
United States Bureau of Reclamation
7794 Folsom Dam Rd
Folsom, California 95630
Delivered Electronically Via Grants.Gov

Subject: Input for Dupuyer Creek Diversion Automation Project – WaterSMART Application

Hello Mr. Reichert:

As the Fire Chief for the Valier area, I would like to take this opportunity to voice my support of the Pondera County Canal & Reservoir Company's (PCCRC) proposal to automate operation of the Dupuyer Creek Diversion structure.

As an emergency responder for the fire department, I understand the importance of water. The PCCRC is an important presence in the Valier and Conrad communities. Local volunteer fire departments have utilized the PCCRC's canals and Lake Frances to fill our water tenders, fire engines, and pump trucks. Lake Frances is fed by the Dupuyer Creek Diversion. The construction of the proposed automation project would improve emergency services by ensuring the long-term viability of the canal systems. I see no drawbacks to this project from an emergency response perspective.

Grant funding will also serve to make the project affordable for our community and further improve water delivery for local farmers and ranchers. This project will benefit the environment through water savings, and it will help to promote drought resiliency in our community.

Thank you for your consideration in helping to fund this important project.

Sincerely,



Jerry Sullivan
Chief Valier Volunteer Fire Department



March 4th, 2021

Mathew Reichert – WaterSMART Administrator

United States Bureau of Reclamation

RE: WaterSMART Grant Application - PCCRC Dupuyer Creek Automation Project

Matthew:

Frontline Ag Solutions is a John Deere dealer headquartered in Conrad, Montana and services agriculturalists with equipment needs across the state of Montana. We are writing this letter to support the Pondera County Canal and Reservoir Company's (PCCRC) application through the USBR's Small-Scale WaterSMART Program for the Dupuyer Diversion Automation Project.

The PCCRC services over 350 farmers and ranchers that irrigate up to 72,000 acres. Successfully obtaining this funding would allow the PCCRC to update the Dupuyer Creek Diversion by installing telemetry and controls for remote operation and conserve as much as 600 million gallons of water every year. Currently the diversion is operated in a similar manner as it was 100 years ago resulting in inefficiencies that could be avoided with this update. With water being one of the most limiting resources of producers in the area we fully support the PCCRC in their submittal for funding to increase the efficiency of the Dupuyer Creek Diversion.

Utilizing water effectively is vital for producers across Montana. This project will allow for better management of both water and man-hours. Updating the diversion will be beneficial for agriculture and wildlife while also benefiting the local economy for years to come.

Being a large company that services many agriculturalists in the area we see the value and need for this funding and ask that you favorably support this request.

Sincerely,

A handwritten signature in black ink, appearing to read "Patrick Wheeler", written in a cursive style.

Patrick Wheeler

Frontline Ag Solutions LLC.



519 S Main St
Conrad, MT 59425-2528
Voice: 406.278.4600 Fax: 406.278.4605

Northwest Farm Credit Services
John Diekhans
519 South Main Street
Conrad, MT 59425

March 5, 2021

Mathew Reichert – WaterSMART Administrator
United States Bureau of Reclamation
7794 Folsom Dam Rd
Folsom, California 95630
Delivered Electronically Via Grants.Gov

Dear Mr. Reichert:

I would like to express my support for the Pondera County Canal & Reservoir Company's grant application for assistance in funding the Dupuyer Creek Automation Project.

Efficient and reliable irrigation is critical to operations for many of our agricultural customers and PCCRC is diligent in its efforts to provide their shareholders with timely and cost effective operations to deliver water throughout the canal system. Implementing automation to manage the water supply as it moves through the PCCRC irrigation project will improve the efficiency of this enterprise and in doing so will benefit their shareholders, the local economy and the agricultural community.

We support PCCRC in this effort and ask that you please give favorable consideration to the PCCRC grant application.

Thank you.

Sincerely,

A handwritten signature in blue ink, appearing to read "John N. Diekhans", is written over a faint circular stamp.

John N. Diekhans
Relationship Manager III/VP



Pondera County Conservation District

406 North Main, Conrad MT 59425 • Phone (406) 278-7611 ext 1048 • Fax (855) 547-5499

March 10, 2021

Mathew Reichert – WaterSMART Administrator
United States Bureau of Reclamation
7794 Folsom Dam Rd
Folsom, California 95630

Greetings Administrator Reichert,

As Administrator for the Pondera County Conservation District, I would like to take this opportunity to express my support of the Pondera County Canal & Reservoir Company in their request for grant funding through a USBR WaterSMART Grant. PCCD has sponsored PCCRC on previous projects and will be sponsoring DNRC's RRGL for the Dupuyer Creek Diversion Automation Project if funded.

The operation of this infrastructure has been operated the same way for the last 100 years. It is extremely inefficient and labor intensive a result of which can cause unnecessary waste of upstream supplies of water and inefficient deliveries. Installing telemetry and controls for the remote operation of the Dupuyer Creek Structure would improve safety, man hours, allow for remote monitoring and conserve as much as 600 million gallons of water each year. That is enough water to fill 909 Olympic sized swimming pools. It would improve the water delivery efficiency and drought resiliency for shareholders and the local community. Utilizing water effectively is vital for producers in Pondera County.

PCCRC needs your financial assistance as they make the automation of the Dupuyer Creek Diversion Structure an infrastructure priority. Both PCCD and PCCRC have had other projects that have had to file for extensions due to product supply chain interruption due to COVID slow downs as well as increased cost of supplies, pushing costs past original planning estimates. This grant assistance will ensure that the Dupuyer Creek Diversion Structure success so it can benefit the producers and community of Pondera County and North Central Montana.

The Pondera County Conservation District fully supports PCCRC in their grant request. This project is especially important to our community, environment, and economy. Thank you for your time and consideration.

Sincerely,

Brandee Fladstol
PCCD Administrator

Board of County
Commissioners

Thomas A. Kuka, hairman
Dale J. Seifert, Member
Jim Morren, Member
Pondera county



PONDERA COUNTY MONTANA

20 Fourth Ave SW, Ste
205
Conrad, MT 9425-2340

Phone (406) 271-4010 Fax
(06) 71-4070 email:
pococo@3rivers.net

Pondera County
204th Avenue SW
Conrad, MT 59425

March 8, 2021

Mathew Reichert – WaterSMART Administrator
United States Bureau of Reclamation
7794 Folsom Dam Rd
Folsom, California 95630
Delivered Electronically Via Grants.Gov

Dear Mr Reichert,

The Pondera County Commissioners strongly support the grant application of the Pondera County Canal & Reservoir Company (PCCRC) for the Dupuyer Creek Diversion Automation Project.

The PCCRC supplies water to the agricultural base of Pondera County and municipal water to Conrad and Brady. PCCRC reservoirs provide wildlife habitat and recreational opportunities that benefit the local economy as well. In a county that is heavily dependent on agriculture it is important to implement the most efficient management of our water resources. The automation of the controls at the Dupuyer Creek Diversion will enable PCCRC to be more responsive to variations in water use and adjust in real time to changing weather conditions in a remote location which is not readily accessible at times. Water will be saved, agriculture producers will be better served, and the County as a whole will benefit.

Sincerely,
PONDERA COUNTY COMMISSIONERS

Thomas A. Kuka

Dale J. Seifert
Jim Morren



The Big Sky Country

MONTANA HOUSE OF REPRESENTATIVES

REPRESENTATIVE ROSS H. FITZGERALD
HOUSE DISTRICT 17

HELENA ADDRESS:
CAPITOL BUILDING
PO BOX 200400
HELENA MT 59620-0400
PHONE: (406) 444-4800

HOME ADDRESS:
451 1ST ROAD NE
FAIRFIELD MT 59436
PHONE: (406) 467-2032
MOBILE: (406) 788-1443
EMAIL: rep.ross.fitzgerald@mt.gov

March 5, 2021

Mathew Reichert – WaterSMART Administrator
United States Bureau of Reclamation
7794 Folsom Dam Rd
Folsom, California 95630
Delivered Electronically Via Grants.Gov

Dear WaterSMART Selection Committee,

I am writing to express my support of the grant application being submitted by the Pondera County Canal & Reservoir Company (PCCRC) for the Dupuyer Creek Diversion Automation Project. The PCCRC's plan to automate control of this existing stream diversion will benefit the agricultural sector of the local economy by improving water accountability and delivery efficiency. The project will also aid the Canal Company in their continued water conservation efforts and future-proof their infrastructure against drought.

The PCCRC needs Reclamation's help to get this work done. As a Montana State Representative and an agriculturalist, I strongly support this project.

Please look favorably on the Canal Company's grant application. Implementation of this project will benefit agricultural producers, local communities, and in turn the State of Montana.

Thank you.

Sincerely,

 *Ross H. Fitzgerald*, Representative HD 17
Ross Fitzgerald
Montana House District 17

From: Evangeline Lancette <evangeline.lancette@mtleg.gov>
Sent: Wednesday, March 17, 2021 9:20 AM
To: pccrc@3rivers.net
Cc: Bruce Gillespie
Subject: Requesting Grant Consideration

Matthew Reichert - WaterSMART Administrator United States Bureau of Reclamation
7794 Folsom Dam Rd.
Folsom California 95630

Greetings!

This is Montana State Senator Bruce (Butch) Gillespie requesting your consideration in helping the Pondera County Canal and Reservoir Company (PCCRC) procure grant funding for the Dupuyer Creek Automation Project.

The Dupuyer Creek Diversion structure is a pivotal component in the transfer, management, and delivery of our water. Currently, the Dupuyer Diversion is operated the same way it has been for the last 100 years; Once each day, the Ditch Rider manually adjusts the diversion gates.

This process is both inefficient and limiting. The diversion is accessed via a two-track ranch road and requires a 20 mile round trip from the PCCRC office in Valier.

In freezing weather, creek flows block the closest access route and necessitate an additional 15 mile detour. As such, the remote location of this site allows only a single (sometimes two) gate adjustment(s) each day.

Because demand for water - and weather conditions - fluctuate constantly, this method of gate operation results in the unnecessary waste of upstream supplies of water and inefficient deliveries.

The proposed RRGL grant application - if funded- would allow PCCRC to remotely operate and monitor the Dupuyer Creek Diversion Site. Gate automation, backed by continued manual oversight, would improve public safety, save man hours, and conserve as much as 600 millions of gallons of water each year. In addition, automation would promote more consistent base flows in downstream Dupuyer Creek. This stability would benefit the downstream agriculturalists, wildlife and fish habitat.

Due to the required capital investment for the automation to work, it is doubtful that the PCCRC will be able to complete these critical facility updates without legislative assistance.

Thank you in advance for your support,

Bruce (Butch) Gillespie
MT State Senator District 9
(406)-949-4453

Legislators are publicly elected officials. Legislator emails sent or received involving legislative business may be subject to the Right to Know provisions of the Montana Constitution and may be considered a "public record" pursuant to Montana law. As such, email, sent or received, its sender and receiver, and the email contents, may be subject to public disclosure, except as otherwise provided by Montana law.

Stockman Bank

420 South Main PO Box 727 • Conrad, Montana 59425-0727
406.278.8200 FAX 406.278.8239

Stockman Bank of Montana
P.O. Box 727
420 S Main St.
Conrad, MT 59425

March 8, 2021

Mathew Reichert – WaterSMART Administrator
United States Bureau of Reclamation
7794 Folsom Dam Rd
Folsom, California 95630
Renewable Resource Program Specialist
Delivered Electronically Via Grants.Gov

Dear Mr. Reichert,

This letter is in support of the grant application being submitted by the Pondera County Canal & Reservoir Company for the Dupuyer Creek Automation Project. Their plan to install automated control of this diversion will improve efficiency, benefit the agricultural sector of the local economy, and aid water conservation efforts.

As a major provider of agricultural credit in the area, Stockman Bank of Montana strongly supports the Pondera County Canal & Reservoir Company's pursuit of this project.

Please give favorable consideration to the PCC&RC grant application. Implementation of this project will benefit agricultural producers and in turn our local community.

Thank you.

Sincerely,

STOCKMAN BANK OF MONTANA



Josh Philipps
Branch Manager - Conrad



Member FDIC

TOWN OF VALIER

Civic Center
514 Montana Street
PO Box 512, Valier, MT 59486

406.279.3721

Fax 406.279.3428

Mayor Glenn Wunderlich

March 5, 2021

Mathew Reichert – WaterSMART Administrator
United States Bureau of Reclamation
7794 Folsom Dam Rd
Folsom, California 95630
Delivered Electronically Via Grants.Gov

Dear WaterSMART Selection Committee,

I am writing to express my support of the grant application being submitted by the Pondera County Canal & Reservoir Company (PCCRC) for the Dupuyer Creek Diversion Automation Project. The PCCRC's plan to automate control of this existing stream diversion will benefit the agricultural sector of the local economy by improving water accountability and delivery efficiency. The project will also aid the Canal Company in their continued water conservation efforts and future-proof their infrastructure against drought.

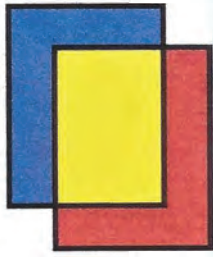
The PCCRC needs the Bureau of Reclamation's help to get this work done. As a community leader in one of Montana's small towns, I can attest to the presence of the Pondera Canal Company in our hometown. Lake Frances, which is operated by the PCCRC, is the sole source of municipal water for our community members. This project would improve and protect the continued viability of this critical water resource for municipal, recreational, and agricultural purposes.

I urge you to help make this project possible through a funding award.

Thank you for your consideration of this important work.

Sincerely,
Mayor Glenn Wunderlich





VADC

Valier Area Development Corporation

P.O. Box 554

Valier, MT 59486

www.valier.org

-Mail: VADC@Valier.org

March 2, 2021

*Mathew Reichert – WaterSMART Administrator
United States Bureau of Reclamation
7794 Folsom Dam Rd
Folsom, California 95630
Delivered Electronically Via Grants.Gov*

Dear Mr. Reichert:

The Valier Area Development Corporation, as the local business and economic development organization for the Valier area, is in support of the Pondera County Canal and Reservoir Company request for assistance with funding for the Upper Creek Inversion Automation Project.

The efficient operation of the irrigation system is very important to the economy of the area and its agricultural base. Over the years the Company has strived to maintain the system and keep it in good repair. The addition of the automated control will enhance what is able to be achieved with regard to efficiency of manpower, and also better water management. The successful operation of the system enhances the economy of the area by improving the financial well being of the business sector that is supported by agriculture.

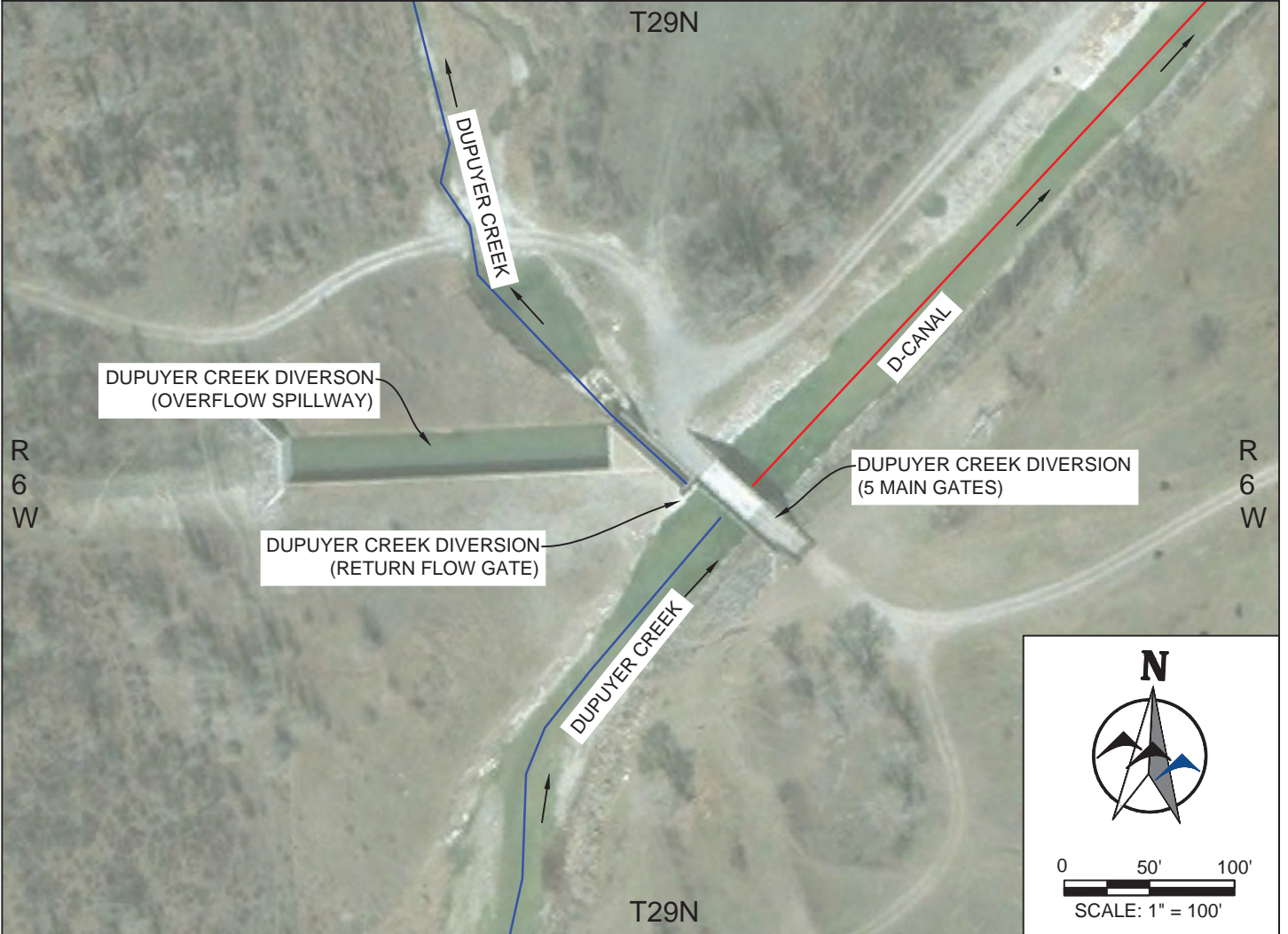
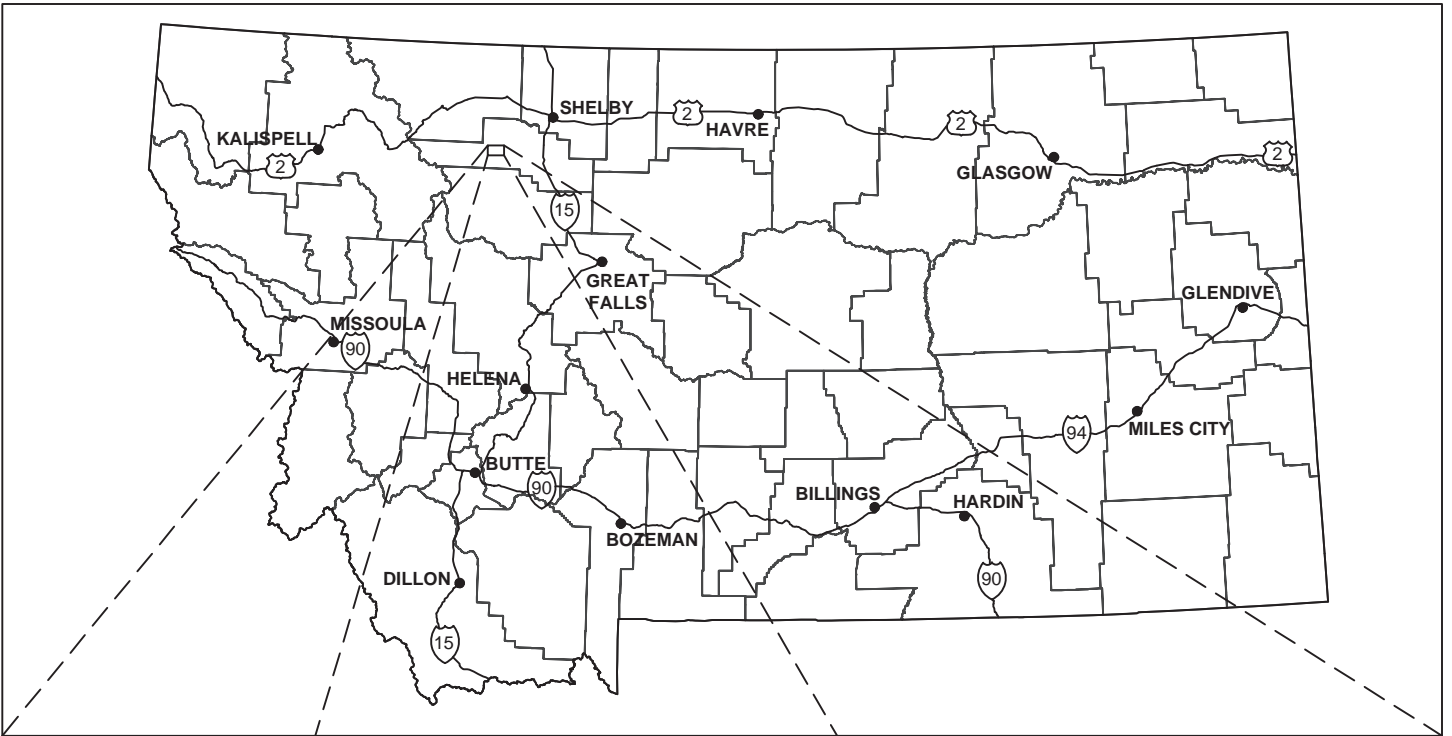
Please support the grant request of the Pondera County Canal and Reservoir Company.

Sincerely,

Cheryl Curry

President

Valier Area Development Corporation



DUPUYER CREEK DIVERSION AUTOMATION PROJECT
LOCATION MAP
 PONDERA COUNTY, MT

PREPARED FOR

PONDERA COUNTY CANAL AND RESERVOIR COMPANY

501 PONDERA AVE.
 VALIER, MT 59601
 (406) 279-3315

DESIGNED BY: MRS
 DRAWN BY: DCI
 CHECKED BY: STH
 DATE: 03/17/2021

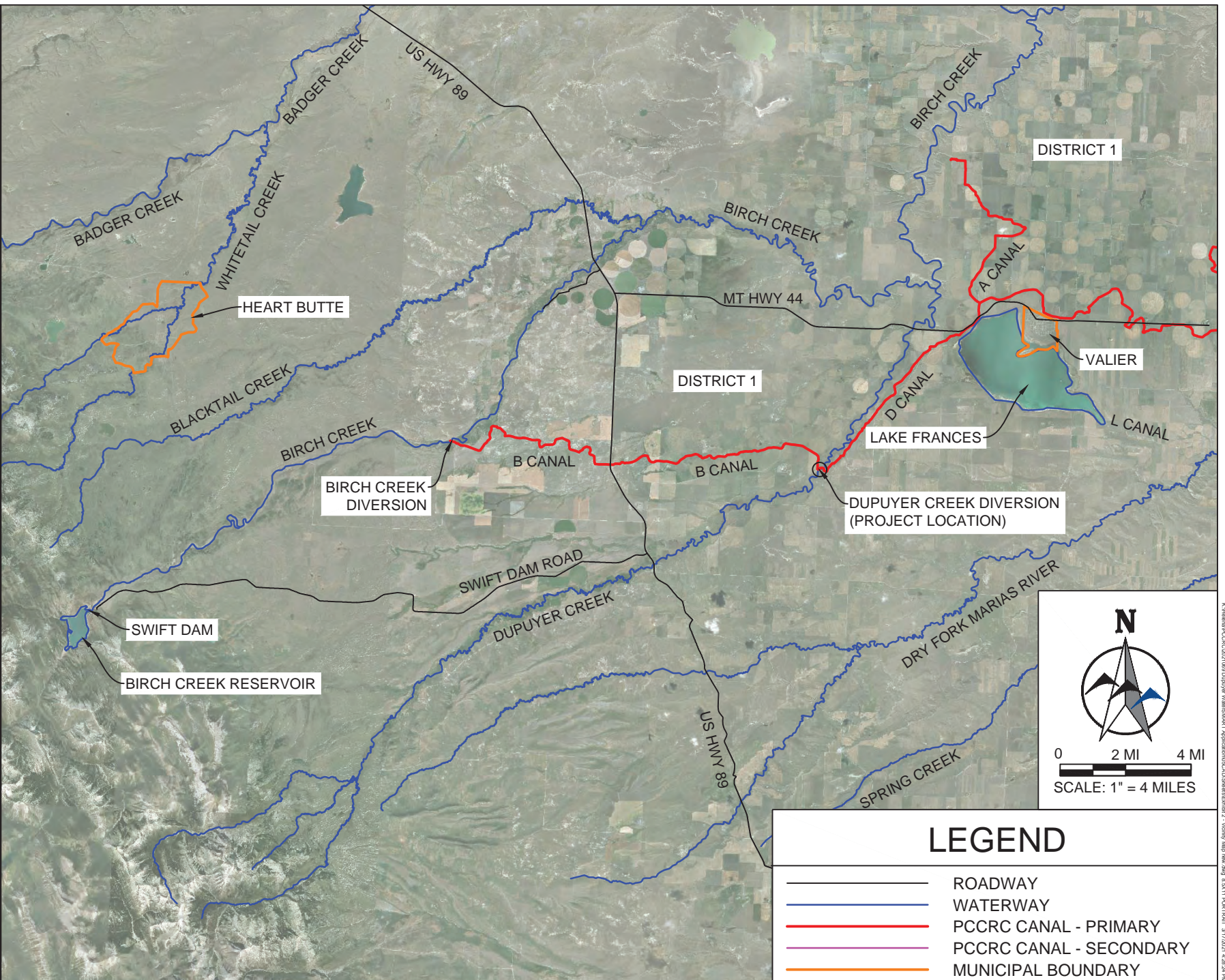
PREPARED BY



1275 MAPLE STREET, SUITE F
 HELENA, MT 59601
 (406) 443-3962
 www.wwcengineering.com

EXHIBIT

1



**DUPUYER CREEK DIVERSION AUTOMATION
 PROJECT
 VICINITY MAP**
 PONDERA COUNTY, MT

PREPARED FOR
**PONDERA COUNTY CANAL
 AND RESERVOIR COMPANY**

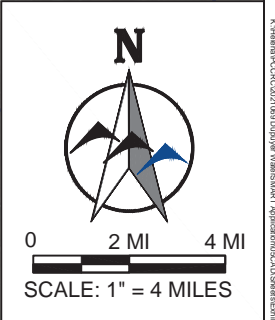
PREPARED BY
WMC ENGINEERING

501 PONDERA AVE.
 VALIER, MT 59601
 (406) 279-3315

1275 MAPLE STREET, SUITE F
 HELENA, MT 59601
 (406) 443-3962
 www.wmcengineering.com

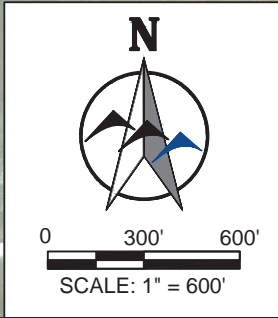
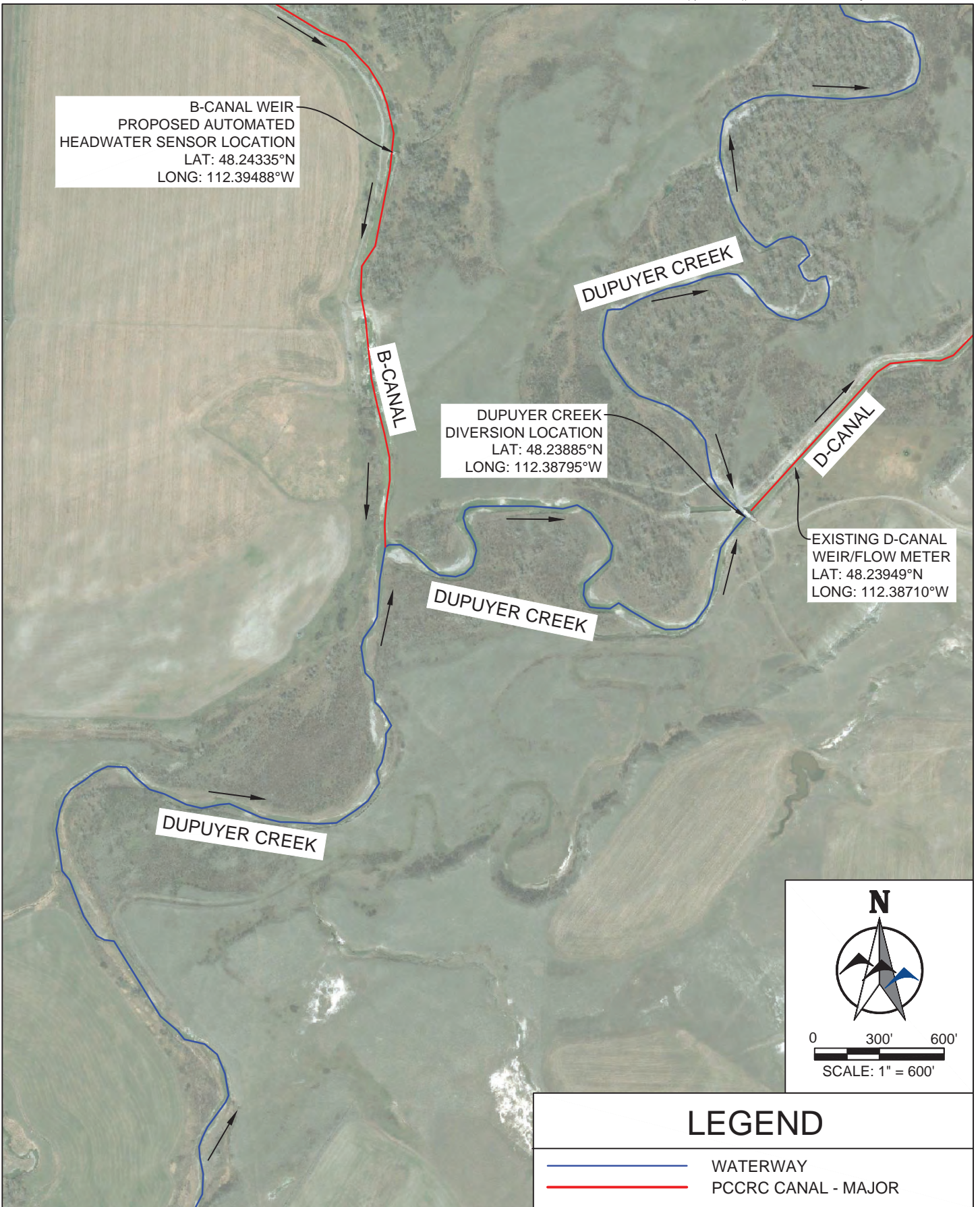
DESIGNED BY: GWJ/
 DRAWN BY: DCT
 CHECKED BY: SJH
 DATE: 03/17/2021

**EXHIBIT
 2**



LEGEND	
—	ROADWAY
——	WATERWAY
————	PCCRC CANAL - PRIMARY
————	PCCRC CANAL - SECONDARY
————	MUNICIPAL BOUNDARY

K:\Users\PCORIC\2021\001\Dupuyer_VicinityMAP.dwg; Project:001\2021\21-Dupuyer_Vicinity Map.mxd; Day: 3; 3:11:11 PM; 3/17/2021; 1:28:24 PM



LEGEND	
	WATERWAY
	PCCRC CANAL - MAJOR

**DUPUYER CREEK DIVERSION AUTOMATION
PROJECT
SITE PLAN**
PONDERA COUNTY, MT

PREPARED FOR PONDERA COUNTY CANAL AND RESERVOIR COMPANY	501 PONDERA AVE. VALIER, MT 59601 (406) 279-3315	DESIGNED BY: <u>MRS</u> DRAWN BY: <u>DCT</u> CHECKED BY: <u>STH</u> DATE: <u>03/17/2021</u>
PREPARED BY 	1275 MAPLE STREET, SUITE F HELENA, MT 59601 (406) 443-3962 www.wwcengineering.com	EXHIBIT 3