WaterSMART

Small-Scale Water Efficiency Projects for FY 2021

Funding Opportunity No. R21AS00300

Salmon River Canal Company Meter Turnout Upgrades

Twin Falls, Idaho

Salmon River Canal Company

John Shetler, General Manager

2700 Highway 93; Twin Falls, ID 83301

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March 18, 2021

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Technical Proposal and Evaluation Criteria

Executive Summary

Date:	Application due date: March 18, 2021
Applicant:	Salmon River Canal Company Twin Falls, Idaho. Twin Falls County
Project Title:	Salmon River Canal Company Meter Turnout Upgrades

Project Summary:

Salmon River Canal Company has measured surface water deliveries with mechanical propeller meters for several years. The district now plans to upgrade water measurement to electromagnetic meters over a multi-year period. Electromagnetic meters will also comply with East Snake Plain Aquifer (ESPA) regulations set forth by the Idaho Department of Water Resources (IDWR).

Salmon River will make use of district and Bureau funds to upgrade **37** or approximately **20%** of the meters on remaining surface water turnouts in the district in the next two years. Salmon River ID will contract with a local dealer for the purchase and installation of electromagnetic meters that will satisfy state regulations as well as the district's water measurement and data needs.

Approximate Length: Two Years

Completion Date: May 15, 2024

Background Data

Salmon River Canal Company:

The Canal Company was formed in 1910 to operate the Salmon Falls Dam and Reservoir. The Canal Company is a non-profit company and has 169 shareholders, who hold a total of 60,050.65 shares.

The Canal Company s primary purpose is to deliver irrigation water to its shareholders on the irrigation project known as the Salmon Tract. The Salmon Tract is located south of Twin Falls, Idaho, and is known for its fertile soils and excellent crops. Primary crops grown are hay, beans, grains, and corn under a combination of pivots, sprinklers, and gravity irrigation systems.

Salmon Falls Dam is a concrete gravity arch dam 223.5 feet high with a crest length of 450 feet and is owned and operated by the Canal Company. When full, the reservoir has an area of about 3,400 acres and a length of approximately 15 miles. The main purpose of Salmon Falls Dam is for irrigation storage; additional benefits are derived from recreation.

The water conserved by constructing the project will be used to satisfy existing irrigation demands in the northern part of the Canal Company system. The Canal Company serves approximately 35,000 irrigated acres. The Canal Company has not expanded beyond historical service area boundaries and has no intentions to expand.

Project Location - Area Map

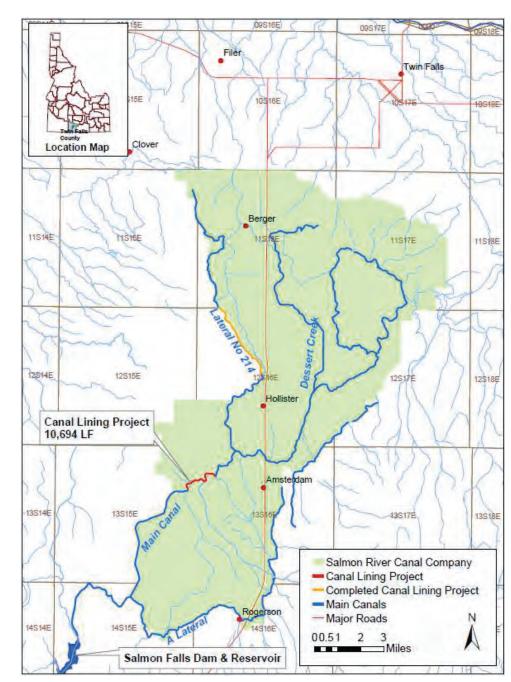


Figure 1- Regional Map (Salmon River Canal Company

Technical Project Description and Milestones

Salmon River Canal Company (SRCC) intends to improve measurement and delivery of surface water within the district by upgrading to electromagnetic meters at farm turnouts with assistance from the WaterSMART Small-Scale Water Efficiency Grant. SRCC owns and operates canals and pipelines which in turn provides irrigation water to approximately 35,000 acres in the district.

Meter Upgrades: The district proposes to implement a process to upgrade each mechanical propeller meter with electromagnetic meters with no moving parts. Converting all turnouts to electromagnetic meters is expected to be a multi-year project.

The proposed project will upgrade old mechanical meters to an electromagnetic meter with no moving parts featuring datalogging capabilities. The new meters will also be telemetry-capable if the canal company decides to deploy remote telemetry. The new meters will also reduce the amount of staff time required for meter service and repairs. Meter down-time will be reduced improving water use records at SRCC. The district is proposing to upgrade **37** mechanical propeller meters with electromagnetic meters in the next two years. The meters planned to be installed will be the McCrometer DuraMag electromagnetic meter. The DuraMag is a



battery-powered flanged full-bore electromagnetic meter. The DC-powered version of the DuraMag is approved by the Idaho Department of Water Resources IDWR). These meters will provide operational advantages to the district as well as improving data collected for water management in the ESPA.

Upon the successful award of this proposal, meters will be ordered in late December of 2021 and 2022 for delivery in January of 2022 and 2023. Installation of meters will be scheduled for January/February of 2022 and 2023 during the off-season of each respective year.

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?

The meters that are proposed to be installed have an accuracy of +/- 1% compared to the expected accuracy of 5% for the mechanical propeller meters. This improved measurement will provide for better accuracy for water delivery to patrons of the SRCC. Greater accuracy of water measurement will improve accuracy of water delivery in the district and will reduce inefficiencies of over deliveries.

Improvements in technology will also be realized with the implementation of the new meters. Each of the meters installed will be equipped with internal dataloggers as a standard feature. These internal dataloggers will allow ditch riders to download time-stamped digital records of water pumped or delivered within specified time intervals. This is an improvement of water deliveries for internal purposes such as billing or pumping records for reporting purposes under state requirements.

Electromagnetic meters are also telemetry-ready in case SRCC decides to deploy remote telemetry units for meter reading or other water management sensors in the future which will further the water management efficiencies of the district.

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

Since SRCC delivers water to its patrons by volume, the new meters will provide more accurate flow measurements to ensure that the amount delivered is correct.

On-farm water management and distribution will improve throughout the district. These meters are more conducive to provide signal outputs for center pivots or other irrigation systems in the district. Farmers will also be able to quantify the amount of water being used for on-farm irrigation management purposes.

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

The new meters will have significant effects across the entire SRCC. The district covers an area which is approximately 20 miles long and up to 10 miles wide (See Figure 1. Improved water management will have benefits of distribution within the district as well as for downstream water users that will benefit from return flows.

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

The new meters proposed are well-suited to surface water measurement. The short installation distance capable for these electromagnetic meters is conducive to water measurement in SRCC with limited distance between turnouts and existing underground pipelines. These meters also have no moving parts and consequently will not stop due to mechanical wear and tear from surface water with sand and sediment. 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 Snake River Basin consistent with the Idaho State Water Plan.

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

This project will support improved surface water management as well as more uniform water distribution across the district which will mean that more fields will be watered more effectively for better productivity. This in turn will prevent less waste of water resources and conserves water for downstream uses.

• 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 meter 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.

Evaluation Criterion (B) Planning Efforts Supporting the Project: Up to 35 points may be awarded based on the extent to which the proposed on-the-ground project is supported by an applicant's existing water management plan, water conservation plan, System Optimization Review (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, SRCC is bound by the *Idaho State Water Plan* which was adopted in November, 2012. The objectives of the State Water Plan are formulated for the conservation, development, management, and optimum use of all unappropriated water resources and waterways of this state in the public interest pursuant to Idaho Code §42-1734A. The first and foremost of these objectives is **Water Management** which encourages the **quantification** of water supplies, water uses, and water demands for all water rights within the state. This encourages integrated, coordinated, and adaptable water resource management and the prudent stewardship of water resources.

Section 1H of the *Idaho State Water Plan, Quantification and Measurement of Water Resources*, states that "Quantification and Measurement of Idaho's water supply and use is essential for sound water resource planning, management, and administration". The Director of the Department is required to maintain an inventory of the state's water resources pursuant to Idaho Code §42-1815. The measurement of water availability and use is necessary to administer and regulate existing water uses and to promote optimal water resource planning and management. In addition, Chapters 6 and 7, Title 42, Idaho Code, provide for water use measurement and reporting throughout the state. Implementation strategies for this objective include: assessing existing measurement network and facilities and developing plans for improving data collection and reporting, prioritizing projects for conversion to automated electronic data collection and reporting systems, and providing technical assistance and participating in securing funding for improved measurement and reporting systems.

Section 2A, *Water Use Efficiency* of the *Idaho State Water Plan* states that water conservation and water use efficiency is to be promoted within the state. Idaho Code §42-250(1) determined that voluntary water conservation practices and projects can advance the policy of the state to promote and encourage conservation, development, augmentation, and utilization of Idaho's water resources. "Water conservation practice" means any practice, improvement, project, or management program that results in the diversion of less than the authorized quantity of water while maintaining the full beneficial use s) of the water right. Idaho Code § 42-250(2). Water conservation practices include, but are not limited to, practices that reduce consumptive use as defined in Idaho Code § 42-220B, reductions in conveyance losses, and reductions in surface and seepage losses occurring at the place of use.

Water measurements will be taken at a higher degree of accuracy than the propeller meters used previously and will also aid in the implementation of technology such as datalogging water deliveries or remote meter monitoring. This project is consistent with the *Idaho State Water Plan* with respect to each of the above-mentioned objectives and implementation strategies.

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

The proposed project complements SRCC's existing FY'19 Water and Energy Efficiency Grant application for canal lining in the district. Surface water will be delivered more efficiently within the district as a result of this project. The next step will be to better quantify deliveries for more accurate water deliveries with improved water measurement at farm turnouts. Consequently, the SRCC Board has voted at the **Feb 3**, **2021** board meeting to dedicate \$30,000/year over the next two years towards upgrading the metering at district turnouts.

Despite SRCC's long history of surface water measurement with mechanical propeller meters, the IDWR is enforcing the ESPA measurement order to the SRCC as well as other districts in the basin. The SRCC Board of Directors has resolved at its **March 3, 2021** board meeting to initiate meter upgrades and authorize staff to apply for the FY' 21 Small-Scale Water Efficiency grant to support this project.

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.

June, 2021:	Successful notification of award from the Bureau
July, 2021:	Sign contract with the Bureau
Oct, 2021:	Initiate Environmental Compliance with local Bureau office. Determine adequate sizing of meters for meter order.

Dec, 2021: Order 19 flowmeters from local supplier

Jan/Feb, 2022: Install new meters at farmer turnouts

Dec, 2022: Order 18 flowmeters from local supplier

Jan/Feb, 2023: Install new meters at farmer turnouts

May, 2023: 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.

SRCC will complete the necessary design work for the diversion points and pipelines. SRCC has extensive experience completing similar projects and will complete the necessary designs for meter installation at each well for this project.

• 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?

SRCC staff have spoken with Melissa Jayo-Guerricagoitia of the Bureau of Reclamation in Boise, Idaho. Melissa reported that the Bureau would be taking the lead on the environmental compliance requirements and work with the District in the event that we are awarded a Small-Scale Water Efficiency grant.

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?

The Salmon River Canal Company has been fortunate to receive funding from the Bureau of Reclamation in recent years for a Canal Lining Project from the Water and Energy Efficiency Grant program in FY '19 and has proven effective in managing and implementing such projects.

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

The district includes BLM lands and the Canal Company does not have storage rights in any Reclamation facilities; however, the Canal Company's water conservation mission is consistent with the U.S. Department of the Interior's mission to stretch scarce water supplies and avoid conflicts over water.

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

Yes. This project is in the same basin as a number of irrigation companies including Twin Falls Canal Company. These canal companies divert water from the Snake River at Milner Dam. Many of these companies have storage rights in American Falls Reservoir and Jackson Lake which are both considered Reclamation projects and part of the Minidoka Project.

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

Yes. This project will conserve water and increase water efficiency for water provided by Reclamation projects within the Snake River Basin.

• Will the project benefit any tribe(s ?

This project will not provide direct benefit to any tribes.

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.

SRCC plans to accomplish meter upgrades or improvements with this project. The meters will be in the same locations as previous meters and any environmental impacts will be minimal. All pipeline work to be done will be above ground installations.

SRCC has consulted Melissa Jayo-Guerricagoitia of the Bureau of Reclamation in Boise, Idaho. Melissa reported the Bureau would be taking the lead on the environmental compliance requirements.

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. No known environmental resources of special value occur, including rivers, streams, lakes, fisheries, threatened plant and animal communities, spawning grounds, or flyways within the SRCC.

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 wetlands or other surface waters that could fall under Clean Water Act jurisdiction exist in the project area.

When was the water delivery system constructed?

Construction of Salmon Falls Dam to supply water for SRCC began in 1908 with the first delivery in 1911. System improvements have been made to the present day.

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.

Discharge pipes of existing turnouts will need slight modifications, but no changes will be made to canals, headgates, or flumes as a result of this project.

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, The land adjacent to this project has been grazed or cultivated in prior years and does not likely represent historic conditions. No aboveground structures are present.

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

No identified or known cultural resources of significance exist within the Canal Company service area.

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

No. The project will not have a disproportionally high or adverse effect on low income or minority populations. No communities exist adjacent to the project area.

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

No. This project will not limit access to ceremonial use of Indian sacred sites.

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, The project will not contribute to the spread of noxious weeds or non-native invasive species.

Board Resolution

OFFICIAL RESOLUTION OF THE SALMON RIVER CANAL COMPANY

Resolution NO.2021-01

WHEREAS, the United States Department of Interior, Bureau of Reclamation, has announced the WaterSMART Grants for Small-Scale Water Efficiency Projects for Fiscal Year 2021 to provide financial assistance to water managers.

WHEREAS, Salmon River Canal Company has a present need for funding to implement irrigation water meter upgrades necessary under Idaho Department of Water Resources (IDWR) regulations.

NOW, THEREFORE, BE IT RESOLVED that the Salmon River Canal Company Directors agree to and authorize the following.

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

DATED: 3/3/2021

hongh Kelvan

Tony Kevan, President Salmon River Canal Company

ATTEST;

Chase Lanting, Secretary Salmon River Canal Company

Project Budget

Funding Plan

Table 1 - Total Project Cost Table		
Funding Sources	% of Total Project Cost	Total Cost by Source
Costs to be reimbursed with the requested federal funding	47.1%	\$60,000.00
Costs to be paid by applicant, SRCC	52.9%	\$67,507.00
Value of Third Party Contributions	0.00%	
TOTAL PROJECT COST	100%	\$127,507

Table 2 - Budget Proposal				
	Computation		Quantity Type	Total Cost
Budget Item Description	\$/unit	Quantity	(hours/days)	
Salaries and Wages				
Project Manager	\$26.00	20	hours	\$520
Field Construction Crew	\$20.00	370	hours	\$7,400
				\$7,920
Fringe Benefits				
	No fringe	benefits r	requested by thi	s project
Travel				
	No federal	funds to k	be used for trave	el to install
		eq	uipment	
Equipment				
8" DuraMag Electromagnetic Meter	\$2,192.00	5	ea	\$10,960
10" DuraMag Electromagnetic Meter	\$2,681.00	12	ea	\$32,172
12" DuraMag Electromagnetic Meter	\$3,187.00	20	ea	\$63,740
Subtotal				\$106,872
Supplies and Materials				
Grounding Rings for 8" Mag Meters	\$165.00	5	ea	\$825
Grounding Rings for 10" Mag Meters	\$248.00	12	ea	\$2,976
Grounding Rings for 12" Mag Meters	\$260.00	20	ea	\$5,200
				\$0
Subtotal				\$9,001
Contractual/Construction				
Installation				\$0
Subtotal				\$0
Total Direct Costs				\$123,793
Indirect Costs		3%		\$3,713.79
Total Estimated Costs				\$127,507

Funding for our project will be provided by the WaterSMART grant and the Salmon River Canal Company. No letters of commitment from outside sources will be needed.

WaterSMART: Small-Scale Water Efficiency Grants for FY 2021 Salmon River Canal Company: Twin Falls, ID - Meter Turnout Upgrades

Budget Narrative

The estimated project cost is **\$127,507**. Upon delivery of the supplies, the grant funds from the BOR will help pay for the equipment purchased from the meter distributors. A quotation for meters and accessories has been obtained from the manufacturer and is included in **Attachment 1**. Flow meters and other materials will be sourced through a local distributor.

In-kind contributions from SRCC will be a combination of cash required to purchase meters and accessories as well as the staff time and services required for the administration and field work to install the meters. This will amount to approximately **\$67,507** as noted in the Budget Proposal. SRCC will be responsible for all the labor, equipment, and the materials needed for meter installation at the sites to accommodate the new equipment. This is reflected in the budget as an in-kind contribution to the project.

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

SRCC board voted at their regular meeting on **Feb 3**, **2021** to budget \$30,000 per year each year for the next two years to accomplish the goals of this project.

Total Costs

The district requests **\$60,000** from the Bureau's Small-Scale Water Efficiency Grant. The remaining **\$67,507** will come from the SRCC in a combination of cash and in-kind services.

Unique Entity Identifier and System for Award

SRCC is registered on the SYSTEM for Award Management (SAM). The unique entity identifier is **099321572.** The Salmon River Canal Company will maintain an active SAM registration throughout the project.

Attachment 1

Section 2017 Section

Quote Number: 159105 Rev0

Company: SALMON RIVER CANAL COMPANY Address: 2700 HIGHWAY 93 City: TWIN FALLS State: ID Postal Code: 83301 Codes: 001 / 023 / 066 Quoted By: Cherish Stack Date Quoted: Mar-08 2021 Expires: Apr-07 2021 Payment Terms: TO BE ADVISED (TBA) Shipping Terms: FCA SELLER'S PREMISES (FCA)

Contact: John Shelter Phone #: (208) 655-4220

Line #:	Item Number:	Description:	Qty:	UM:	Price:		Ext. Price:
1.000	DM08-1002	8" DURA MAG	5	EA	\$2,192.00		\$10,960.00
		150# AWWA Class D Flanges Battery Powered Pulse Output No Cable Quick Connect Cable Terminals					
1.100	3-2781-08-K	Grounding Ring Assy., 8" UM	5	EA	\$165.00		\$825.00
		Grounding Rings for above meter					
						Subtotal:	\$11,785.00
					Toton due		
2.000	DM10-1002	10" DURA MAG	12	EA	\$2,681.00		\$32,172.00
		150# AWWA Class D Flanges Battery Powered Pulse Output No Cable Quick Connect Cable Terminals					
2.100	3-2781-10-K	Grounding Ring Assy., 10" UM	12	EA	\$248.00		\$2,976.00
		Grounding Rings for above meter					
						Subtotal:	\$35,148.00
3.000	DM12-1002	12" DURA MAG	20	EA	\$3,187.00		\$63,740.00
		150# AWWA Class D Flanges Battery Powered Pulse Output No Cable Quick Connect Cable Terminals					
3.100	3-2781-12-K	Grounding Ring Assy., 12" UM	20	EA	\$260.00		\$5,200.00
		Grounding Rings for above meter					
						Subtotal:	\$68,940.00
All Pric	es are in US Dollars	(USD)				Total Quoted:	\$115,873.00
a la fact							
Abc	ive price does not	include tax or shipping cost****					
evaluat	tions, equipment s	equipment cost and does not inclu start-up, end user training or submit ometer Factory Representative.					
Printed	on 3/8/2021 9:42:44	G AM Dev	ge 1 of 1		*****	Continu	es on next page.

WaterSMART: Small-Scale Water Efficiency Grants for FY 2021 Salmon River Canal Company: Twin Falls, ID - Meter Turnout Upgrades

Upload #2

Applicant:	Salmon River Canal Company, Ltd
Application Number:	R-DO-2021-000304
Project Title:	Salmon River Canal Company Meter Turnout Upgrades
Status:	Complete
Document Title:	Form AttachmentForm_1_2-V1.2.pdf

GrantSolutions.gov was not able to attach this document Form AttachmentForm_1_2-V1.2.pdf due to technical reasons.