1/2/2024

WaterSMART: Small-Scale Water and Energy Efficiency Grants for FY 2024

Supervisory Control & Data Acquisition (SCADA) Project

APPLICANT

OGDEN RIVER WATER USERS' ASSOCIATION
Jeff T. Humphrey, General Manager
471 West 2nd Street
Ogden, Utah 84404

PROJECT MANAGER

Matt McPhie, Operations Foreman
471 West 2nd Street
Ogden, Utah 84404
p (801) 621-6555
mmcphie@pineviewwater.com

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Executive Summary

Date, Applicant Name, City, County and State

- **Date:** January 9, 2024
- **Applicant name:** Ogden River Water Users' Association
- **City, County, State:** Ogden, Weber, Utah
- **Category A:** Water District
- **Project Manager**
  - **Name:** Matt McPhie
  - **Title:** Operations Foreman
  - **Telephone:** 801-621-6555
  - **E-mail:** mmcphie@pineviewwater.com
- **Project funding request:** $100,000
- **Total funding:** $224,500

Project Summary

The proposed project will provide Supervisory Control and Data Acquisition (SCADA) to several critical sites along the Ogden-Brigham Canal (OB Canal) and South Ogden Highline Canal (SOHC), both canals are operated and maintained by Ogden River Water Users' Association (ORWUA). This project also adds a key monitoring site below Pineview Dam to monitor a main tributary stream to the Ogden River. ORWUA operates and maintains Pineview Dam and the release of water from the dam. Pineview Reservoir is an in-stream storage facility located 8 miles east of Ogden, UT. ORWUA delivers approximately 30,000 acre-feet of water every irrigation season (April 15th – October 15th). ORWUA currently relies on canal riders to monitor and operate headgates and over 35 miles of canals. ORWUA also manages the releases to the Ogden River for numerous irrigation companies downstream of Pineview Reservoir. The proposed project will allow ORWUA real-time access to monitor and adjust water flow conditions to increase water delivery efficiency and conservation.

Length of Time and Estimated Completion Date

Ogden River Water Users' Association is ready to begin installation of SCADA technology upon signing of contracts, and the completion of environmental impact study. Planning, engineering,

and public involvement have already taken place. It is estimated the project will take less than two years to complete and will take place before, during, and after the irrigation season.

Federal Facility

Is the proposed project located on a federal facility?

The proposed SCADA technology will be used to operate Bureau of Reclamation facilities. Pineview Dam, SOHC, and OB Canal are Bureau facilities. ORWUA relies on federal resources to provide irrigation and secondary water resources for the majority of the populated areas of Ogden, Washington City, North Ogden, Harrisville, Pleasant View, South Willard, Perry, Brigham City, and Agriculture areas of southeast Box Elder County.

BACKGROUND DATA

The Ogden River Water Users' Association (ORWUA) is part of what is referred to as Pineview Water Systems – a management company for Ogden River Water Users Association, South Ogden Conservation District (SOCD), and Weber-Box Elder Conservation District (WBECD). The two districts are Irrigation Districts formed under Utah Code 17B-2a-501 and the association is a non-profit 501(c)(12) organization.

ORWUA has been providing water from Pineview Reservoir, a Reclamation facility, since the 1930s. The staff of Pineview Water Systems maintain ditches, canals, reservoirs, pumps, and pressurized secondary water pipelines originating from Pineview Reservoir and the Ogden River. Most of this network of canals and reservoirs is part of the ORWUA.

ORWUA provides irrigation and secondary water for the majority of the populated area of Weber and Southeastern Box Elder Counties. ORWUA is tasked with maintaining and operating the Pineview Dam, Ogden Canyon Pipeline, Ogden Canyon Siphon, and the South Ogden Highline Canal. The Bureau of Reclamation in conjunction with ORWUA has developed a master plan for the improvement of this canal system with emphasis on water conservation, risk reduction and cost effectiveness of operation.

Geographic Location

The proposed project involves the OB Canal and SOHC systems, and monitoring of a tributary stream to the Ogden River. The OB Canal is owned/managed by the ORWUA and is within the boundaries of the WBECD service areas, as seen in Attachment A-1 Project Location Map. The tributary is located below the foot of Pineview Dam and is also seen in Attachment A-1 Project Location Map. The SOHC is owned/managed by the ORWUA and is within the boundaries of SOCD, as seen in Attachment A-1 Project Location Map. These reservoirs and canal include:

- South Ogden Highline Canal
- P Reservoir

- 8 Reservoir
- 13 Reservoir
- 17 Reservoir
- 20 Reservoir
- 25 Reservoirs (25,25A,25B)
- Wheeler Creek
- End of OB Canal
- Three trash racks
- #1 Box
- #5 Box
- Butler Box
- F Reservoir
- North Bench Reservoir
- J Pump House

Source of Water Supply, Water Rights, Current Water Users

- **Source of water supply.**
  The secondary water is primarily provided by the Ogden and Weber rivers, operated by ORWUA using water from Pineview Reservoir, a Reclamation facility.

- **Water rights involved.**
  ORWUA managed water right # 35-7397 consisting of 44,175 acre-ft. SOCD also subscribes to 2,345 acre-ft from Weber Basin Water Conservancy District under water right # 35-829

- **Current water uses.**
  - Residential lawns and gardens
  - Agriculture: fruit orchards, berries, hay, row crops, corn
  - Commercial Landscaping

- **Number of water users served.**
  Water is provided to roughly 30,000 agricultural and secondary service connections within the Weber-Box Elder and South Ogden Conservation Districts.

- **Current and projected water demand.**
  The estimated amount of water currently used is 29,540 acre-feet annually. Combined, Weber and Box Elder counties have seen significant population growth recently. The population growth will increase the secondary water demand.

- **Potential shortfalls in water supply.**

  Drought

Utah is the second driest state in the nation, experiencing significantly less precipitation than the rest of the United States. Droughts are a recurrent concern in the area especially since global climate change seems to be affecting the water supply. The water conserved will remain in Pineview Reservoir as a result of this project and can provide a buffer during exceptionally dry years. The secondary water in the Weber-Box Elder and South Ogden Conservation District is vital to the livelihood of the community, while emphasizing the importance of efficiency in the distribution of the water supply.

Efficiency

ORWUA canal system and secondary water delivery system, water and the time of the canal operators are all valuable resources. The canal riders are essential to the regulation of the water within the secondary water delivery system. The canal riders, Pineview Water System's employees, are currently required to drive to each reservoir location for a visual inspection and to alter water delivery into each reservoir twice a day. Due to the limited time and access the canal riders have with each reservoir site, the reservoirs are susceptible to overtopping and/or unintentional draining. The overtopping of a reservoir can have serious consequences to down-stream life and property, and unintentional draining creates a loss of service to the District's customers for extended periods of time. Without the implementation of the proposed automation project, water will continue to be wasted rather than efficiently delivered to the customer. Conserving water is crucial in providing sufficient secondary water resources to all users. Also, without the proposed SCADA project, the canal riders will need to continue to use valuable time and resources to physically travel to each reservoir to inspect and regulate. With the implementation of the proposed automation project, the canal operators will be able to effectively monitor and operate each site remotely thus eliminating travel time and expense. This will be a cost and safety benefit for the districts, operators, and the customers of SOCD and WBECD.

Water Delivery System

The ORWUA and OB Canal consist of 35 miles canal and 17 equalizing reservoirs that service Weber and Box Elder Counties.

Relationship with Reclamation

Pineview Water Systems (ORWUA, SOCD, and WBECD) has completed an Automation Master Plan with the Provo, Utah area field office. This Master Plan is the basis of this project and has a number of priority projects that will be phased in over a number of years. Pineview Water Systems has had a long history of working and communicating with Reclamation. Pineview Water Systems manages the water from Pineview Dam which was constructed as part of the Reclamation's Ogden River Project completed in 1937. Pineview Reservoir is the primary source of water for the proposed project.

PROJECT DESCRIPTION

ORWUA, South Ogden Highline Canal and OB Canal delivery systems require canal riders and staff to travel to sites to manually shut off and assess shortfalls in the system. The Wheeler Creek tributary requires the dam tender to take a visual of what is flowing down the creek, no measuring device is located in this stream before it reaches the Ogden River. Canal riders are driving 160 miles and spending 8-12 hours a day to monitor/operate the South Ogden Highline canal and OB Canal. Delayed response results in blocked canals, flooding, loss of valuable water resources, empty reservoirs, and reduced efficiency in the delivery. Time is critical when obtaining control, conserving water resources, and reducing risk.

The proposed project will give canal riders and staff remote contact to the OB Canal, SOHC and reservoirs through the use of SCADA technology, utilizing desktop and mobile technology to provide immediate access to overwhelmed canal and reservoir systems. Swift response times will protect the homes, yards, roads, and the environment by reducing the risk of canal and reservoir system failures. Maintenance/repair costs will be significantly reduced. Real-time access will maximize data collection which will lead to well informed, data-driven decisions, ultimately increasing reliability of the water delivery systems. The project will implement flow measuring devices and canal level sensing. All of which will provide real-time response action to help reduce potential shortfalls in canal systems and/or repairs needed to conserve water and provide continual water flows. The flow monitoring device on the Wheeler Creek tributary will provide accurate measurement of water flowing into the Ogden River, this will allow operators to conserve more water up stream in Pineview Reservoir.

All of these will provide real-time response action to help reduce potential water management failures in the canal systems.

- **Break-Down of Canal/Reservoir Projects**

Project 7 – Wheeler Creek

Communication and Remote Monitoring will be established above the inlet to the Ogden River from Wheeler Creek. To accomplish this:

- Remote terminal unit (RTUs) will allow for the monitoring of Wheeler Creek
- Open channel meter installed to monitor river flows

Project 9 - #1 Box

Communication and Remote Monitoring will be established at the outlet of this box from the OB Canal. To accomplish this:

- Remote terminal unit (RTUs) will allow for the monitoring of flows from canal
- Meters installed to monitor outflow from #1 box

Project 10 - #5 Box

Communication and Remote Monitoring will be established at the outlet of this box from the OB Canal. To accomplish this:

- Remote terminal unit (RTUs) will allow for the monitoring of flows from canal
- Meters installed to monitor outflow from #5 box

Project 14 – Butler Box

Communication and Remote Monitoring will be established at the outlet of the box from the OB Canal. To accomplish this:

- Remote terminal unit (RTUs) will allow for the monitoring of flows from canal
- Meters installed to monitor outflow from Butler Box

Project 14 – J Pump House

Communication and Remote Monitoring will established at the inline gate to pumphouse. To accomplish this:

- Remote terminal unit (RTUs) will allow for the monitoring of elevation of canal
- Pressure transducer will detect canal elevation for optimal operation to pumps

Project 19 – End of OB Canal Meter

Communication and Remote Monitoring will be established at the end of the OB Canal. To accomplish this:

- Remote terminal unit (RTUs) will allow for the monitoring of flows at the end of the canal
- Meter installed to monitor high and low flows

Project Trash Racks – 3 Trash Racks along OB Canal

Communication and Remote Monitoring will be established at 3 of the trash racks along the OB Canal to monitor high/low canal levels. To accomplish this:

- Remote terminal unit (RTUs) will allow for monitoring of high/low flows
- Pressure transducers will detect high and low flows

Project 4A – F Reservoir Operation

Communication and Remote Operation will be established at the inlet to the reservoir from the OB Canal. To accomplish this:

- New controls will be tied into Remote terminal unit (RTUs) for operation of gate valve
- Meter installed to monitor flows into reservoir

Project 14 – North Bench Reservoir Operation

Communication and Remote Operation will be established at the inlet to the reservoir from the OB Canal. To accomplish this:

- New controls will be tied into Remote terminal unit (RTUs) for operation of headgate
- Meter installed to monitor flows into reservoir

Project 24 – P Reservoir Operation

Communication and Remote Operation will be established at the inlet to this reservoir from the South Highland Canal. To accomplish this:

- Remote terminal unit (RTUs) will allow for the closing of the gate valve for the reservoir
- New controls will be tied into RTUs for operation of gate valve
- Underdrain flow meter

Project 25 – 8 Reservoir Operation

Communication and Remote Operation will be established at the inlet to this reservoir from the South Highland Canal. To accomplish this:

- Remote terminal unit (RTUs) will allow for the closing of gate valve for the reservoir
- New controls will be tied into RTUs for operation of gate valve
- Underdrain flow meter

Project 26 – 13 Reservoir Operation

Communication and Remote Operation will be established at the inlet to this reservoir from the South Highland Canal. To accomplish this:

- Remote terminal unit (RTUs) will allow for the closing of the gate valve for the reservoir
- New controls will be tied into RTUs for operation of gate valve
- Underdrain flow meter

Project 27 – 17 Reservoir Operation

Communication and Remote Operation will be established at the inlet to this reservoir from the South Highland Canal. To accomplish this:

- Remote terminal unit (RTUs) will allow for the closing of the gate valve for the reservoir
- New controls will be tied into RTUs for operation of gate valve
- Underdrain flow meter

Project 28 – 20 Reservoir Operation

Communication and Remote Operation will be established at the inlet to this reservoir from the South Highland Canal. To accomplish this:

- Remote terminal unit (RTUs) will allow for the closing of the gate valve for the reservoir
- New controls will be tied into RTUs for operation of gate valve
- Underdrain flow meter

Project 29 – 25's Reservoir

Communication and Remote Operation of the 3 reservoirs has already been established at the inlet. Need to install flow meters on the underdrains of each reservoir.

EVALUATION CRITERIA

E.1.1. Evaluation Criterion A – Project Benefits (35 points)

- *Describe the expected benefits and outcome of implementing the proposed project. What are the benefits to the applicant's water supply delivery system? If other benefits are expected explain those as well.*

The proposed SCADA project will have definite positive impacts on not only the South Ogden Highline Canal and OB Canal, but also on the surrounding population and residents who rely on efficient water supply and flow to provide secondary water for vibrant lawns, gardens and agriculture.

Benefits of the proposed SCADA technology include:

- Remote access to systems: allows canal riders and staff to quickly dispatch any errors in canal and reservoir systems, thereby reducing potential damage caused to systems and environment from overwhelming amounts of water flow, especially during spring months, March-May
- Resource conservation: eliminates travel time, vehicle consumption, fuel, and associated pollution.
- Real-time data acquisition: permits well-informed, data-driven decisions between the staff, and water managers who rely on quick, efficient data for use in improving canal and reservoir system reliability
- Reduced risk and costs: less resources expended in cleaning and/or restoring affected areas that occur after a system failure
- Remote measuring devices: conserves existing and potential water supply rather than allowing it to back up and/or overflow reservoirs to where it cannot be recovered
- Reduction of drought risk: allows more water storage retainment in reservoir
- Reduced or prevent flooding: offers protection to the surrounding environment, including any natural habitats and wildlife
- Water availability: conservation of existing/potential water and uninterrupted water flow to service areas will maintain the confidence of local sectors and economies who grow food, and which is equally important to residents and local governments in maintaining vibrant landscapes and communities

The resent good snowpack and flooding is evidence that the proposed automation plan will be a priority and benefit to systems, users, and surrounding environments. Improving the SOHC and OB Canals will allow ORWUA the means to better anticipate and control the flow of water during emergency situations, and significantly reduce disastrous effects such as the flooding and water contamination that occurs during these events.

E.1.2. Evaluation Criterion B – Planning Efforts Supporting the Project (25 points)

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. In conjunction with the Bureau of Reclamation, ORWUA's proposed Automation Master Plan identifies an inefficiency of communication between staff, canal riders, and canal systems. In times of emergency, immediate response is critical to obtaining control of overwhelmed canal systems. Direct communication between staff and canal systems during times of emergency will allow for a more efficient flow of water, thereby conserving water resources and reducing water losses. The proposed installation of SCADA technology into existing canal and reservoir systems will bridge this gap between staff and canal by installing flow meters tasked with communicating to valves the need for emergency shut-off. Following remote shut off, real time data collected will allow staff to accurately identify the problem at hand and make well-informed, data-based decisions to stabilize water flow and ultimately conserve valuable water resources for use by farmers and residents in an ever-growing community.

- *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 implantation of SCADA technology has been determined to be of utmost importance in conserving both existing and potential water resources. Flow meters and remote telemetry units will ensure well-informed, data driven decisions when directly communicating with canal systems, in order to maintain control and reduce potential risk to the systems and environment.

  Priority reasons include:

  - Flooding: snow melt normally occurring between the months of March and April and has been exceptionally high in previous years, resulting in overflowing canals and reservoir causing severe flooding
  - Climate variability: during wet years, in the spring and summer, storm water run-off fills canals and overloads the systems. Data-driven decisions will help to determine how much water needs to be released into the system and how much should be held upstream.
    - In May, Northern Utah experiences light to severe precipitation 30% of those days, with the greatest accumulation occurring around May 13th. Real-time data acquisition will allow staff to measure rain levels and control the flow of water.
    - Though on average precipitation percentages decrease during June and July, some years reflect May's 30% or greater

throughout all summer. Though storm water is always vital to maintaining efficient water storage/flow, the years when storm water is in greater abundance will provide greater resources necessary to conserving water for years with little or no precipitation.

The implementation of SCADA technology on the existing canal and reservoir systems is a priority in reducing current and potential flooding and preparing for climate variability.

E.1.3. Evaluation Criterion C – Project Implementation and Results (20 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.*

The Bureau of Reclamation in conjunction with Pineview Water Systems has completed and approved the proposed Automation Master Plan. After award and completion of the WaterSMART contract, the environmental study report will be contracted and completed with the BOR. ORWUA will start to install the project between July 2024 – July 2026. Final reporting and project close-out will be filed upon completion of installation. Please see the following estimated project schedule.

Estimated Project Schedule	
Milestone/Task	**Estimated Completion Date**
Sign WaterSMART contracts	October 2024
Project Award	October 2024
Environmental Impact Study prepared and approved by BOR	October 2024 – March 2025
Installation of the Project	July 2024 – July 2026
Final reporting and project close-out	July 2026

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

Building permits are required for the installation of SCADA technology and will be obtained by each municipality within Ogden River Water Users' Association boundaries. These cities include Ogden City, South Ogden City, Washington

Terrace City, North Ogden City, Pleasant View City, Perry, South Willard City, Brigham City, Weber and Box Elder County.

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

  All engineering and design work outlined in the Automation Master Plan has been completed and supplied to the BOR. Subsequently, the BOR has reviewed and approved the plan and is in direct support of the proposed project.

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

  No new policies are required to implement the proposed project. All policies or administrative actions are in direct compliance with Bureau of Reclamation and South Ogden Conservation District policies and procedures.

E.1.4. Evaluation Criterion D – Nexus to Reclamation (5 points)

Describe the nexus between the proposed project and a Reclamation project or activity, including:

- *How is the proposed project connected to a Reclamation project or activity?*

  The proposed Automation Master Plan has been developed by ORWUA in conjunction with the BOR.

- *Does the applicant receive Reclamation project water?*

  ORWUA receives water directly from BOR reservoir storage facilities.

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

  The proposed Reclamation project is located on Reclamation land/facility. The South Ogden Highland Canal and OB Canal are both on Reclamation land.

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

  No. However, the proposed project receives water directly from infrastructure built during the Ogden River and Weber River Projects.

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

  Yes. The conservation of water that will come from better management and efficiency can be stored in the Ogden River and Weber River Project's water storage facilities.

E.1.5. Evaluation Criterion E – Presidential and Department of the Interior Priorities (15 points)

Modernizing our infrastructure

The proposed project will contribute to modernizing district infrastructure. The SCADA will allow for water supply reliability and to modernize the way ORWUA delivers water to the cities for secondary water use. This will help fulfil water allocations and provide enhanced understanding of potential water savings within the ORWUA boundaries. ORWUA is confident that the addition of the new technology will add dependability, reliability, trust, and safety within the systems. This is achieved by faster reaction times and reduced times spent by the canal riders who currently monitor and adjust flows manually. The additional time gained through the remote automation technology will allow the canal riders to concentrate their efforts on canal improvements and other maintenance projects during the irrigation season.

There are no lands associated with this project in a disadvantaged or underserved community and/or connected to tribal lands.

Project Budget

FUNDING PLAN AND LETTERS OF COMMITMENT

Describe how the non-Federal share of project costs will be obtained.

Non-Federal project costs will be obtained in cash.

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).

ORWUA will use matching funds from its own budget for the procurement of equipment and material. The district will construct the project's infrastructure at its own expense.

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

- None

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.

- None

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

No other financing will be requested. Ogden River Water Users' Association already has the funds for its cost-sharing portion of the project.

Summary of all funding sources. Denote in-kind contributions with an asterisk (*).

Funding Sources	Funding Amount
Non-Federal Entities	
Recipient Funding	$124,500
Non-Federal Subtotal	$124,500
Other Federal Entities	$0.00
Other Federal Subtotal	$0.00
Requested Reclamation Funding:	$100,000
Total Project Funding	$224,500

BUDGET PROPOSAL

Budget Item Description	Computation		Quantity Type	Total Cost
	$/Unit	Quantity		
Salaries and Wages				
Fringe Benefits				
Equipment				
Supplies and Materials				
Contractual/Construction				
Pressure Transducer	$700	5	EA	$3,500
Remote Terminal Unit	$2,700	8	EA	$21,600
Electric Actuator	$10,000	5	EA	$50,000
Stem Enclosure with Motor	$3,000	2	EA	$6,000
Battery Backup	$700	13	EA	$9,100
Cabinet	$900	13	EA	$11,700
Ultrasonic Measuring Device	$15,000	2	EA	$30,000
Communication Transmitter	$900	14	EA	$12,600
Concrete Pad (3'x3')	$250	4	EA	$1,000
Flow Control Meter	$12,000	5	EA	$60,000
Reservoir Underdrain Flow Meters	$2,000	8	EA	$16,000
Environmental 2%				$3,000
Total Direct Costs				$224,500
Indirect Costs				$0
Total Project Costs				$224,500

BUDGET NARRATIVE

Salaries and Wages

None

Fringe Benefits

None

Travel

None

Equipment

None

Materials and Supplies

Material costs will be part of the contracted portion of the project.

Contractual

The contractual costs shown above are estimates for each of the component's acquisition and installation of all necessary materials/equipment.

Environmental and Regulatory Compliance Costs

ORWUA will request that BOR prepare an environmental impact study for an estimated $3000 which this expense may vary due to the district's preconception that the project does not take place in an environmentally sensitive area.

Other Expenses

N/A

Indirect Costs

N/A

Total Costs

ORWUA Portion: $124,500 Fed Portion: $100,000 Total: $224,500

Environmental and Cultural Resources

1. *Will the 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.

No impacts to the surrounding environment are expected with the proposed automation project. SCADA is a monitoring technology and will be installed as an upgrade to an already developed area.

2. *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 an activities associated with the proposed project?*

   ORWUA is not aware of any impacts concerning threatened or endangered species in this area. A comprehensive investigation will be done as part of the required environmental process.

3. *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 project may have.*

   The Construction will take place in existing canals and reservoirs. There are no known wetlands in the construction area. A comprehensive investigation will be done as part of the required environmental process.

4. *When was the water delivery system constructed?*

   The Ogden River Project construction by contract was started on September 29, 1934. Construction of the Pineview Dam and Ogden-Brigham Canal were completed in June 1937. The South Ogden Highline Canal and distribution system consisting of 6.6 miles of concrete lined canal and miles of pressure pipe system, were built during 1938-1941.

5. *Will the 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.*

   New SCADA technology will be added to the existing canal and reservoir systems located within ORWUA service boundaries along the Weber and Ogden rivers. Manually operated systems will be replaced with remote telemetry units and meters allowing real-time access to flood gates and accurate data acquisition, in order to make well-informed, data-based decisions.

6. *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.*

ORWUA is not aware of any building, structures or features that would qualify. A cultural resource inventory will be completed as part of the submitted environmental document.

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

   ORWUA is not aware of any impacts to locations of archeological sites. A comprehensive investigation will be done as part of the required environmental process.

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

   No. In fact, by remotely controlling the flow of water at each canal and reservoir system, the proposed project will benefit all users within ORWUA service areas, especially low-income residents. Demographics show that nearly 21% of Weber County residents live in poverty. The loss of valuable water resources due to delayed response times during emergencies has a disproportionately negative effect on low-income residents.

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

   No tribal lands are located within the project limits.

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

    Best management practices will be employed to prevent the spread of noxious weeds in the area. In fact, by remotely controlling water flow, this project will help with the control of noxious weeds and invasive trees caused by flooding.

Required Permits or Approvals

Building permits are required for the installation of SCADA technology and will be obtained by each municipality within Ogden River Water Users' Association boundaries. The municipalities include Ogden City, South Ogden City, Washington Terrace City, North Ogden City, Harrisville City, Pleasant View City, South Willard City, Perry City, Brigham City, and Weber County and Box Elder County.

Official Resolution

The Official Resolution for Ogden River Water Users' Association SCADA project will be signed and submitted by January 16, 2024.