WaterSMART Small-Scale Water Efficiency Projects – Application Period 2

Long Island Irrigation Company

Project: Main Diversion Replacement

Applicant:
Long Island Irrigation Company
595 N 3300 E
Menan, ID 83434
lleolakli46@gmail.com

Project Manager:
Darin Cottle, Vice President
595 N 3300 E
Menan, ID 83434
208-716-1080
cottlecattle@msn.com

Due Date: July 9, 2024

Submittal Date: June 10, 2024

Table of Contents

Technical Proposal and Evaluation Criteria

Executive Summary

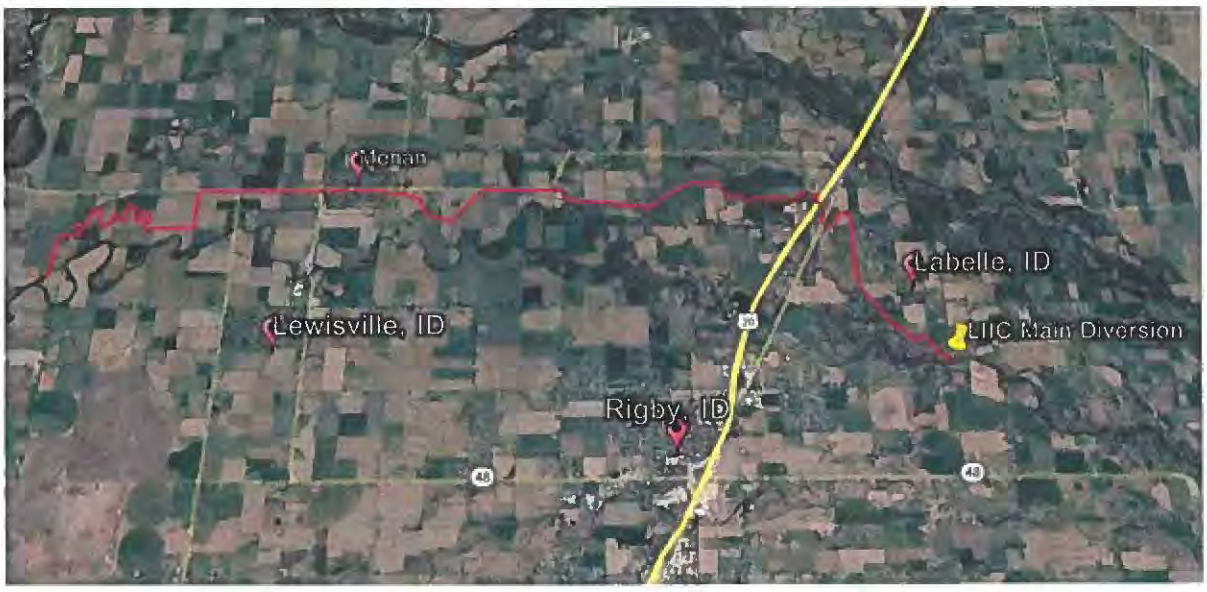
Date: June 10, 2024
Applicant: Long Island Irrigation Company
Category: A

City: Menan, ID
County: Jefferson
State: Idaho

The Long Island Canal serves over 300 shareholders spanning over 11,200 acres. This project proposes to remove and replace the existing main diversion for the canal. The main diversion for the Long Island Canal needs to be improved and updated as the current structure was built in the 1930s and the concrete is crumbling from the pressure of the water. If the structure is not replaced soon, the entire concrete structure could fail. The proposed project is not located on a Federal facility.

Project Location

The Long Island Canal diverts from the Dry Bed aka the Great Feeder Canal, which is a tributary of the Snake River. The diversion is located south of the area known as Labelle, northeast of the town of Rigby. The diversion delivers water to the Long Island Canal, the West Labelle Canal, and the Independent Canal. It provides water to over 15,000 irrigated acres and 400 shareholders between all three canals. The path of the main channel of the Long Island Canal is illustrated in the map below.



Main Diversion: Lat: 43°41'21.83"N Long: 111°51'13.92"W

Technical Project Description

The existing main diversion structure for the Long Island Irrigation Company (LIIC) was built in the 1930's. The only change that has been made to the structure since it was first built is that automation was added to two of the four gates in the early 2000's.

The replacement of the main diversion project entails removing the entire existing concrete structure and replacing it with a new concrete structure with space for three gates instead of four. New larger steel gates will be installed with updated automation. The new structure has been engineered to make it better able to withstand and control the strong flow of water that is directed by the diversion. The plan includes extended concrete floors on the bed of the Canal to stop water from flowing under the base of the structure and affecting its integrity as it is now. The new structure will also have extended wing walls to prevent further erosion of the banks.

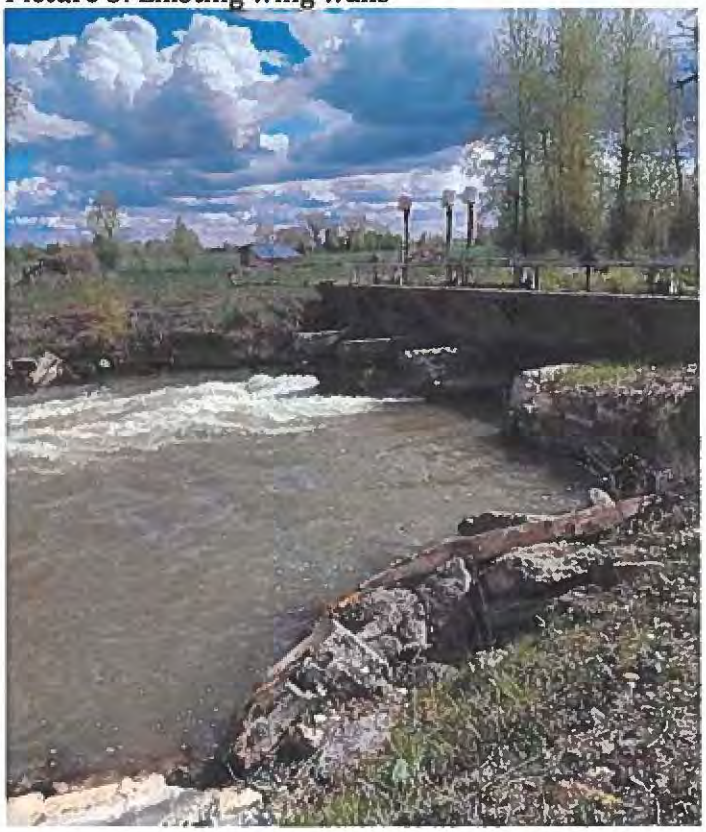
A 10 ft wide concrete bridge across the structure will be added to allow for maintenance equipment to access the middle of the diversion to remove trees and other debris that inhibit the flow of water through the diversion structure. Currently, maintenance equipment is not able to reach the middle of the Canal from the banks to remove debris that get caught in the structure.

Pictures of Existing Long Island Irrigation Main Diversion Structure

Picture 1: Existing support walls for main diversion structure

Picture 2: Close up view of support walls (Canal not at full allocation level)

Picture 3: Existing wing walls



Picture 4: Gates – two in the middle have automation, two on the end have hand cranks

Evaluation Criteria

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

Clearly explain the anticipated water management benefits to the Category A applicant's water supply delivery system and water customers.

• *Will the project result in more efficient management of the water supply?*
Yes. Replacing LIICs main diversion will result in more efficient management of the system. LIICs diversion as measured by Water District 01 varied from 551 cfs to 523 cfs between July 10 and July 17, 2023. Due to the short water supply the past couple years, the current headgate automation has not been able to keep up with changing water flows in the Dry Bed where only 2 of the 4 gates are automated. Having all 3 new gates automated will help conserve water as well as more efficiently deliver water to LIIC shareholders.

As illustrated in the pictures of the diversion, it is in dire need of replacement. The existing concrete diversion and gates will be removed and replaced with a new structure designed to last for another 100 years or longer. This project is imperative as the current structure is deteriorating at an increasing rate as the concrete continues to degrade. Every irrigation season that the current diversion is in use increases the risk that the diversion will fail and cause damage to homes and prevent shareholders from receiving their allotted irrigation water until the structure can be replaced. If this diversion fails, there will be no way to manage the supply of water to the three canals that rely on it.

• *Where any conserved water as a result of the project will go and how it will be used?*
Any conserved water as a result of the project will remain in the Dry Bed, a tributary of the Snake River, and benefit the natural flow of the river as well as downstream users.

• *Explain the significance of the anticipated water management benefits for the Category A applicant's water delivery system and customers.*

The benefits of replacing the main diversion for LIIC include the continued safe operation of multiple canals that use LIICs main diversion, including the Long Island, the West Labelle, and the Independent. When flood control is needed, the gates will be operated to only allow as much flow past the gates as the canals can hold. In the case of drought, the gates will be controlled to deliver only the allotted amount of water to shareholders and better manage the amount of storage water that is allocated to shareholders on all canals that rely on LIICs main diversion for accurate allocation.

• *What are the consequences of not making the improvement?*

If this improvement is not made soon, the entire structure could fail. If the structure fails, LIIC won't be able to control the delivery of water to over 15,000 acres of irrigated land to its shareholders as well as to other canals as LIIC will not have the ability to control the flow of water through its system until the structure is fixed.

Broader Benefits: *Describe the broader benefits that are expected to occur as a result of the project.*

• *Will the project improve broader water supply reliability at sub-basin or basin scale?*

The project will maintain the current water supply reliability within LIICs system and other canal systems that receive water from LIIC.

• *Will the proposed project increase collaboration and information sharing among water managers in the region? Please explain.*

Replacing LIICs main diversion will allow LIIC to more accurately control the amount of water flowing through it's system. This will allow it to deliver water more accurately to the other canals that receive water from LIIC which will increase collaboration and information sharing among the canal boards and watermasters in the area.

• *Is the project in an area that is experiencing, or recently experienced, drought or water scarcity? Will the project help address drought conditions at the sub-basin or basin scale?*

The project is in an area that recently experienced drought. The project will help address drought conditions by more accurately delivering water to shareholders on multiple canals.

• *Will the proposed project positively impacts/benefit various sectors and economies within the applicable geographic area (e.g., impacts to agriculture, environment, recreation, and tourism)? Please explain.*

The proposed project will benefit agriculture and recreation. As most of the water being controlled by the LIIC main diversion is being used for irrigation of crops, the greatest benefit will be to the agriculture sector as the water will be more accurately delivered. There is a lot of recreation in the project area on both the Dry Bed and the Snake River. Because the water flowing into the Long Island Canal will be more accurately controlled, any excess flows can remain in the Dry Bed or the Snake River for recreation.

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

Plan Description and Objectives: *Is your project supported by a specific planning document or effort? If so, describe the existing plan. When was the plan developed? What is the purpose and objective of the plan?*

Yes. The replacement of LIICs main diversion is supported by the LIIC Board of Directors 2023 System Optimization Review Plan. The plan was developed at the 2023 annual meeting. The purpose and objective of the plan is to prioritize improvement projects on the Canal that will improve operation and management efficiency.

Plan Development: *Who developed the planning effort? What is the geographic scope of the plan? If the planning effort was not developed by the Category A applicant, describe the Category A applicant's involvement in developing the planning effort.*

The LIIC Board of Directors developed the System Optimization review. The geographic scope of the plan is the service area of LIIC.

Support for the Project: *Describe to what extend the proposed project is supported by the identified plan.*

• *Is the project identified specifically by name and location in the planning effort?*
Yes. The replacement of the main diversion is identified specifically by name and location.

• *Is this type of project identified in the planning effort?*
Yes. The LIIC System Optimization review identifies the projects needed to improve the efficiency of the system.

• *Explain whether the proposed project implement a goal, objective, or address a need or problem identified in the existing planning effort?*
The replacement of the main headgate addresses the objective in the System Optimization Reivew Plan of increasing operation and management efficiency within LIICs system as it is the structure that controls the flow of water through the entire system.

• *Explain how the proposed project has been determined as a priority in the existing planning effort as opposed to other potential projects/measures.*
The replacement of the main diversion structure was determined a priority as without this structure, the other operations of the canal will fail. LIIC has operated its system as efficiently as possible with the current main diversion structure, but now the structure needs to be replaced to ensure efficient operation of its system long term.

E.1.3. Evaluation Criterion C—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.*

Implementation Plan
Planning for the project has already been completed. No regulatory review or permitting is needed as the project will not expand beyond the banks of the existing Canal. LIIC has received a bid from Straight Arrow Construction to complete the removal of the existing structure and construction of the new concrete structure. Straight Arrow Construction has experience with canal diversions and will be able to successfully complete its part of the project.

Once the existing structure is removed and the new structure is in place, new steel gates will be installed with automation. LIIC has received a bid from Boulter Excavation to fabricate and install the new steel gates. Metcom Inc. will install the automation to the gates after they are in place.

The start date for the project is contingent on the award of grants and when funds are received, but construction will begin no sooner than February 1, 2025. Construction is expected to be finished by spring of 2026. The following table has the tentative schedule for project completion depending on award of funds and weather.

Proposed Implementation schedule

Implementation Schedule		
Activity/Milestone	Begin Date	Completion date
Remove existing Diversion Structure	10/1/2025	10/15/2025
Construct new Diversion structure	10/15/2025	11/1/2025
Install new gates	11/1/2025	11/7/2025
Install automation to new gates	11/7/2025	11/14/2025

• *Proposals with a budget and budget narrative that provide a reasonable explanation of project costs will be prioritized under this criterion.*

Proposed Budget

Non-Federal Funding Partners

LIIC was awarded $74,222 in November of 2023 from the Idaho Water Resource Board (IWRB) under the Aging Infrastructure Grant Program for this project. This is 33% of the overall project cost and will help LIIC meet the cost share requirement under this grant. The money from IWRB will be used in conjunction with this grant to reduce LIICs cost share portion. If this grant is awarded in the amount of $100,000, LIIC's portion of the proposed budget will be $50,693. LIIC has enough saved for improvement projects to be able to cover their portion of the proposed project without obtaining any other financing.

Table 1: Budget Summary

Total Estimated project costs	$224,915
Amount of IWRB Grant Funding Awarded	$74,222
Amount Requested from BOR WaterSMART SWEP Grant	$100,000
Applicant Contribution	$50,693

Table 2: Cost Estimate and Budget proposal

Cost Estimate for Long Island Irrigation Main Diversion Replacement		
Activity	Description	Cost
Demo	Demo of old structure	$ 9,500.00
Excavation & backfill	Excavation and backfill for new structure including backfill material	$ 26,500.00
Footings & Walls	Concrete footings, walls, and slab	$113,600.00
Concrete	Concrete for bridge deck	$ 10,000.00
Steel Gates	New steel gates	$ 33,115.00
Automation	Installing Automation	$ 32,200.00
	Total Cost	$224,915.00

Budget Narrative

Salaries and Wages

The Project Manager, Darin Cottle, is the vice president of LIIC. All the work for these proposed improvements will be contracted through an automation professional, a construction company, and a steel fabricator. No labor has been added for Darin as project manager. The professional from Metcom, Inc. will install the automation and SCADA systems for the headgate and overshot gate and charge his standard rate of $95 an hour. The professionals from the steel fabrication company will build the headgate and overshot gate and install them, charging their standard rate. The labor costs have been included in the budget proposal.

Equipment

No equipment from the irrigation company is needed. The companies that have been hired to do their particular tasks will provide the specific equipment needed to do it properly.

Materials and Supplies

The materials and supplies are included in the line items in the budget. The particular companies hired to do the project will provide the materials and supplies as needed.

Contractual
Once funding has been received for the projects, LIIC will contract with three professionals to ensure that the work is done properly.

Environmental and cultural resources compliance
We will not be altering anything environmental or cultural.

Required permits or approvals

• *Describe any permits and agency approvals that will be required along with the process and timeframe for obtaining such permits or approvals.*
We do not need any permits or approvals for this project as the entire project will take place within the banks of the Long Island Canal.

• *Identify and describe any engineering or design work performed specifically in support of the proposed project. What level of engineering design is the project currently? If additional design is required, describe the planned process and timeline for completing the design.*
Straight Arrow Construction, a construction company with experience designing and constructing irrigation diversion works provided a design for the new concrete structure. LIIC does not expect that additional design will be required, but if it is, will complete the design process in February 2025. The design for the new structure is attached at Attachment A.

• *Does the applicant have access to the land or water source where the project is located? Has the applicant obtained any easements that are required for the project?*
Yes, LIIC has a statutory easement that allows it to access the land where the project is located and to do the work needed to implement the proposed project. The statutory easement is described in Idaho Code § 42-1102.

• *Identify whether the applicant has contacted the local Reclamation office to discuss the potential environmental and cultural resource compliance requirements for the project and the associated costs. Has a line item been included in the budget for costs associated with compliance? If a contractor will need to complete some of the compliance activities, separate line items should be included in the budget for Reclamation's costs and the contractor's costs.*
LIIC has not yet contacted the local Reclamation office, but it will by the end of January 2024 to begin any compliance processes that will be needed. A line item for compliance costs has not been included in the budget.

E.1.4. Evaluation Criterion D—Nexus to Reclamation (5 Points)

LIIC has contracts with two Reclamation facilities; Palisades Reservoir and Jackson Lake. LIIC receives both natural flow and storage water from the two facilities and strives to use the water received in an efficient manner.

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

E.1.5.1. Sub-criterion No. E1. Climate Change

Combating the Climate Crisis:

Please describe how the project will address climate change, including the following:

• *Please provide specific details and examples on how the project will address the impacts of climate change and help combat the climate crisis.*

This project will help address the impacts of climate change by increasing supplies through water management improvements. The replacement of LIIC's main diversion will allow LIIC to control the flow of water through its system and connected systems allowing it to adjust operations quicker and easier when needed.

• *Does this proposed project strengthen water supply sustainability to increase resilience to climate change? Does the proposed project contribute to climate change resiliency in other ways not described above?*

Yes. This project strengthens water supply sustainability by increasing LIIC's ability to direct and control the flow of water to over 15,000 acres of irrigated farmland.

E.1.5.3. Sub-criterion No. E3. Tribal Benefits

• *Does the proposed project support Tribal resilience to climate change and drought impacts or provide other Tribal benefits such as improved public health and safety by addressing water quality, new water supplies, or economic growth opportunities?*

Yes, this project will benefit the Shoshone-Bannock Tribes by protecting tribal water supplies, which improves tribal resilience to climate change and drought. As part of the 1990 Fort Hall Indian Water Rights Agreement, several canal companies (including LIIC) set aside storage water in the Ririe and Palisades reservoirs for the tribes each year. As a result, the Tribes feel little or no adverse impacts during drought years and have sufficient water for irrigation as well as domestic, commercial, municipal, industrial, hydropower, and stock water uses. This agreement has numerous environmental benefits, including 1. helping preserve area wetlands, 2. enhancing Snake River flows, and 3. helping protect threatened migratory salmon and steelhead.

Official Resolution

For Small Scale Water Efficiency Projects: FY 2024 – Application Period 1

June 10, 2024

Whereas, the Long Island Irrigation Company, in Menan, Idaho is a legally organized irrigation company in the State of Idaho, and

Whereas, the Company promotes, supports, and encourages water conservation, and

Whereas, the Company urgently needs system improvements to replace the main diversion structure.

Therefore, be it resolved that the Board of Directors of the Long Island Irrigation Company in Menan Idaho agrees and authorizes that:

1. The Board has reviewed and supports the application proposal to the WaterSMART: Small-Scale Water Efficiency Projects.
2. The Board authorizes the President Shane Shippen or Vice President, Darin Cottle the legal authority to enter into the WaterSMART: Small Scale Water Efficiency Projects Agreement.
3. The Long Island Irrigation Company in Menan, Idaho can provide the matching obligations, and
4. If selected for a Small Scale Water Efficiency Project Grant, the applicant will work with Reclamation to meet established deadlines for entering into a cooperative agreement.

June 10, 2024
Date

Shane Shippen
Shane Shippen,
Long Island Irrigation Company President