DEPARTMENT OF NATURAL RESOURCES

DIVISION OF FISH AND WILDLIFE
CONSERVATION PARTNERS LEGACY GRANT

Revision: 20191104

Data Date:December 14, 2022

PROJECT CONTACT

Project Name: Little Floyd Lake Dam Rock Arch Rapids
Organization Name: Pelican River Watershed District
Organization Type: Government
Mailing Address 1: 211 Holmes Street West
Mailing Address 2: Wells-Fargo Bldg - Suite 201
City, State ZIP Code: Detroit Lakes, MN 56501

Project Manager: Tera Guetter
Title: Administrator
Phone: 218-846-0436
Email: Tera.Guetter@arvig.net

PROJECT OVERVIEW

Sites / Location

County Name: Becker
Project Site Name: Little Floyd Lake
Total Project Sites: 1
Total Project Acres: 1

Land Ownership

Primary Land Ownership: Public Water
Additional Land Ownerships: (N/A)

Habitat

Primary Type: Fish, Game or Wildlife Habitat
Additional Types: (N/A)

Activities

Primary Activity: Restoration
Additional Activities: (N/A)

PROJECT FUNDING SUMMARY

Grant Type: Statewide
Grant Request Level: Over $25,000

Total Grant Amount Requested:	$156,400
Total Match Amount Pledged:	$18,000
Additional Funding Amount:	$0
Total Project Cost:	**$174,400**

PROJECT SUMMARY

The existing Little Floyd Lake dam was constructed in 1936 and acts as a barrier to fish migration upstream into Little Floyd Lake, the headwaters of the Pelican River. We propose to modify the existing dam and provide fish passage by installing a rock arch rapids which will improve opportunities for recreation, fish and wildlife habitat and dispersal, as well as provide a permanent fix to the aging fish barrier structure.

A rock arch rapids is a structure that mimics shallow natural rapids in rivers that can be traversed by fish moving up and downstream. While modification of the dam into rock arch rapids will benefit all aquatic species moving along the channel, this structure will be particularly useful in aiding the MN DNR's goal of reintroduction of sturgeon, the MN DNR began stocking them in downstream Detroit Lake in 1997, and the rock arch rapids would create suitable spawning habitat for them. In addition, this project will aid in improved fish movement and reproduction as outlined in the MN DNR's Red River of the North Fisheries Management Plan (2017-2027) and the Pelican River Watershed District Revised Water Management Plan (2020-2029). Even though this project covers less than one acre of land, it will benefit the 14,790 acres of lakes and 84 river miles in the entire Pelican River Watershed by restoring connections that existed prior to dam building.

PROBLEM STATEMENT

The Little Floyd Lake dam was constructed in 1936 and sets the runout for Little Floyd Lake. Under many flow conditions the existing dam is a fish barrier. Modifying the dam as we propose will mitigate risks of affecting water levels of upstream, highly developed, high quality fish and recreational chain of lakes- Little, Middle and Big Floyd Lake, as well as in the downstream chain of lakes including Detroit, Sallie, and Melissa. An additional problem created by the Little Floyd Lake Dam is that it makes dispersal difficult up and downstream for river species, and it could easily be converted to a habitat that was conducive

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PROBLEM STATEMENT (*Continued*)

to spawning sturgeon. It has been documented that dams affect aquatic biodiversity, especially fish and native mussels. The report "Barrier Effects on Native Fishes of MN - 2015" by Dr. Luther Aadland, MN DNR, analyzed 32 stream barriers and found an average of 37% of species sampled in the watershed were absent from collections upstream of a barrier relative to downstream. The species lost included sensitive fish and mussels. Subsequent removal of the barriers resulted in upstream recolonization of an average of 66% of the species that were absent. The movement of organisms within streams is an important ecological process that can be significantly affected by dams, which can be barriers to the movement of organisms, sediment, woody debris, and other habitat features.

The construction of this spillway also has the potential to be important to sturgeon and efforts by the DNR for reintroduction. The "Restoration of Extirpated Lake Sturgeon in the Red River Watershed Plan - Phases 1 & 2" have guided reintroduction of sturgeon into the Pelican River. Sturgeon were once a part of the Pelican River system but were extirpated largely due to barriers to their movement for spawning. The MN DNR has been stocking sturgeon in Detroit Lake since 1997, and is seeing them in their fisheries surveys. Modifying this dam would remove a fish barrier and provide spawning habitat for sturgeon, which can further increase the restoration efforts.

PROJECT OBJECTIVES

The main objective of this project is to modify the current Little Floyd Lake dam into a rock arch fishway, thereby providing a long-term fix to the aging dam/fish barrier which will provide multiple benefits: (a) improve the functionality of the outlet, (b) provide easier dispersal for river species upstream and downstream, and (c) provide spawning substrate for sturgeon and other fish species.

Even though this project covers less than one acre of land, it will benefit the 14,790 acres of lakes and 84 river miles in the entire Pelican River Watershed by restoring connections. The "Red River of the North Fisheries Management Plan" (2017-27), Pelican River WD Comprehensive Water Management Plan (2020-29), and the "Restoration of Extirpated Lake Sturgeon in the Red River Watershed Plan - Phase 2" (2019-29) have listed goals of removing barriers to restore uninterrupted fish migration pathways. To date, 40 barriers to fish migration have been eliminated in the Red River of the North Watershed, and this would be one more important addition, particularly given its potential as sturgeon spawning habitat. The removal of this barrier would aid the MN DNR sturgeon reintroduction program, which has already had significant state funding and resources invested, and meet the goals outlined in the MN DNR plans.

All proposed budget items are intended for improvement of the habitat. The project proposed for this CPL grant application is cost-effective and we have worked to minimize our budget. A complete replacement of the dam would cost much more than retrofitting the existing structure as proposed here. Project costs are limited to only those items that are part of the final design and installation of the rock arch rapids as a modification to the existing dam. The project will maintain the existing hydraulic function while helping to improve biodiversity and aquatic habitat both upstream and downstream of the proposed rock arch rapids design. The project will improve the connectivity of the rivers and streams in the region and, consequently, will improve fish movement through the Red River basin system. Aquatic species benefiting include all fish and mussel species of the upper Pelican River. The project site is not adjacent to to any protected land but sits on privately-owned property and is just upstream of the Frank Wildlife Management Area. The Pelican River Watershed District as the Drainage Authority has access for completion of the proposed work.

METHODS

Bidding and award of the project to a contractor will occur once notice of funding approval is received. Construction is anticipated to occur in the fall and early winter of 2023. Installation of the rock arch rapids will be completed during the late fall or winter in order to work during low flow conditions on the Pelican River. As shown on the enclosed plan set, the existing dam will be modified by installing a rock arch rapids consisting of a series of rock weirs, designed to create riffles and pools for migrating fish to rest as they make their way upstream. The plan set includes an inventory of materials necessary for the project. The design is based on MN DNR guidance documents and has been reviewed and approved by MN DNR staff. The project will require a public waters permit.

EXPERIENCE / ABILITIES

The Pelican River Watershed District and Houston Engineering (HEI) have a history of successful performance on similar projects and grant requirements. In 2021, the Pelican River Watershed District completed the Phase 1 Restoration of the Rice Lake Wetland (Becker County, MN) which involved the installation of a rock arch rapids (BWSR Clean Water Funding). Previous similar projects completed by HEI include Blue Eagle Lake Outlet (Clay County, MN), Sand Hill Lake Outlet (Polk County, MN),

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EXPERIENCE / ABILITIES (*Continued*)

Prairie and Lizzie Lake Dams (Otter Tail County, MN), Fish Lake Dam (Otter Tail County, MN), and Blackduck Lake Dam (Beltrami County, MN).

The Pelican River Watershed District (PRWD) has extensive experience in applying, managing, and implementing grants from an array of funding programs, including Lessard-Sams Outdoor Heritage Fund, Clean Water Fund, FEMA, MPCA Section 319, and Board of Water and Soil Resources. PRWD has also successfully implemented MN DNR AIS treatment grants (Curly-leaf pondweed and Flowering rush) over a number of years.

PROJECT TIMELINE

Time Frame	Goal
January 2023	Finalize Grant Contract
January - August 2023	Finalize Design/Bid Package
September 2023	Request for Bids out to Contractors
October 2023	Award Project to Contractor
November 2023	Begin Construction
July 2024	Project Complete

Estimated Project Completion Date: 2024-06-30

PROJECT INFORMATION

1. Describe the degree of collaboration and local support for this project.

The Pelican River Watershed District has partnered with the MN DNR and Houston Engineering (HEI) to complete the preliminary project analysis and design. Local support for fish passage improvements within the Pelican River and Otter Tail River basins is strong. The area MN DNR Fisheries and EcoWaters staff have been involved with this project and support the modification of the Little Floyd lake dam with a rock arch rapids. The site is currently listed on the MN DNR stream prioritization list managed by the MN DNR River Ecology unit.

The PRWD Board of Managers approved the cash grant match and will assist with oversight of the project. This past summer, the proposed project was presented to the Floyd Shores Lake Association who supports the fish passage improvements.

2. Describe any urgency associated with this project.

Without funding through this grant, restoring fish connections in this area would not be possible. While the existing Watershed District Board is supportive of the project, it will require CPL funding to move this project forward.

The existing dam creates problems with fish passage upstream into Little Floyd Lake. The Watershed District Board and MN DNR feel a sense of urgency to prioritize this project in order to continue the effort of improving fish passage and habitat resiliency within the Red River Basin.

3. Discuss if there is full funding secured for this project, the sources of that funding and if CPL Grant funds will supplement or supplant existing funding.

There is not full funding secured to implement this project on our own without this grant. In order to implement this project, CLP funding is necessary to move this project forward. The PRWD Board of Managers has approved a 10% match towards this grant application and is very committed to this project as demonstrated in hiring Houston Engineering at a cost of $10,000 for survey and preliminary design work. CPL grant funds would not supplant any existing funding.

4. Describe public access at project site for hunting and fishing, identifying all open seasons.

The site is located at the outlet of Little Floyd Lake (Becker County, MN) and there is access to this site via water at all times of the year. In addition, a public access is located on the south shore of Little Floyd Lake providing boating access to the lake as well.

5. Discuss use of native vegetation (*if applicable*).

The only areas that will need planting would be right along the stream where the construction vehicles accessed the site. These areas will be replanted with native vegetation.

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PROJECT INFORMATION (*Continued*)

6. Discuss your budget and why it is cost effective.

The design was prepared with an emphasis of efficient use of the existing topography to limit the amount of rock needed for the project, the local availability of construction materials, and the need to meet MN DNR design criteria for the rock arch rapids. Funds, if granted, will only be used for costs associated with the implementation of the proposed rock arch rapids. To keep the budget efficient, the current dam is being modified instead of completely replaced.

7. Provide information on how your organization encourages a local conservation culture. This includes your organization's history of promoting conservation in the local area, visibility of work to the public and any activities and outreach your organization has completed in the local area.

The Pelican River Watershed District promotes conservation in our area through water quality , fisheries, and wildlife habitat improvement projects. Examples include the Rice Lake Wetland Restoration Project (2021) which included acquiring 34 private land flowage easements, acquiring land and transferring it to the MN DNR Frank Wildlife Management Area , and constructing a rock arch fishway. The District partners with landowners and Becker SWCD to improve soil health by installing practices to reduce erosion/sediment in our waterways. In the urban setting, the District works with landowners/businesses to install storm water management practices to protect our chain of lakes (Floyds, Detroit, Long, Sallie, Melissa). The District works with the Detroit Lakes schools (K-12) on environmental programs, as well as makes presentations to service clubs, lake associations, county board, and city councils on environmental projects, best management practices, etc. See www.prwd.org or Facebook.

BUDGET INFORMATION

Organization's Fiscal Contact Information

Name: Tera Guetter
Title: Administrator
Email: Tera.Guetter@arvig.net
Phone: 218-846-0436

Street Address 1: 211 Holmes Street West
Street Address 2: Wells-Fargo Bldg, Ste 201
City, State ZIP Code: Detroit Lakes, MN 56501

Budget Details

Contracts

Contractor Name	Contracted Work	Amount	Grant/Match	In-kind/Cash
TBD	Rock Arch Rapids Installation	$8,000	Match	Cash
TBD	Rock Arch Rapids Installation	$111,400	Grant	(N/A)

Professional Services

Professional Name	Description of Services	Amount	Grant/Match	In-kind/Cash
Houston Engineering	Constr Stake/Observ/Closeout	$25,000	Grant	(N/A)
Houston Engineering	Permit/Const. Docs & Mtg/Admin	$10,000	Grant	Cash
Houston Engineering	Design Phase/Final Plans	$10,000	Grant	(N/A)
Houston Engineering	Design Phase/Final Plans	$10,000	Match	Cash

Additional Funding

Additional Funding Amount: $0

Budget Overview

Item Type	Grant	Match	Total
Personnel	-	-	-
Contracts	$111,400	$8,000	$119,400
Fee Acquisition with PILT	-	-	-
Fee Acquisition without PILT	-	-	-
Easement Acquisition	-	-	-
Easement Stewardship	-	-	-
Travel (in-state)	-	-	-

BUDGET INFORMATION (*Continued*)

Budget Overview (Continued)

Item Type	Grant	Match	Total
Professional Services	$45,000	$10,000	$55,000
DNR Land Acquisition Cost	-	-	-
Equipment/Tools/Supplies	-	-	-
Additional Budget Items	-	-	-
Totals:	**$156,400**	**$18,000**	**$174,400**

SITE INFORMATION

You may group your project sites together as long as land ownership, activity and habitat information is the same for the land manager.

Land Manager

Name: Nathan Olson
Organization: MN Department of Natural Resources
Title: Detroit Lakes Area Fisheries Supervisor
Phone: 218-846-8292
Email: nathan.olson@state.mn.us

Site Information

Habitat: Fish, Game or Wildlife Habitat **Activity:** Restoration **Land Ownership:** Public Water

(1) **Site Name:** Little Floyd Lake Dam at Pelican River
DOW Lake #: 03038600
Acres: 1
PLS Section: Township - 139**, Range -** 41W**, Section -** 11

Open to Public Hunting? No
Open to Public Fishing? Yes - all

NATURAL HERITAGE DATABASE REVIEW

Natural Heritage elements were found within my project site(s): Yes

Natural Heritage Sites and Managers: (N/A)

Natural Heritage Elements: (N/A)

Natural Heritage Mitigation: The site is the Pelican River/Little Floyd Lake. See the attached CLP Land Manager Review and Approval Form for more details.

Pugnose Shiner - present in Floyd Lake. Pugnose shiner inhabit weedy clear lakes and slow moving river systems. Likely to have no impact or benefit from increased river connectivity. Colonial waterbird nesting area - waterbirds will not be affected, as lake runout elevation will not change.

ATTACHMENTS

Additional Documentation

Attach additional documentation as applicable using the appropriate cagtegories below. If you exceed the size limit while uploading, contact CPL Grant staff to discuss your options.

Partner Commitment Letter

File Name	Description
2022_Letter_PRWD_CPLGrant_TS.pdf	MN DNR Project Partner letter

Engineering/Survey/Design Plan

File Name	Description
2022_08_22_Little_Floyd_Lake_Plans.pdf	Little Floyd Lake Rock Arch Rapids Design Plans

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ATTACHMENTS (*Continued*)

Engineering/Survey/Design Plan (*Continued*)

File Name	Description
2022_09_14_Little_Floyd_Lake_OPC.pdf	Little Floyd Lake - Rock Arch Rapids- Opinion of Probable Cost

Supplemental Document

File Name	Description
barrier-effects-native-fishes_of_MN_2015.pdf	Barrier Effects on Native Fishes of MN , Luther Aadland, MN DNR_2015
LKS_Restoration_Plan_2019-2029_Final.pdf	Restoration fo Extripated Lake Sturgeon Phase 2
Red_River_Management_Plan_2017-2027_Signed.pdf	Red River of the North Fisheries Management Plan

FINAL APPLICATION SUBMISSION

P **I certify that I have read the Conservation Partners Legacy Grants Program Request for Proposal, Program Manual and other program documents, and have discussed this project with the appropriate public land manager, or private landowner and easement holder.**

P **I certify I am authorized to apply for and manage these grant and match funds, and the project work by the organization or agency listed below. I certify this organization to have the financial capability to complete this project and that it will comply with all applicable laws and regulations.**

P **I certify that all of the information contained in this application is correct as of the time of the submission. If anything should change, I will contact CPL Grant staff immediately to make corrections.**

P **I certify that if funded I will give consideration to and make timely written contact to Minnesota Conservation Corps or its successor for consideration of possible use of their services to contract for restoration and enhancement services. I will provide CPL Grant staff a copy of that written contact within 10 days after the execution of my grant, should I be awarded.**

P **I certify that I am aware at least one Land Manager Review and Approval form is required for every application and at least one Public Waters Contact form is required for all public waters work. I am aware I must submit all completed forms by uploading them into this applidation. I have attached the required type and number of forms as necessary for this project.**

P **I am aware that by typing my name in the box below, I am applying my signature to this online document.**

Signature: Tera L Guetter

Organization / Agency: Pelican River Watershed District

Title: Administrator

Date Signed: September 15, 2022

(CPL Grant Application ID = 2126)