



Lessard-Sams Outdoor Heritage Council

Klondike Clean Water Retention Project part 2
Laws of Minnesota 2022 Accomplishment Plan

General Information

Date: 01/05/2022

Project Title: Klondike Clean Water Retention Project part 2

Funds Recommended: \$964,000

Legislative Citation: ML 2022, Ch. XX, Art. 1, Sec. 2, subd.

Appropriation Language:

Manager Information

Manager's Name: Dan Money

Title: District Administrator

Organization: Two Rivers Watershed District

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Location Information

County Location(s): Kittson.

Eco regions in which work will take place:

- Forest / Prairie Transition

Activity types:

- Restore
- Enhance

Priority resources addressed by activity:

- Wetlands
- Prairie

- Habitat

Narrative

Abstract

The Two Rivers Watershed District (TRWD) proposes to construct "part 2" of Phase 1 of the Klondike Clean Water Retention impoundment. Part 1 was recommended for funding by LSOHC last year. The multi-purpose project will provide fish habitat, protect-maintain-improve prairie rich fen habitat, stabilize river flows, keep water on the landscape, reduce erosion and sediment, benefit water quality and provide flood damage reduction. Because only partial funding was awarded, construction was scaled into part 1 and part 2. Reduced funding will result in less construction resulting in 25% lower dikes, less outlet structures, and reduced inlet capacity.

Design and Scope of Work

Several natural resources enhancements and flood damage reduction strategies have been identified in this area. The Beaches Lake Area Fen is a prairie rich fen that has been identified by DNR as one of the largest of its type in the lower 48 states. Portions of the fen have been degraded by farming practices and are located on the project site. The MNDNR and TRWD have jointly written a fen management plan and this project will begin plan implementation. Downstream reaches of the Two Rivers have been identified by the MPCA as impaired for fish and macroinvertebrates. These reaches experience flashy flows and become nearly or totally dry in late summer when rainfall is typically sparse, causing a major stressor for fish. Another stressor is upstream sources of sediment that impact the resource by causing turbidity, lowering dissolved oxygen, and increasing nutrients that promote excessive algal growth. Excessive floodwaters frequently impact public and private lands causing erosion, sedimentation, inundation of habitat, loss of crop land and damage to public infrastructure.

An interagency Project Work Team consisting of landowners, local-state-federal government agencies, and non-government organizations convened and discussed the flooding and natural resources problems, identified a purpose and need, investigated a range of alternatives, and selected the preferred alternative. Substantial surface water, groundwater, and vegetative and biological monitoring has been done by local, regional, and state agencies to assess the resources and propose a project. The TRWD is pursuing the project through Minnesota Statute 103D.

This application is for part 2 out of 2 parts relative to phase 1. Part 1 planning and development is underway. Groundwater and vegetation monitoring is being completed during summer 2021 that will identify specific fen protection and enhancement activities. A land exchange application with the MN DNR has been submitted to permanently protect high value fen. Part 1 will construct 75% of the proposed dike, one of the two outlet structures, and 8 miles of diked inlet which will included the main channel and set back levees. These construction items will partially achieve the desired fen protection and fish habitat components of the plan.

The part 2 proposal encompasses this current funding request, and will construct the remaining 25% of the dike, the second outlet structure, 2 additional inlet structures, and a south diversion inlet ditch. These are critical to the fish habitat component of the project because the part 2 structures will maximize the amount of water that can be stored and consequently released into the downstream river system at low flow periods when fish need it the most. The project will also improve habitat by stabilizing bank and bed erosion of the river in turn reducing sedimentations to riffle and runs that provide habitat.

How does the plan address habitats that have significant value for wildlife species of greatest conservation need, and/or threatened or endangered species, and list targeted species?

Beaches Lake Area Fen is located in and adjacent to the project area. It is unique due to its large size, overall integrity, biodiversity significance, and location, as it is the westernmost, largest peatland in Minnesota. It was once 34,000 acres in size and is now estimated at 18,000 acres. The TRWD and the MNDNR jointly wrote the "Beaches Lake Area Fen Management Plan" in 2017 in order to identify the natural and disturbed areas of the fen, provide management goals and objectives, and provide strategies to protect, maintain, and improve the fen. This proposal directly addresses items contained within the fen management plan.

The Middle Branch and the South Branch of the Two Rivers are located directly downstream from this project. Stream flow data show that in average and drier than average years these rivers experience extremely low flows which put undue stress on fish and macroinvertebrates. The Two Rivers Watershed Restoration and Protection Strategy report shows downstream reaches on the Two Rivers are impaired for fish and biota. Low flow, interstitial flow, and no flow have been observed on the Middle and South Branches of the Two Rivers. This project will provide flow augmentation by holding a floodpool and releasing it later in the summer to extend flows and provide habitat for aquatic organisms.

Mammal species listed as special concern and documented in or near this area include moose and elk. Bird species of special concern observed in the area include Nelson's sparrow, yellow rail, and marbled godwit. Other non listed birds in the area and on the species in greatest conservation need list are American bittern and sharp-tailed grouse. This project will remove up to 12 square miles of land from cropland status and provide permanent habitat.

Describe how the plan uses science-based targeting that leverages or expands corridors and complexes, reduces fragmentation or protects areas identified in the MN County Biological Survey:

Surface water monitoring was completed in 2020 and one year remains for groundwater and vegetation monitoring. Pre project surface water quality monitoring was done at 5 locations upstream, within, and downstream of the project area. Groundwater monitoring is being done by the DNR and TRWD at 4 locations within the project area. Vegetation monitoring is being done by the DNR / MN County Biological Survey to identify the prairie rich fen and its condition, along with inventorying flora and fauna in and around the fen. The MPCA has utilized HSPF computer modelling to pre and post project scenarios regarding flow and load reductions that could be achieved. A rapid floristic quality assessment was done in and near the fen. Various computer models have been developed to look at pre and post project flows and analyze proposed alterations in flows.

The project area is located on degraded fen and adjacent to high quality fen. Purchase of this land and construction of an impoundment will take it out of ag production and utilize it to store water on the land, restore degraded areas of fen, create a buffer alongside undisturbed areas of fen, prevent floodwater from entering and further degrading the fen, restore a more natural hydrograph to downstream river channels, and address the goals and objectives of the fen management plan. This project is also mentioned in the recently written "Two Rivers Plus One Watershed One Plan".

Which two sections of the Minnesota Statewide Conservation and Preservation Plan are most applicable to this project?

- H1 Protect priority land habitats
- H7 Keep water on the landscape

Which two other plans are addressed in this program?

- Other : Beaches Lake Area Fen Management Plan
- Red River of the North Fisheries Management Plan

Which LSOHC section priorities are addressed in this program?

Forest / Prairie Transition

- Protect, enhance, and restore rare native remnant prairie

Does this program include leveraged funding?

Yes

Explain the leverage:

For Phase 1:

\$2.2 Million (16.9%) is committed by the Red River Watershed Management Board

\$1.05 Million (8.1%) is committed by the Two Rivers Watershed District

\$3.25 Million (25%) applied for LSOHC

\$6.5 Million (50%) applied for DNR Flood Hazard Mitigation Grant

\$0.5 Million awarded by NRCS for environmental assessment pre-planning

\$0.1 Million awarded by Enbridge for habitat protection

Per MS 97A.056, Subd. 24, Please explain whether the request is supplanting or is a substitution for any previous funding that was not from a legacy fund and was used for the same purpose.

This request does not supplant or substitute for any other funding.

Non-OHF Appropriations

Year	Source	Amount
2018	Enbridge Energy	100000
2017	Two Rivers Watershed District	1000000
2016	Red River Watershed Management Board	5000000

How will you sustain and/or maintain this work after the Outdoor Heritage Funds are expended?

The project is being done in accordance with MN Statute 103D otherwise known as the Watershed Law. The Two Rivers Watershed is a political subdivision known as a Special District. The District will use the watershed law to

order engineer's reports, hold public hearings, make findings of fact and conclusion, develop all final plans and specifications, order the project construction, write and enact an operations and maintenance plan. Because the Two Rivers Watershed District is a local unit of government and is using MN Statute 103D, the project will be sustained and maintained.

Actions to Maintain Project Outcomes

Year	Source of Funds	Step 1	Step 2	Step 3
2022	Tax Levy	Annual Inspections	Land Management Activities	Maintenance

How will the program directly involve, engage, and benefit BIPOC (Black, Indigenous, People of Color) and diverse communities:

This project will benefit any and all people that use Beaches Wildlife Management Area, Lake Bronson State Park, and other public lands. Swimming, boating, fishing, and camping will be positively effected because project components will improve habitat conditions. The land area where this project is located will be open to all members of the public for hiking, bird watching, hunting, and other outdoor recreational activities. Opportunity for public comment and input has been and will continue to be provided periodically during the development of this project. The public can also provide comments to the Board of Managers of the Two Rivers Watershed District by attending monthly Board meetings.

Activity Details

Requirements

If funded, this program will meet all applicable criteria set forth in MS 97A.056?

Yes

Will restoration and enhancement work follow best management practices including MS 84.973 Pollinator Habitat Program?

Yes

Is the restoration and enhancement activity on permanently protected land per 97A.056, Subd 13(f), tribal lands, and/or public waters per MS 103G.005, Subd. 15?

Yes

Where does the activity take place?

- WMA
- Other : Watershed District

Land Use

Will there be planting of any crop on OHF land purchased or restored in this program?

No

Timeline

Activity Name	Estimated Completion Date
Construction	2022 - 2024
Monitoring of surface water quality, vegetation, groundwater, stream flows according to monitoring plans	2017 - ?
Final Engineering, Plans and Specifications	2020 - 2021

Secure Funding	2017 - 2023
Right of Way, Land Acquisition	2017 - 2022
Wetland Delineations, Environmental Assessments, Permits, Operation & Maintenance Plans	2019 - 2022
Preliminary Designs, Plans, Specifications, Project Planning Team Meetings	2009 - 2021
MN Statute 103D.605 Engineers Report and Public Hearing	2017
Concept Development and Planning	2016

Date of Final Report Submission: 11/01/2027

Budget

Budget reallocations up to 10% do not require an amendment to the Accomplishment Plan.

Totals

Item	Funding Request	Antic. Leverage	Leverage Source	Total
Personnel	-	-	-	-
Contracts	\$847,300	\$9,009,500	FHMG; RRWMB; TRWD	\$9,856,800
Fee Acquisition w/ PILT	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-
Easement Acquisition	-	-	-	-
Easement Stewardship	-	-	-	-
Travel	-	-	-	-
Professional Services	\$116,700	\$1,236,400	FHMG; RRWMB; TRWD	\$1,353,100
Direct Support Services	-	-	-	-
DNR Land Acquisition Costs	-	-	-	-
Capital Equipment	-	-	-	-
Other Equipment/Tools	-	-	-	-
Supplies/Materials	-	-	-	-
DNR IDP	-	-	-	-
Grand Total	\$964,000	\$10,245,900	-	\$11,209,900

Amount of Request: \$964,000

Amount of Leverage: \$10,245,900

Leverage as a percent of the Request: 1062.85%

DSS + Personnel: -

As a % of the total request: 0.0%

Easement Stewardship: -

As a % of the Easement Acquisition: -

How will this program accommodate the reduced appropriation recommendation from the original proposed requested amount?

Leverage sources will be asked for additional contributions based upon percentage reduction of original request. Other leverage sources will be sought, including Federal, State, Regional and possibly local programs. MN Statute 13F.161, Subdivision 3 will potentially be utilized to seek additional funding.

Describe and explain leverage source and confirmation of funds:

Flood Hazard Mitigation Grant: To date \$250,000 has been awarded. Between \$7.8 million and \$9.85 million application is pending.

Red River Watershed Management Board: A total of \$7.25 million has been approved.

Two Rivers Watershed District is the local sponsor and will pay \$1.97 million

Contracts

What is included in the contracts line?

The construction of the inlet channels, dikes, and outlet structures will be done by letting bids. This work is necessary in order to be able to provide stream flow augmentation and fen protection. The dollar amount on the contracts line will go toward the construction contract.

Federal Funds

Do you anticipate federal funds as a match for this program?

Yes

Are the funds confirmed?

Yes

Is Confirmation Document attached?

[Yes](#)

- Cash : \$256,022
- Other : RCPP planning funding for environmental assessment

Output Tables**Acres by Resource Type (Table 1)**

Type	Wetland	Prairie	Forest	Habitat	Total Acres
Restore	-	-	-	640	640
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	2,120	-	-	160	2,280
Total	2,120	-	-	800	2,920

Total Requested Funding by Resource Type (Table 2)

Type	Wetland	Prairie	Forest	Habitat	Total Funding
Restore	-	-	-	\$212,000	\$212,000
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	\$699,300	-	-	\$52,700	\$752,000
Total	\$699,300	-	-	\$264,700	\$964,000

Acres within each Ecological Section (Table 3)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Acres
Restore	-	640	-	-	-	640
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-
Enhance	-	2,280	-	-	-	2,280
Total	-	2,920	-	-	-	2,920

Total Requested Funding within each Ecological Section (Table 4)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Funding
Restore	-	\$212,000	-	-	-	\$212,000
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-
Enhance	-	\$752,000	-	-	-	\$752,000
Total	-	\$964,000	-	-	-	\$964,000

Average Cost per Acre by Resource Type (Table 5)

Type	Wetland	Prairie	Forest	Habitat
Restore	-	-	-	\$331
Protect in Fee with State PILT Liability	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-
Protect in Easement	-	-	-	-
Enhance	\$329	-	-	\$329

Average Cost per Acre by Ecological Section (Table 6)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest
Restore	-	\$331	-	-	-
Protect in Fee with State PILT Liability	-	-	-	-	-

Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	-	\$329	-	-	-

Target Lake/Stream/River Feet or Miles

65 river miles

Outcomes

Programs in forest-prairie transition region:

- Water is kept on the land ~ *The impoundment will store 16,500 acre feet of water to provide flood damage reduction, protect, enhance, and improve fish & wildlife habitat, improve water quality, and provide recreational opportunities. Water levels will be closely monitored and records of storage and operations will be kept and shared with a project work team consisting of local, state, and federal agencies, non government organizations, and local citizens. A detailed operating plan will be followed. Pre and post project monitoring of fish populations, vegetation, stream flows, and surface and ground water quality will be utilized to determine project success.*

Parcels

For restoration and enhancement programs ONLY: Managers may add, delete, and substitute projects on this parcel list based upon need, readiness, cost, opportunity, and/or urgency so long as the substitute parcel/project forwards the constitutional objectives of this program in the Project Scope table of this accomplishment plan. The final accomplishment plan report will include the final parcel list.

Parcel Information

Sign-up Criteria?

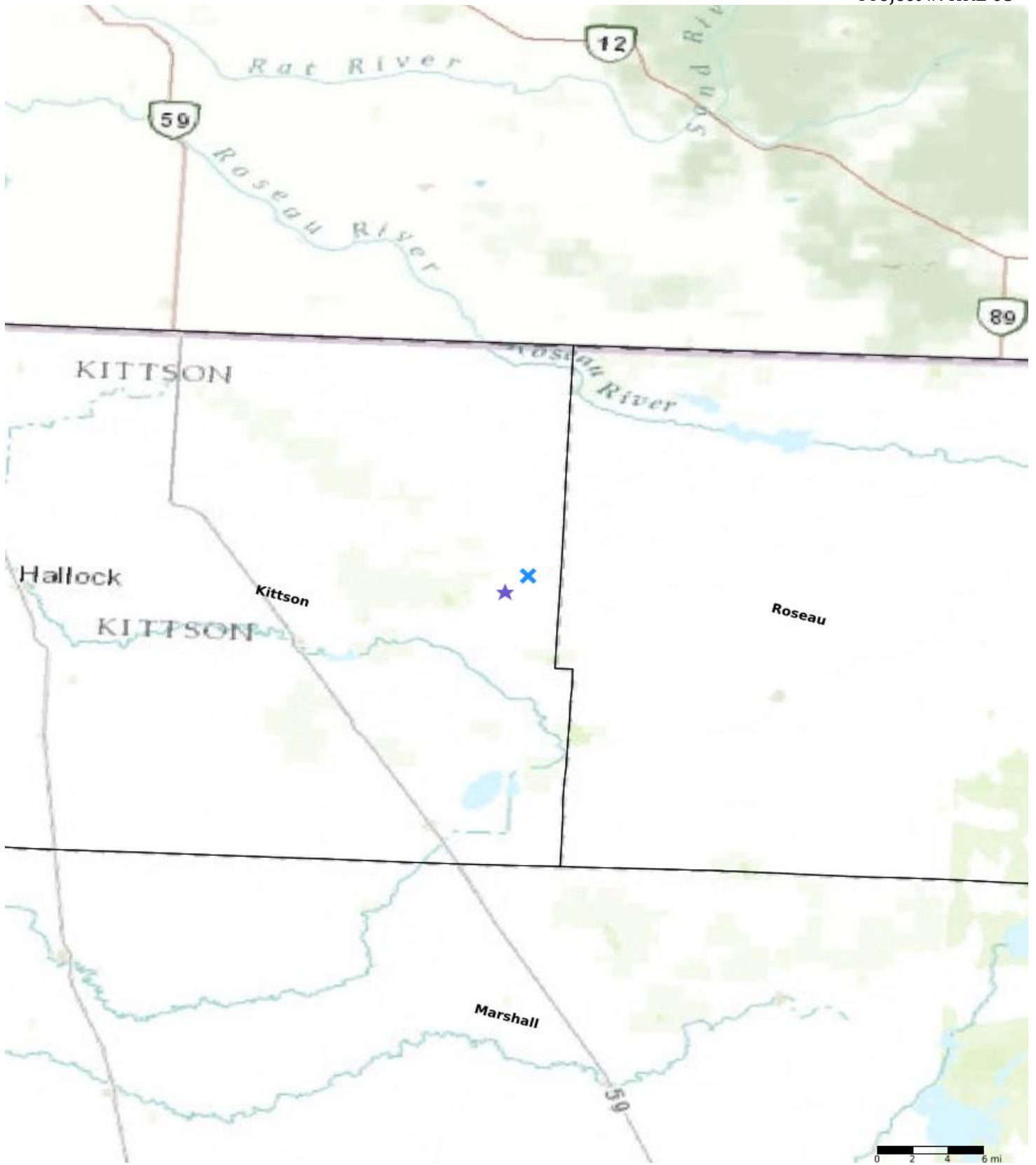
No

Explain the process used to identify, prioritize, and select the parcels on your list:

Meetings were held between the MN DNR and the Two Rivers Watershed District to develop the "Beaches Area Fen Protection Plan". From this process, these parcels were identified as high priority prime fen habitat.

Restore / Enhance Parcels

Name	County	TRDS	Acres	Est Cost	Existing Protection
Klondike 2	Kittson	16145202	160	\$0	No
Klondike 10	Kittson	16145210	640	\$0	No



- Protect in Easement
- ▲ Protect in Fee with PILT
- Protect in Fee W/O PILT
- ★ Restore
- ✕ Enhance
- ⊕ Other

Parcel Map
Klondike Clean Water Retention Project part 2
(Data Generated From Parcel List)



Lessard-Sams Outdoor Heritage Council

Comparison Report

Program Title: ML 2022 - Klondike Clean Water Retention Project part 2

Organization: Two Rivers Watershed District

Manager: Dan Money

Budget

Requested Amount: \$1,350,000

Appropriated Amount: \$964,000

Percentage: 71.41%

Item	Total Requested		Total Appropriated		Percentage of Request	
	Requested	Leverage	Appropriated	Leverage	Percent of Request	Percent of Leverage
Personnel	-	-	-	-	-	-
Contracts	\$1,186,600	\$8,573,500	\$847,300	\$9,009,500	71.41%	105.09%
Fee Acquisition w/ PILT	-	-	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-	-	-
Easement Acquisition	-	-	-	-	-	-
Easement Stewardship	-	-	-	-	-	-
Travel	-	-	-	-	-	-
Professional Services	\$163,400	\$1,176,400	\$116,700	\$1,236,400	71.42%	105.1%
Direct Support Services	-	-	-	-	-	-
DNR Land Acquisition Costs	-	-	-	-	-	-
Capital Equipment	-	-	-	-	-	-
Other Equipment/Tools	-	-	-	-	-	-
Supplies/Materials	-	-	-	-	-	-
DNR IDP	-	-	-	-	-	-
Grand Total	\$1,350,000	\$9,749,900	\$964,000	\$10,245,900	71.41%	105.09%

If the project received 70% of the requested funding

Describe how the scaling would affect acres/activities and if not proportionately reduced, why?

Construction of several project components would be reduced by 30%. These items may include the completion of the construction of dike, elimination of an outlet structure, elimination of inlet structures, or elimination of inlet channels.

Describe how personnel and DSS expenses would be adjusted and if not proportionately reduced, why?

Because the structural components of the project would be reduced, the time needed to construct them would be reduced, and therefore required personnel would spend less time on the project.

If the project received 50% of the requested funding

Describe how the scaling would affect acres/activities and if not proportionately reduced, why?

Project components would be reduced by 50%. These items may include the completion of the construction of dike, elimination of an outlet structure, elimination of inlet structures, or elimination of inlet channels.

Describe how personnel and DSS expenses would be adjusted and if not proportionately reduced, why?

Because the structural components of the project would be reduced, the time needed to construct them would be reduced, and therefore required personnel would spend less time on the project.

Output

Acres by Resource Type (Table 1)

Type	Total Proposed	Total in AP	Percentage of Proposed
Restore	640	640	100.0%
Protect in Fee with State PILT Liability	0	-	-
Protect in Fee w/o State PILT Liability	0	-	-
Protect in Easement	0	-	-
Enhance	2,280	2,280	100.0%

Total Requested Funding by Resource Type (Table 2)

Type	Total Proposed	Total in AP	Percentage of Proposed
Restore	\$296,800	\$212,000	71.43%
Protect in Fee with State PILT Liability	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-
Protect in Easement	-	-	-
Enhance	\$1,053,200	\$752,000	71.4%

Acres within each Ecological Section (Table 3)

Type	Total Proposed	Total in AP	Percentage of Proposed
Restore	640	640	100.0%
Protect in Fee with State PILT Liability	0	-	-
Protect in Fee w/o State PILT Liability	0	-	-
Protect in Easement	0	-	-
Enhance	2,280	2,280	100.0%

Total Requested Funding within each Ecological Section (Table 4)

Type	Total Proposed	Total in AP	Percentage of Proposed
Restore	\$296,800	\$212,000	71.43%
Protect in Fee with State PILT Liability	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-
Protect in Easement	-	-	-
Enhance	\$1,053,200	\$752,000	71.4%