



Lessard-Sams Outdoor Heritage Council

Laws of Minnesota 2021 Accomplishment Plan

General Information

Date: 12/11/2020

Project Title: Klondike Clean Water Retention Project - Phase 1

Funds Recommended: \$1,973,000

Legislative Citation: ML 2021, 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 a multi-purpose impoundment located upstream of Lake Bronson State Park in Kittson and Roseau counties. The project footprint is over 12 square miles in size, and it will alter Lateral 1 of State Ditch #95 to provide fish and wildlife habitat, keep water on the landscape, stabilize river flows, reduce erosion and sediment, protect, maintain, and improve a prairie rich fen, benefit water quality and provide flood damage reduction. Phase 1 construction will include buffered inlet channels, a diked impoundment, various water control structures, and related structures.

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 phase 1 of 3 phases. Over 12 square miles of land have been obtained. 130 easement acres are needed. Structural measures will include changes to Lateral 1 of State Ditch #95 to provide an inlet for water to flow into the impoundment. A set back levy will be constructed along 8 miles of the ditch to provide a wide grassed area for water to flow. A low dike will be constructed around a 12 square mile area to hold the water and release it slowly over time. Several gated inlet controls and two gated outlet controls will allow for management of the flows into and out of the project. A detailed operating plan will identify how and when the project will be filled and emptied before, during and after runoff events. In general the impoundment will be filled during spring, summer and fall runoff events and will be slowly drained dry. The project will retire ag land to provide grassland and wetland habitat and the operating plan will address downstream fish habitat and provide flood control.

Project Team participants include the TRWD, Red River Watershed Management Board, International Water Institute, Red River Flood Damage Reduction Work Group, The Nature Conservancy, MN DNR, MPCA, Kittson County, Roseau County, various Townships, MN Board of Water & Soil Resources, U.S. Army Corps of Engineers,

Kittson and Roseau SWCD's. Funding to date has been provided by the Natural Resources Conservation Service, Red River Watershed Management Board, Enbridge, Flood Damage Reduction Work Group, and TRWD.

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:

Pre project surface water quality monitoring has been done at 5 locations upstream, within, and downstream of the project area. Groundwater monitoring has been done at 4 locations within the project area. Vegetation monitoring has been done over the past 30 years 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.

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

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

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
Concept Development and Planning	2016
MN Statute 103D.605 Engineers Report and Public Hearing	2017
Preliminary Designs, Plans, Specifications, Project Planning Team Meetings	2009 - 2020
Wetland Delineations, Environmental Assessments, Permits, Operation & Maintenance Plans	2019 - 2021
Right of Way, Land Acquisition	2017 - 2021
Secure Funding	2017 - 2022
Final Engineering, Plans and Specifications	2020 - 2021
Construction	2021 - 2023
Monitoring of surface water quality, vegetation, groundwater, stream flows according to monitoring plans	2017 - ?

Date of Final Report Submission: 11/01/2026

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	\$1,734,900	\$9,943,600	FHMG; RRWMB; TRWD	\$11,678,500
Fee Acquisition w/ PILT	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-
Easement Acquisition	-	-	-	-
Easement Stewardship	-	-	-	-
Travel	-	-	-	-
Professional Services	\$238,100	\$1,364,400	FHMG; RRWMB; TRWD	\$1,602,500
Direct Support Services	-	-	-	-
DNR Land Acquisition Costs	-	-	-	-
Capital Equipment	-	-	-	-
Other Equipment/Tools	-	-	-	-
Supplies/Materials	-	-	-	-
DNR IDP	-	-	-	-
Grand Total	\$1,973,000	\$11,308,000	-	\$13,281,000

Amount of Request: \$1,973,000

Amount of Leverage: \$11,308,000

Leverage as a percent of the Request: 573.14%

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, and Regional programs. MN Statute 103F.161, subdivision 3 will potentially be utilized to seek additional funding.

Describe and explain leverage source and confirmation of funds:

Flood Hazard Mitigation Grant: Between \$6.5 million and \$9.75 million application is pending

Red River Watershed Management Board: \$2.2 million has been approved

Two Rivers Watershed District is project sponsor and will pay \$1.05 million

Other Federal, State, Regional & local sources will be sought out.

Contracts

What is included in the contracts line?

Once the final plans and specifications have been prepared by the project engineer, a contract will be let including

all materials and labor for the construction of the project. This includes construction of an earthen dike, two inlet structures, two outlet structures, inlet ditches, and related works of improvement.

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 : \$500,000
- Other : RCPP planning funding for environmental assessment

Output Tables

Acres by Resource Type (Table 1)

Type	Wetland	Prairie	Forest	Habitat	Total Acres
Restore	-	-	-	333	333
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	1,104	-	-	83	1,187
Total	1,104	-	-	416	1,520

Total Requested Funding by Resource Type (Table 2)

Type	Wetland	Prairie	Forest	Habitat	Total Funding
Restore	-	-	-	\$432,500	\$432,500
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	\$1,432,400	-	-	\$108,100	\$1,540,500
Total	\$1,432,400	-	-	\$540,600	\$1,973,000

Acres within each Ecological Section (Table 3)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Acres
Restore	-	333	-	-	-	333
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-
Enhance	-	1,187	-	-	-	1,187
Total	-	1,520	-	-	-	1,520

Total Requested Funding within each Ecological Section (Table 4)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Funding
Restore	-	\$432,500	-	-	-	\$432,500
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-
Enhance	-	\$1,540,500	-	-	-	\$1,540,500
Total	-	\$1,973,000	-	-	-	\$1,973,000

Average Cost per Acre by Resource Type (Table 5)

Type	Wetland	Prairie	Forest	Habitat
Restore	-	-	-	\$1,298
Protect in Fee with State PILT Liability	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-
Protect in Easement	-	-	-	-
Enhance	\$1,297	-	-	\$1,302

Average Cost per Acre by Ecological Section (Table 6)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest
Restore	-	\$1,298	-	-	-
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State	-	-	-	-	-

PILT Liability					
Protect in Easement	-	-	-	-	-
Enhance	-	\$1,297	-	-	-

Target Lake/Stream/River Feet or 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?

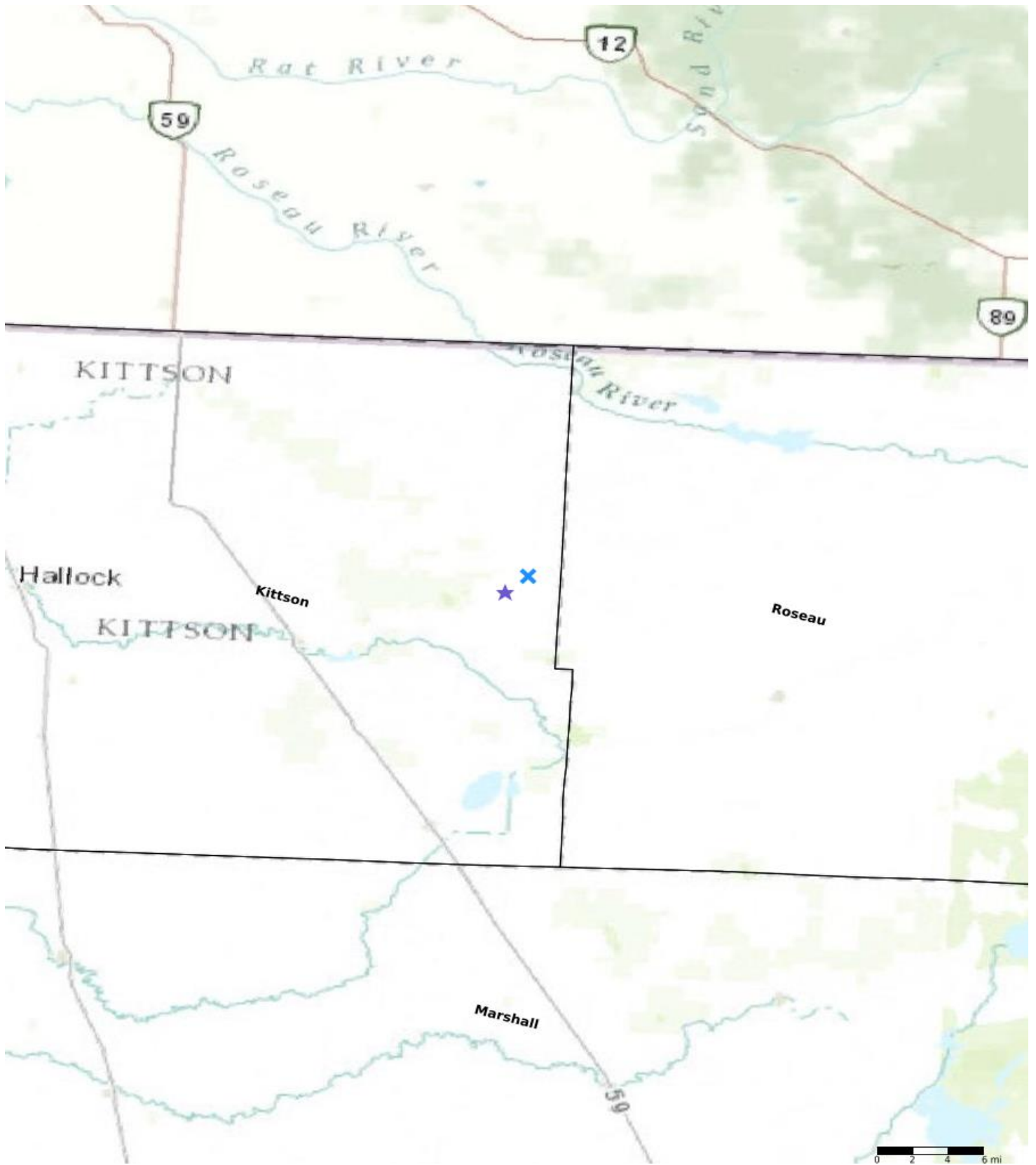
No

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

The Beaches Lake Area Fen Management Plan was jointly written over the course of 1 year by the MN DNR and the Two Rivers WD. During the development of this plan, specific areas of the fen were identified and mapped as high, medium or low quality. Goals for the fen were identified to 1) protect existing conditions in high quality areas, 2) maintain or improve conditions of intact fen but have degraded quality, 3) improve areas of the fen that have been substantially altered, and 4) increase awareness of the fen's functions and values and the factors that affect the fen. Significant surface and subsurface water monitoring and vegetative surveys were done to determine fen conditions. Working together with the DNR and using these goals for the fen, the TRWD has determined specific parcels to protect, restore, and enhance.

Restore / Enhance Parcels

Name	County	TRDS	Acres	Est Cost	Existing Protection
Klondike 10; N1/2 & N1/2 of S1/2	Kittson	16145210	480	\$0	No
Klondike 2 W1/2, W1/2	Kittson	16145202	160	\$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 - Phase 1
(Data Generated From Parcel List)



Lessard-Sams Outdoor Heritage Council

Comparison Report

Program Title: ML 2021 - Klondike Clean Water Retention Project - Phase 1

Organization: Two Rivers Watershed District

Manager: Dan Money

Budget

Requested Amount: \$3,250,100

Appropriated Amount: \$1,973,000

Percentage: 60.71%

Item	Total Requested		Total Appropriated		Percentage of Request	
	Requested	Leverage	Appropriated	Leverage	Percent of Request	Percent of Leverage
Personnel	-	-	-	-	-	-
Contracts	\$2,857,900	\$8,573,500	\$1,734,900	\$9,943,600	60.71%	115.98%
Fee Acquisition w/ PILT	-	-	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-	-	-
Easement Acquisition	-	-	-	-	-	-
Easement Stewardship	-	-	-	-	-	-
Travel	-	-	-	-	-	-
Professional Services	\$392,200	\$1,176,400	\$238,100	\$1,364,400	60.71%	115.98%
Direct Support Services	-	-	-	-	-	-
DNR Land Acquisition Costs	-	-	-	-	-	-
Capital Equipment	-	-	-	-	-	-
Other Equipment/Tools	-	-	-	-	-	-
Supplies/Materials	-	-	-	-	-	-
DNR IDP	-	-	-	-	-	-
Grand Total	\$3,250,100	\$9,749,900	\$1,973,000	\$11,308,000	60.71%	115.98%

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, and Regional programs. MN Statute 103F.161, subdivision 3 will potentially be utilized to seek additional funding.

Output

Acres by Resource Type (Table 1)

Type	Total Proposed	Total in AP	Percentage of Proposed
Restore	640	333	52.03%
Protect in Fee with State PILT Liability	0	-	-
Protect in Fee w/o State PILT Liability	0	-	-
Protect in Easement	0	-	-
Enhance	2,280	1,187	52.06%

Total Requested Funding by Resource Type (Table 2)

Type	Total Proposed	Total in AP	Percentage of Proposed
Restore	\$712,400	\$432,500	60.71%
Protect in Fee with State PILT Liability	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-
Protect in Easement	-	-	-
Enhance	\$2,537,700	\$1,540,500	60.7%

Acres within each Ecological Section (Table 3)

Type	Total Proposed	Total in AP	Percentage of Proposed
Restore	640	333	52.03%
Protect in Fee with State PILT Liability	0	-	-
Protect in Fee w/o State PILT Liability	0	-	-
Protect in Easement	0	-	-
Enhance	2,280	1,187	52.06%

Total Requested Funding within each Ecological Section (Table 4)

Type	Total Proposed	Total in AP	Percentage of Proposed
Restore	\$712,400	\$432,500	60.71%
Protect in Fee with State PILT Liability	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-
Protect in Easement	-	-	-
Enhance	\$2,537,700	\$1,540,500	60.7%