



## Lessard-Sams Outdoor Heritage Council

### Buffalo River Watershed Stream Habitat Program - Phase 2 Laws of Minnesota 2022 Accomplishment Plan

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#### General Information

**Date:** 06/20/2022

**Project Title:** Buffalo River Watershed Stream Habitat Program - Phase 2

**Funds Recommended:** \$2,407,000

**Legislative Citation:** ML 2022, Ch. 77, Art. 1, Sec. 2, subd. 5(p)

**Appropriation Language:** \$2,407,000 the second year is to the commissioner of natural resources for an agreement with the Buffalo-Red River Watershed District to restore and enhance aquatic and upland habitat associated with the Buffalo River and tributaries in the Buffalo River watershed. A list of proposed restorations and enhancements must be provided as part of the required accomplishment plan.

#### **Manager Information**

**Manager's Name:** Kristine Altrichter

**Title:** Administrator

**Organization:** Buffalo-Red River Watershed District

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#### **Location Information**

**County Location(s):** Clay, Wilkin and Becker.

**Eco regions in which work will take place:**

- Prairie

**Activity types:**

- Restore
- Enhance

**Priority resources addressed by activity:**

- Prairie
- Habitat

## Narrative

### **Abstract**

A century of channel straightening efforts has significantly reduced the habitat quality within the BRRWD. The BRRWD has identified, with preliminary designs completed, a number of straightened streams. In the second phase of this multi-phase project, the BRRWD in partnership with landowners, federal, state, and local agencies, will restore 7 miles of the Upper Buffalo River channel and riparian habitat corridor, and 4.2 miles of the South Branch Buffalo River channel and riparian habitat corridor. Additional restorations of straightened streams include a Buffalo River tributary (Glyndon), and Whisky Creek and its south tributary to be completed as funding permits.

### **Design and Scope of Work**

Throughout the last century, channel straightening efforts and poor field practices have significantly reduced the habitat quality within the BRRWD. Channel straightening efforts have eliminated hundreds of acres of quality stream habitat. Straightened channels create homogenous habitats that no longer have the shallow riffles and deeper pools that are required by fish at various stages in their life cycle. The straightened reaches also tend to lose access to their floodplains which increases erosion in the channel and causes downstream flooding. In addition, aggradation of the downstream channel, due to increased sediment loading, reduces habitat quality and makes flooding worse. Over the last several years, the BRRWD, with input and in partnership with landowners, federal, state, and local agencies, designed comprehensive subwatershed restoration plans and intends to implement these plans over the next several years. A component of these plans includes the restoration of numerous reaches of straightened and abandoned creek and river channels throughout the Watershed District. Prioritization of projects is largely based on ecological benefits, being shovel-ready and having landowner and other stakeholder support. In the second phase of this multi-phase project, the BRRWD plans to restore 7 miles of the Upper Buffalo River channel, within an 11-mile stream reach, and associated riparian habitat corridor. In addition, this phase will restore 4.2 miles of the South Branch Buffalo River channel in the 280 acre associated riparian habitat corridor. The Upper Buffalo River and the South Branch Buffalo River will be restored using natural channel design principles. The river restorations have been designed with direct input from the MN DNR Stream Habitat Program as well as the MN Board of Water & Soil Resources (BWSR). A sinuous riffle-pool natural channel design is proposed to recreate the aquatic habitat diversity that was lost in the straightened channel. The naturally stable restored channel will not only recreate lost habitat but will reduce the current erosion that is overloading downstream reaches of the Upper Buffalo River and South Branch Buffalo River. This project is being completed in conjunction with a Reinvest in Minnesota project implemented by the MN BWSR. As part of their comprehensive subwatershed planning process, the District has completed planning and design on three additional stream reaches which are included as part of this application package. These include the restoration of Whisky Creek, its south tributary, and the Buffalo River tributary near Glyndon and their associated riparian corridors. Additional stream restoration enhancement along the Buffalo River tributary near Glyndon and Whisky Creek will be completed as funding permits when and if additional sources of match funding become available. Combined, these comprehensive projects have the potential to restore and enhance more than 46 miles of natural prairie stream. Ultimately, over 970 acres of stream, river, floodplain, wetland, and grassland habitat along these restoration reaches will be protected and restored.

## **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?**

This project will restore 11.2 miles of stream and riparian habitat for associated fish and wildlife communities. This project is the second phase of a long-term effort within the BRRWD. This project will also benefit mussel and insect populations along and downstream of the South Branch and Upper Buffalo River by improving water quality. Pollinator seed mixes will be used along the habitat corridor. The project will provide a continuous wildlife corridor from the Rothsay Wildlife Management Area downstream to CSAH 30. The South Branch downstream of the restoration reach will benefit from a reduced sediment loading to the river resulting from the project. Acquisition and restoration of the stream channel corridor will also improve habitat for Channel Catfish, Northern Pike, and another 70+ fish species present in Red River Basin. Some species of fish will also benefit from the project as a result of a larger quantity of better quality spawning habitat. Less than one mile away, Lawndale Creek is a designated trout stream. DNR studies show that throughout the year, the trout migrate to the South Branch. Restoration of the nearby channel will increase fish usage of this perennial stream. Greater Prairie Chicken are one upland species that will also benefit from the permanent protection of upland areas.

## **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:**

The BRRWD uses a science-based planning model for the selection of stream projects. The targeted projects involve straightened reaches that have lost much of their habitat diversity. Reference stream reaches set the geometry for all of the proposed stream restoration based on survey work completed by the MN Department of Natural Resources (DNR). Geometry used is characteristic of Rosgen E-channels in low gradient streams. The South Branch project is located in the vicinity of the Rothsay WMA (4 miles east), Manston WMA (2 miles southwest), Atherton WMA (1 mile northeast), soon to be established Rogelstad WMA (1 mile east) and a designated trout stream (Lawndale Creek). In addition, RIM easements, an SNA, and a number of WRP projects in the South Branch project area connect the project in a continuous habitat corridor directly to the Rothsay WMA. The South Branch project would be adjacent to the Rothsay Prairie which is identified in the MN Prairie Conservation Plan as a core area. The Upper Buffalo project is located in the vicinity of the Ogema WMA (1 mile east), Riparia WMA (adjacent to project), Pednor WMA (2 miles northwest), the Matter WPA, Donley/Tillman WPA, and Buchl WPA, and Hamden Slough NWR. The Upper Buffalo project is in the Waubun Prairie which is identified in the MN Prairie Conservation Plan as a core area. The Minnesota Prairie Plan also lists restoration of channelized prairie river segments and cultivation of lands immediately adjacent to streams and ditches as "critical challenges". In addition, the BRRWD has completed GIS-based terrain analysis to identify, prioritize, and target conservation best management practices in the contributing agricultural watershed. Many of these best management practices have been implemented, with more planned.

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

- H2 Protect critical shoreland of streams and lakes
- H6 Protect and restore critical in-water habitat of lakes and streams

## **Which two other plans are addressed in this program?**

- National Fish Habitat Action Plan
- Red River of the North Fisheries Management Plan

## Which LSOHC section priorities are addressed in this program?

### Prairie

- Restore or enhance habitat on public lands

## Does this program include leveraged funding?

Yes

### Explain the leverage:

The BRRWD has an existing Clean Water Fund Grant through with the MN BWSR and will work with and encourage landowners to utilize programs (CREP, RIM) to implement the project to the extent possible. These programs require landowners to apply and it is expected that landowners will participate. Local tax levy funds will also be used as leverage funds.

## 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.

The funding provided by the Outdoor Heritage Fund does not supplant or substitute for any previous funding.

### Non-OHF Appropriations

Year	Source	Amount
2021	Clean Water Fund	300,000
2019	Section 319	613,908
2016	MN BWSR - RIM	1,063,106.25
2013-2021	Local Tax Levy	400,000
2013	Clean Water Fund	336,000
2010	MN BWSR - RIM	478,094.83

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

In accordance with Minnesota Watershed Law and the Red River Basin Flood Damage Reduction Work Group Mediation agreement, projects implemented under this grant will be monitored to ensure they are working as intended. It is expected that there will be some maintenance in the first few years to ensure native vegetation is established. The stream restoration projects are designed following natural channel design principles and are expected to be largely self-sustaining. Significant long-term maintenance costs are not expected; however, the BRRWD will set up a local tax levy that will provide long-term maintenance funding for the project. The locally raised levy will provide an annual revenue stream for maintenance. Post-project monitoring will be conducted by the BRRWD, the Riverwatch Program, and the International Water Institute.

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

The Upper Buffalo project is located within the White Earth Indian Reservation. The 150 acres of restored floodplain, wetland, and grassland habitat area, in addition to the 7 miles of restored channel, will have a direct positive impact on the Indigenous community throughout the White Earth Indian Reservation.

## 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?**

- Permanently Protected Conservation Easements
- Public Waters

### 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
Continue contacting landowners along stream restoration as part of the acquisition process	August 2021
Complete construction and restoration (Upper Buffalo and South Branch)	June 2026
Begin construction	October 2022
Complete land acquisition	August 2022
Establish local funding source (pre-grant)	June 2022
Finalize construction plans for the Upper Buffalo and South Branch projects (pre-grant)	December 2021

**Date of Final Report Submission:** 11/01/2027

**Availability of Appropriation:** Subd. 7. Availability of Appropriation

(a) Money appropriated in this section may not be spent on activities unless they are directly related to and necessary for a specific appropriation and are specified in the accomplishment plan approved by the Lessard-Sams Outdoor Heritage Council. Money appropriated in this section must not be spent on indirect costs or other institutional overhead charges that are not directly related to and necessary for a specific appropriation. Money appropriated to acquire land in fee may be used to restore, enhance, and provide for public use of the land acquired with the appropriation. Public-use facilities must have a minimal impact on habitat in acquired lands.

(b) Money appropriated in this section is available as follows:

(1) money appropriated for acquiring real property is available until June 30, 2026;

(2) money appropriated for restoring and enhancing land acquired with an appropriation in this act is available for

four years after the acquisition date with a maximum end date of June 30, 2030;

(3) money appropriated for restoring or enhancing other land is available until June 30, 2027;

(4) notwithstanding clauses (1) to (3), money appropriated for a project that receives at least 15 percent of its funding from federal funds is available until a date sufficient to match the availability of federal funding to a maximum of six years if the federal funding was confirmed and included in the original approved draft accomplishment plan; and

(5) money appropriated for other projects is available until the end of the fiscal year in which it is appropriated.

## 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	\$1,991,000	\$250,000	Clean Water Fund	\$2,241,000
Fee Acquisition w/ PILT	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-
Easement Acquisition	-	\$300,000	CREP, RIM, Local Tax Levy	\$300,000
Easement Stewardship	-	-	-	-
Travel	-	-	-	-
Professional Services	\$415,000	\$140,000	Local Tax Levy, Clean Water Fund	\$555,000
Direct Support Services	-	-	-	-
DNR Land Acquisition Costs	-	-	-	-
Capital Equipment	-	-	-	-
Other Equipment/Tools	-	-	-	-
Supplies/Materials	\$1,000	-	-	\$1,000
DNR IDP	-	-	-	-
<b>Grand Total</b>	<b>\$2,407,000</b>	<b>\$690,000</b>	-	<b>\$3,097,000</b>

**Amount of Request:** \$2,407,000

**Amount of Leverage:** \$690,000

**Leverage as a percent of the Request:** 28.67%

**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?**

It is anticipated the project will accomplish approximately 45% of the original proposed river restoration work. It is estimated that approximately 5 miles of river restoration work will be completed.

### **Describe and explain leverage source and confirmation of funds:**

The BRRWD has an existing Clean Water Fund Grant through the MN BWSR and will work with, and encourage, landowners to utilize programs (CREP, RIM) to implement the project to the fullest extent possible. The BRRWD has tax levy authority to raise local funds.

### **Contracts**

#### **What is included in the contracts line?**

Cost associated with river restoration construction and re-establishment of vegetation.

**Federal Funds**

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

Yes

**Are the funds confirmed?**

No

**What is the approximate date you anticipate receiving confirmation of the federal funds?**

12/31/2021



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

Type	Wetland	Prairie	Forest	Habitat	Total Acres
Restore	-	45	-	55	100
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	-	-	-	-	-
<b>Total</b>	-	<b>45</b>	-	<b>55</b>	<b>100</b>

**Total Requested Funding by Resource Type (Table 2)**

Type	Wetland	Prairie	Forest	Habitat	Total Funding
Restore	-	\$220,000	-	\$2,187,000	\$2,407,000
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	-	-	-	-	-
<b>Total</b>	-	<b>\$220,000</b>	-	<b>\$2,187,000</b>	<b>\$2,407,000</b>

**Acres within each Ecological Section (Table 3)**

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Acres
Restore	-	-	-	100	-	100
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-
Enhance	-	-	-	-	-	-
<b>Total</b>	-	-	-	<b>100</b>	-	<b>100</b>

**Total Requested Funding within each Ecological Section (Table 4)**

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Funding
Restore	-	-	-	\$2,407,000	-	\$2,407,000
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-
Enhance	-	-	-	-	-	-
<b>Total</b>	-	-	-	<b>\$2,407,000</b>	-	<b>\$2,407,000</b>

**Average Cost per Acre by Resource Type (Table 5)**

Type	Wetland	Prairie	Forest	Habitat
Restore	-	\$4,888	-	\$39,763
Protect in Fee with State PILT Liability	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-
Protect in Easement	-	-	-	-
Enhance	-	-	-	-

**Average Cost per Acre by Ecological Section (Table 6)**

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest
Restore	-	-	-	\$24,070	-
Protect in Fee with State PILT Liability	-	-	-	-	-

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

### Target Lake/Stream/River Feet or Miles

5

### Outcomes

#### Programs in prairie region:

- Protected, restored, and enhanced habitat for migratory and unique Minnesota species ~ *Project outcomes are measured by the total acres of restored riparian habitat, in addition to the total stream miles restored.*

## 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:

While numerous reaches in the Buffalo River watershed are identified, the Upper Buffalo and South Branch of the Buffalo River restoration reaches are being prioritized for implementation. These projects are nearly shovel ready and will be by the time LSOHC funding is available. Significant benefits to habitat, water quality, and flood damage reduction are expected by these projects.

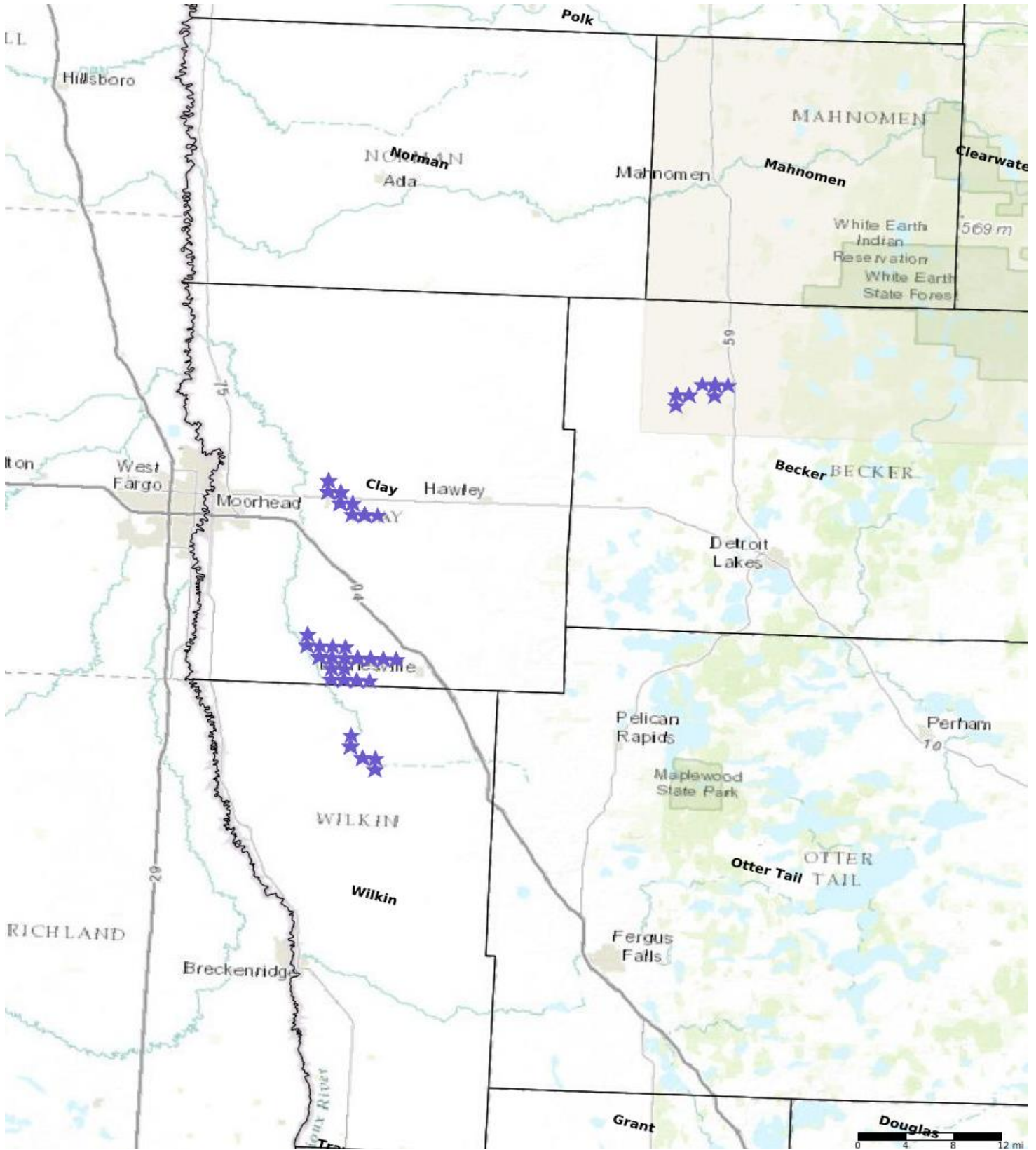
### Restore / Enhance Parcels

Name	County	TRDS	Acres	Est Cost	Existing Protection
23.0066.000	Becker	14142215	7	\$72,568	No
23.0075.000	Becker	14142216	3	\$31,101	No
23.0077.000	Becker	14142216	11	\$114,038	No
23.0080.000	Becker	14142216	5	\$51,835	No
23.0108.000	Becker	14142221	18	\$186,606	No
23.7022.200	Becker	14142215	3	\$31,101	No
23.0056.001	Becker	14142212	18	\$228,827	No
23.0052.000	Becker	14142212	17	\$176,240	No
23.0055.001	Becker	14142212	2	\$20,734	No
23.0060.000	Becker	14142213	8	\$235,761	No
23.0048.000	Becker	14142211	12	\$124,404	No
23.0056.000	Becker	14142212	12	\$124,404	No
23.0055.000	Becker	14142212	7	\$72,568	No
04.0038.000	Becker	14141207	21	\$97,078	Yes
23.0053.000	Becker	14142212	1	\$10,366	No
23.0054.000	Becker	14142212	0	\$0	No
01.023.4001	Clay	13747223	1	\$0	No
01.023.4000	Clay	13747223	4	\$0	No
01.023.2201	Clay	13747223	1	\$0	No
01.023.0100	Clay	13747223	17	\$0	No
01.015.2000	Clay	13747215	1	\$0	No
01.015.1000	Clay	13747215	16	\$0	No
01.015.0300	Clay	13747215	2	\$0	No
01.014.3000	Clay	13747214	10	\$0	No
01.010.4001	Clay	13747210	1	\$0	No
01.010.3770	Clay	13747210	1	\$0	No
02.060.0101	Clay	13746220	1	\$0	No
02.023.3701	Clay	13746223	10	\$0	No
02.023.3301	Clay	13746223	4	\$0	No
02.023.3001	Clay	13746223	1	\$0	No
02.022.4600	Clay	13746222	7	\$0	No
02.022.4400	Clay	13746222	5	\$0	Yes
02.022.3000	Clay	13746222	11	\$0	No
02.021.4330	Clay	13746221	1	\$0	No

02.021.4000	Clay	13746221	5	\$0	No
02.021.2000	Clay	13746221	17	\$0	No
02.021.1800	Clay	13746221	1	\$0	No
02.020.2201	Clay	13746220	18	\$0	No
02.020.2000	Clay	13746220	2	\$0	No
02.020.1101	Clay	13746220	17	\$0	No
02.020.1000	Clay	13746220	2	\$0	No
02.019.1500	Clay	13746219	12	\$0	No
02.019.1101	Clay	13746219	1	\$0	No
02.019.0200	Clay	13746219	5	\$0	No
02.018.3000	Clay	13746218	16	\$0	No
01.013.4700	Clay	13747213	1	\$0	No
25.018.4000	Clay	13946218	1	\$0	No
25.018.1000	Clay	13946218	20	\$0	No
25.017.4100	Clay	13946217	1	\$0	No
25.017.4000	Clay	13946217	2	\$0	No
25.017.3600	Clay	13946217	3	\$0	No
25.017.3000	Clay	13946217	2	\$0	No
25.017.2600	Clay	13946217	1	\$0	No
25.017.2000	Clay	13946217	1	\$0	No
25.017.1000	Clay	13946217	3	\$0	No
25.016.3000	Clay	13946216	1	\$0	No
25.007.4701	Clay	13946207	13	\$0	No
25.007.4700	Clay	13946207	4	\$0	No
20.035.4303	Clay	14047235	3	\$0	No
20.035.4302	Clay	14047235	3	\$0	No
20.035.0401	Clay	14047235	1	\$0	No
10.012.9999	Clay	13947212	2	\$0	No
10.012.9001	Clay	13947212	1	\$0	No
10.012.4502	Clay	13947212	2	\$0	No
10.012.4501	Clay	13947212	10	\$0	No
10.012.2470	Clay	13947212	4	\$0	No
10.012.2300	Clay	13947212	1	\$0	No
02.033.2060	Clay	13746233	1	\$0	No
10.012.2202	Clay	13947212	1	\$0	No
10.012.2201	Clay	13947212	1	\$0	No
10.012.2104	Clay	13947212	1	\$0	No
10.012.1000	Clay	13947212	6	\$0	No
10.002.1801	Clay	13947202	1	\$0	No
10.002.1400	Clay	13947202	6	\$0	Yes
10.002.1301	Clay	13947202	1	\$0	No
10.002.1300	Clay	13947202	2	\$0	No
10.002.1201	Clay	13947202	4	\$0	No
10.001.3301	Clay	13947201	1	\$0	No
10.001.3000	Clay	13947201	10	\$0	No
10.001.2000	Clay	13947201	3	\$0	No
10.012.2203	Clay	13947212	3	\$0	No
02.032.3000	Clay	13746232	1	\$0	No
02.032.2000	Clay	13746232	10	\$0	No
02.032.1000	Clay	13746232	10	\$0	No
02.031.3000	Clay	13746231	7	\$0	No
02.031.2001	Clay	13746231	1	\$0	No
02.031.2000	Clay	13746231	7	\$0	No
02.031.0400	Clay	13746231	21	\$0	No
02.030.0300	Clay	13746230	2	\$0	No
01.036.1100	Clay	13747236	1	\$0	No
01.036.0100	Clay	13747236	8	\$0	No

01.025.4000	Clay	13747225	14	\$0	No
01.025.1000	Clay	13747225	13	\$0	No
01.024.4000	Clay	13747224	7	\$0	No
01.024.0000	Clay	13747224	14	\$0	No
01.023.4002	Clay	13747223	3	\$0	No
12-004-0400	Wilkin	13546204	13	\$134,771	Yes
12-005-0600	Wilkin	13546205	16	\$165,872	Yes
12-005-0300	Wilkin	13546205	8	\$82,936	Yes
12-005-0200	Wilkin	13546205	4	\$41,467	Yes
12-006-0100	Wilkin	13546205	13	\$134,771	Yes
12-009-0200	Wilkin	13546209	1	\$10,366	Yes
12-009-0100	Wilkin	13546209	1	\$10,366	Yes
12-004-0500	Wilkin	13546204	1	\$10,366	Yes
03-030-0400	Wilkin	13646230	1	\$10,366	Yes
03-031-0400	Wilkin	13646231	5	\$51,835	Yes
03-031-0500	Wilkin	13646231	3	\$31,101	Yes
03-031-0100	Wilkin	13646231	10	\$103,670	Yes
03-031-0200	Wilkin	13646231	4	\$41,467	Yes

### Parcel Map



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