



## Lessard-Sams Outdoor Heritage Council

### Buffalo River Watershed Stream Habitat Program – Phase 1 Laws of Minnesota 2018 Accomplishment Plan

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#### General Information

**Date:** 10/03/2023

**Project Title:** Buffalo River Watershed Stream Habitat Program – Phase 1

**Funds Recommended:** \$1,195,000

**Legislative Citation:** ML 2018, Ch. 208, Art. 1, Sec. 2, subd 5(n)

**Appropriation Language:** \$1,195,000 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 south branch of the Buffalo River and Whisky Creek in the Buffalo River watershed. A list of proposed restorations and enhancements must be provided as part of the required accomplishment plan.

**Additional Legislative Changes:** ML 2023, Ch. 40, Article 1, Sec. 2, subd 10. Carryforwards, (d) The availability of the appropriation under Laws 2018, chapter 208, section 2, subdivision 5, paragraph (n), Buffalo River Watershed Stream Habitat Program, is extended to June 30, 2025.; ML 2022, Chapter 77, Art. 1, Sec. 2, Subd 10.

Carryforwards

(a) The availability of the appropriation for Laws 2018, chapter 208, section 2, subdivision 5, paragraph (n), for Buffalo River Watershed Stream Habitat Program, is extended to June 30, 2023.

#### **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 and Wilkin.

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

- Prairie

#### Activity types:

- Restore
- Enhance

#### Priority resources addressed by activity:

- Prairie
- Habitat

## Narrative

### Abstract

Over a century ago, the construction of Judicial Ditch No. 3 resulted in the rerouting of the South Branch of the Buffalo River, completely changing its flow characteristics. In the first phase of this multi-phase project, the Buffalo-Red River Watershed District (BRRWD) in partnership with landowners, federal, state, and local agencies, will put much of the rerouted channel back restoring up to 4.6 miles of the South Branch with up to 100 acres of associated riparian habitat corridor. Additional restorations of straightened stream and river channels along the South Branch and Whisky Creek will be completed as funding permits.

### Design and Scope of Work

The construction of several legal ditch systems and other channel straightening efforts eliminated hundreds of acres of quality of stream habitat within the BRRWD. In some cases, the channelization simply straightened the stream channel and in others the constructed ditch diverted water away from the natural stream. Straightened channels create homogenous habitats, they 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 first phase of this multi-phase project, the BRRWD plans to restore up to 4.6 miles of perennial stream with up to 100 plus acres of associated riparian corridor habitat along the South Branch of the Buffalo River. The project will divert water from Wilkin County Ditch No. 44 (formerly called Judicial Ditch 3) back into the abandoned South Branch channel. The South Branch will be restored using natural channel design principles. The river restoration has 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 ditch. The naturally stable restored channel will not only recreate lost habitat, but will reduce the current erosion that is overloading downstream reaches of the South Branch. This project is being completed in conjunction with a Reinvest in Minnesota project being 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 tributary, and the South Branch of the Buffalo River and their associated riparian corridors. Additional stream restoration enhancement along the South Branch of the Buffalo River 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 38 miles of natural prairie stream. Ultimately, over 1400 acres of 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 up to 4.6 miles of stream and 100 acres of riparian habitat for associated fish and wildlife communities. This project is the first 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 of the 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 MN Highway 9. The South Branch downstream of the restoration reach will benefit from a reduced sediment loading due to 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.

**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 restorations based on survey work completed by the MN Department of Natural Resources (DNR). Geometry used is characteristic of Rosgen E-channel streams.

The project is located in the vicinity of the Rothsay WMA (2 miles east), Manston WMA (2 miles southwest), Atherton WMA (1 mile north) and a designated trout stream. In addition, RIM easements, an SNA, and a number of WRP projects in the project area connect the project in a continuous habitat corridor directly to the Rothsay WMA. This project would be adjacent to the Rothsay 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

**Outcomes**

**Programs in prairie region:**

- Protected, restored, and enhanced habitat for migratory and unique Minnesota species ~ *The outcome of the Buffalo River Watershed Stream Restoration Program will be up to 4.6 miles of restoration (currently estimated at 3 miles based on reduced funding) of the South Branch of the Buffalo River into a stable prairie stream with expanded and enhanced permanently protected habitat corridor. This will provide significantly improved terrestrial and aquatic habitat for fish and wildlife, such as prairie chickens, using the stream corridor. Improvements in water quality are also expected.*

**Does this program include leveraged funding?**

-

**Non-OHF Appropriations**

Year	Source	Amount
2010	MN BWSR - RIM	\$478,094
2013	Clean Water Fund	\$336,000
2013-2017	Local Tax Levy	\$100,000
2016	MN BWSR - RIM	\$1,063,106

**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 this project. The locally raised levy will provide an annual revenue stream for maintenance. Post-project monitoring will be conducted by the BRRWD and the Barnesville Riverwatch Program.

**Actions to Maintain Project Outcomes**

Year	Source of Funds	Step 1	Step 2	Step 3
Annual	Watershed District -	Monitoring and	-	-

	Local Tax Levy	Maintenance of Channel Restoration		
Annual	Watershed District – Local Tax Levy	Monitoring and Maintenance of the Habitat Corridor	-	-
Annual	Watershed District – Local Tax Levy	Conservation BMP Promotion throughout the project watershed	-	-

### 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 or on lands to be acquired in this program?**

Yes

**Where does the activity take place?**

- Permanently Protected Conservation Easements

#### 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
Formally Contact Landowners along Stream Restoration – Begin Easement Process	October 2017
Finalize South Branch Restoration Project Construction Plans (Pre-grant)	March 2018
Establish Local Funding Source (Pre-grant)	June 2018
Complete Land Acquisition Process	August 2018
Begin Construction	September 2018
Complete Construction (South Branch Phase 1)	June 2023

**Date of Final Report Submission:** 11/01/2023

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

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. Unless otherwise provided, the amounts in this section are available until June 30, 2021. For acquisition of real property, the amounts in this section are available until June 30, 2022, if a binding agreement with a landowner or purchase agreement is entered into by June 30, 2021, and closed no later than June 30, 2022. Funds for restoration or

enhancement are available until June 30, 2023, or five years after acquisition, whichever is later, in order to complete initial restoration or enhancement work. If a project receives at least 15 percent of its funding from federal funds, the time of the appropriation may be extended to equal the availability of federal funding to a maximum of six years if that federal funding was confirmed and included in the second draft accomplishment plan. Funds appropriated for fee title acquisition of land 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.

**Budget**

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

**Totals**

<b>Item</b>	<b>Funding Request</b>	<b>Leverage</b>	<b>Leverage Source</b>	<b>Total</b>
Personnel	-	-	-	-
Contracts	\$822,500	-	-	\$822,500
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	\$372,500	\$55,000	Local Tax Levy	\$427,500
Direct Support Services	-	-	-	-
DNR Land Acquisition Costs	-	-	-	-
Capital Equipment	-	-	-	-
Other Equipment/Tools	-	-	-	-
Supplies/Materials	-	-	-	-
DNR IDP	-	-	-	-
<b>Grand Total</b>	<b>\$1,195,000</b>	<b>\$355,000</b>	-	<b>\$1,550,000</b>

**Amount of Request:** \$1,195,000

**Amount of Leverage:** \$355,000

**Leverage as a percent of the Request:** 29.71%

**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?**

The appropriation recommendation reduction will reduce the length of restored stream from an estimated 4.6 to 3 miles. The restored stream will be completed in Section 11 and then 9 and then 10, as funding permits. Actual restored length will depend on additional outside funding and contractor bids.

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

Sources of leverage for project construction come from locally levied funds (confirmed). Land acquisition is expected to utilize other programs such as CREP and RIM (not confirmed, but in process).

**Contracts**

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

All of the contract amount is for Restoration and enhancement work.

**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?**

3/31/2018



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

Type	Wetland	Prairie	Forest	Habitat	Total Acres
Restore	0	0	0	36	36
Protect in Fee with State PILT Liability	0	0	0	0	0
Protect in Fee w/o State PILT Liability	0	0	0	0	0
Protect in Easement	0	0	0	0	0
Enhance	0	42	0	0	42
<b>Total</b>	<b>0</b>	<b>42</b>	<b>0</b>	<b>36</b>	<b>78</b>

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

Type	Wetland	Prairie	Forest	Habitat	Total Funding
Restore	-	-	-	\$1,105,000	\$1,105,000
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	-	\$90,000	-	-	\$90,000
<b>Total</b>	<b>-</b>	<b>\$90,000</b>	<b>-</b>	<b>\$1,105,000</b>	<b>\$1,195,000</b>

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

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Acres
Restore	0	0	0	36	0	36
Protect in Fee with State PILT Liability	0	0	0	0	0	0
Protect in Fee w/o State PILT Liability	0	0	0	0	0	0
Protect in Easement	0	0	0	0	0	0
Enhance	0	0	0	42	0	42
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>78</b>	<b>0</b>	<b>78</b>

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

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Funding
Restore	-	-	-	\$1,105,000	-	\$1,105,000
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-
Enhance	-	-	-	\$90,000	-	\$90,000
<b>Total</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>\$1,195,000</b>	<b>-</b>	<b>\$1,195,000</b>

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

Type	Wetland	Prairie	Forest	Habitat
Restore	-	-	-	\$30,694
Protect in Fee with State PILT Liability	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-
Protect in Easement	-	-	-	-
Enhance	-	\$2,142	-	-

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

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest
Restore	-	-	-	\$30,694	-
Protect in Fee with State PILT Liability	-	-	-	-	-

Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	-	-	-	\$2,142	-

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

3

## 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

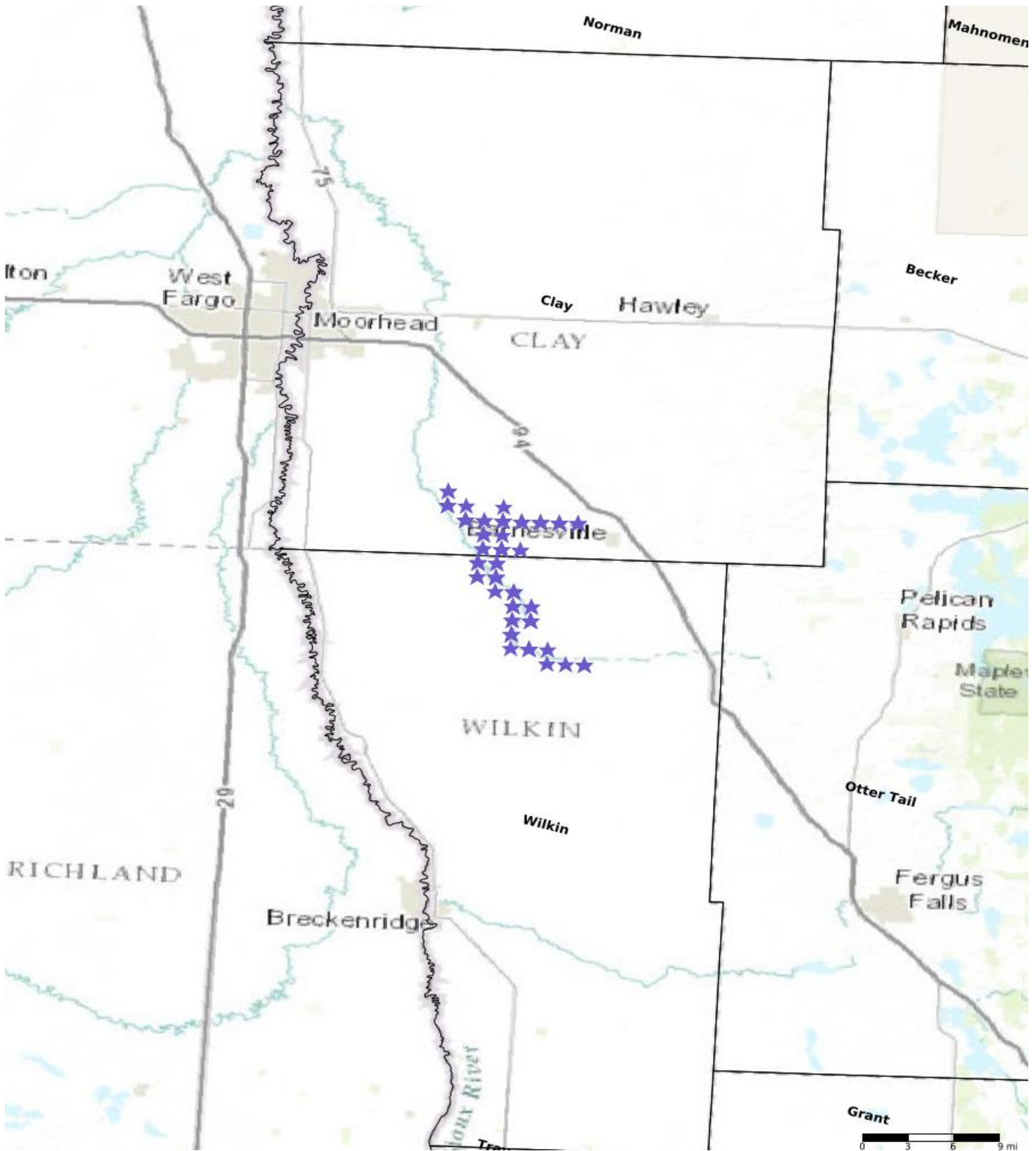
**Explain the process used to identify, prioritize, and select the parcels on your list:**

### Restore / Enhance Parcels

Name	County	TRDS	Acres	Est Cost	Existing Protection
02.021.4000	Clay	13746221	0	\$0	Yes
02.023.3701	Clay	13746223	0	\$0	Yes
02.031.2001	Clay	13746231	0	\$0	Yes
01.036.1100	Clay	13747236	0	\$0	Yes
01.036.0100	Clay	13747236	0	\$0	Yes
02.032.2000	Clay	13746232	0	\$0	Yes
01.010.4001	Clay	13747210	0	\$0	Yes
02.021.4330	Clay	13746221	0	\$0	Yes
02.021.1800	Clay	13746221	0	\$0	Yes
01.010.3770	Clay	13747210	0	\$0	Yes
01.015.2000	Clay	13747215	0	\$0	Yes
01.015.0300	Clay	13747215	0	\$0	Yes
02.030.0300	Clay	13746230	0	\$0	Yes
01.014.3000	Clay	13747214	0	\$0	Yes
01.023.4000	Clay	13747223	0	\$0	Yes
01.025.1000	Clay	13747225	0	\$0	Yes
01.015.1000	Clay	13747215	0	\$0	Yes
02.020.1000	Clay	13746220	0	\$0	Yes
02.021.2000	Clay	13746221	0	\$0	Yes
02.032.1000	Clay	13746232	0	\$0	Yes
02.018.3000	Clay	13746218	0	\$0	Yes
02.019.0200	Clay	13746219	0	\$0	Yes
02.019.1500	Clay	13746219	0	\$0	Yes
01.023.0100	Clay	13747223	0	\$0	Yes
01.023.2201	Clay	13747223	0	\$0	Yes
01.023.4002	Clay	13747223	0	\$0	Yes
01.024.0000	Clay	13747224	0	\$0	Yes
01.025.4000	Clay	13747225	0	\$0	Yes
02.031.2000	Clay	13746231	0	\$0	Yes
02.031.3000	Clay	13746231	0	\$0	Yes
02.031.0400	Clay	13746231	0	\$0	Yes
02.020.2000	Clay	13746220	0	\$0	Yes
02.020.2201	Clay	13746220	0	\$0	Yes
02.019.1101	Clay	13746219	0	\$0	Yes
02.022.4400	Clay	13746222	0	\$0	Yes
02.023.3301	Clay	13746223	0	\$0	Yes
02.022.3000	Clay	13746222	0	\$0	Yes

02.022.4600	Clay	13746222	0	\$0	Yes
01.024.4000	Clay	13747224	0	\$0	Yes
02.020.1101	Clay	13746220	0	\$0	Yes
02.023.3001	Clay	13746223	0	\$0	Yes
03-020-0300	Wilkin	13646220	0	\$0	Yes
03-029-0500	Wilkin	13646229	0	\$0	Yes
03-019-0100	Wilkin	13646219	0	\$0	Yes
03-018-0500	Wilkin	13646218	0	\$0	Yes
12-010-0100	Wilkin	13546210	0	\$95,000	Yes
10-002-0400	Wilkin	13647202	0	\$0	Yes
10-002-0200	Wilkin	13647202	0	\$0	Yes
10-002-0100	Wilkin	13647202	0	\$0	Yes
10-001-0500	Wilkin	13647201	0	\$0	Yes
10-011-0300	Wilkin	13647211	0	\$0	Yes
10-012-0300	Wilkin	13647212	0	\$0	Yes
10-013-0100	Wilkin	13647213	0	\$0	Yes
10-012-0400	Wilkin	13647212	0	\$0	Yes
12-009-0100	Wilkin	13546209	0	\$200,000	Yes
03-018-0110	Wilkin	13646218	0	\$0	Yes
03-018-0400	Wilkin	13646218	0	\$0	Yes
03-019-0115	Wilkin	13646219	0	\$0	Yes
03-019-0500	Wilkin	13646219	0	\$0	Yes
03-020-0200	Wilkin	13646220	0	\$0	Yes
03-029-0400	Wilkin	13646229	0	\$0	Yes
03-030-0100	Wilkin	13646230	0	\$0	Yes
03-031-0100	Wilkin	13646231	0	\$0	Yes
12-005-0200	Wilkin	13546205	0	\$0	Yes
12-005-0600	Wilkin	13546205	0	\$0	Yes
10-001-0300	Wilkin	13647201	0	\$0	Yes
03-031-0500	Wilkin	13646231	0	\$0	Yes
10-011-0100	Wilkin	13647211	0	\$0	Yes
03-018-0200	Wilkin	13646218	0	\$0	Yes
10-012-0100	Wilkin	13647212	0	\$0	Yes
10-012-0200	Wilkin	13647212	0	\$0	Yes
03-030-0400	Wilkin	13646230	0	\$0	Yes
03-031-0400	Wilkin	13646231	0	\$0	Yes
12-006-0100	Wilkin	13546206	0	\$0	Yes
03-031-0200	Wilkin	13646231	0	\$0	Yes
12-005-0300	Wilkin	13546205	0	\$0	Yes
12-004-0400	Wilkin	13546204	0	\$0	Yes
12-011-0200	Wilkin	13546211	0	\$400,000	Yes
12-011-0100	Wilkin	13546211	0	\$500,000	Yes
03-029-0300	Wilkin	13646229	0	\$0	Yes
03-018-0100	Wilkin	13646218	0	\$0	Yes
03-029-0310	Wilkin	13646229	0	\$0	Yes

### Parcel Map



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