



Lessard-Sams Outdoor Heritage Council

ML 2022 Request for Funding

General Information

Date: 06/03/2021

Proposal Title: Buffalo River Watershed Stream Habitat Program - Phase 2

Funds Requested: \$4,951,000

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 proposal 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.

What is the degree of timing/opportunistic urgency and why it is necessary to spend public money for this work as soon as possible?

The South Branch and Upper Buffalo River have been degraded for some time. What has changed is that landowners are ready to implement the proposed project. RIM and WRP easements have closed in the last several years along the corridor. Funding for the complete restoration is the issue. Locally raised funding will be part of the overall project funding package. However, without outside funding to help defray the implementation cost, the projects may not happen. The existing stream function is degraded and restoration will return the functions of the stream which will have many ecological and water quality benefits in the upstream portion of this watershed.

Describe how the proposal 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 proposal?

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

Describe how your program will advance the indicators identified in the plans selected:

In the second phase of this multi-phase project, the BRRWD plans to restore 11.2 miles of natural stream with an associated river habitat corridor along the Upper Buffalo River and South Branch Buffalo River. This program addresses goals 3 and 4 of the National Fish Habitat Action Plan: Goal #3 is to reverse declines in the quality and quantity of aquatic habitats to improve the overall health of fish and other aquatic organisms. Goal #4 is to increase the quality and quantity of fish habitats that support a broad natural diversity of fish and other aquatic species. The program also addresses several objectives from the Red River of the North Fisheries Management Plan: Objective #1: Establish and maintain stable stream channels. Objective #4: Provide heterogeneous and complex physical habitat components consistent with the physiographic setting and important to aquatic species in the Red River basin.

Which LSOHC section priorities are addressed in this proposal?

Prairie

- Restore or enhance habitat on public lands

Describe how your program will produce and demonstrate a significant and permanent conservation legacy and/or outcomes for fish, game, and wildlife as indicated in the LSOHC priorities:

A priority for prairie zones of Minnesota is to reverse the negative effects of stream channelization on in-stream habitats for fish and other aquatic organisms. Channelization has changed the hydrology of streams, which has then made them wider and more deeply incised. The proposed project will restore 11.2 miles of in-stream habitats. Riparian vegetation will be restored to stabilize stream banks (several state and federal programs, such as RIM and CREP, may potentially provide financial assistance). Natural channel restoration designs will be constructed where streams have been channelized to provide better access of floodplain to dissipate stream energy and allow the river room to meander, which will provide more diverse habitat for aquatic organisms. This project will build on previous conservation efforts in the areas. The project adds onto a significant block of habitat previously restored wetlands and upland vegetation that were established under RIM and WRP as well as on State and Federal lands. These efforts combined with the proposed project hold water on the landscape and allows for increased infiltration, which will help mitigate the altered hydrology of the watershed and helps habitat by providing a more natural flow regime.

What other fund may contribute to this proposal?

- Clean Water Fund

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

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.

Identify indicator species and associated quantities this habitat will typically support:

Restoration of the South Branch and Upper Buffalo will provide 11.2 miles of stream channel and riparian corridor, improving habitat for Channel Catfish, Northern Pike, and another 70+ fish species present in Red River Basin. The restored channel will have higher quality, more complex habitat than is currently provided. Some species of fish will also benefit from the project as a result of a larger quantity of better quality spawning habitat. Northern pike would be a likely fish species to utilize the restored channel for spring spawning along the stream. Amphibians such as the Canada Toad, Great Plains Toad, Leopard Frog, Cope Toad, Western Chorus Frog and Spotted Salamander, would also benefit, especially with the expanded riparian buffer area. The 225 acres of prairie riparian habitat would be expected to support 20 nesting pairs of each upland species such as Ring-necked Pheasant and Meadowlark. Pollinator seed mixes are proposed along the stream restoration to enhance opportunities for honey bees, native bees, butterflies, and other insects. The Greater Prairie Chicken (MN Special Concern) is an additional upland species that will also benefit from the permanent protection of upland areas. The project, with 225 plus acres of permanently protected riparian habitat alongside the existing RIM, SNA, and WMA land, could support an estimated 20 breeding pair of prairie chickens. The DNR has also identified breeding pairs of Bobolink using the area, which should increase with increased prime habitat.

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 proposal 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

Other OHF Appropriation Awards

Have you received OHF dollars in the past through LSOHC?

Yes

Timeline

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

Budget

Totals

Item	Funding Request	Antic. Leverage	Leverage Source	Total
Personnel	-	-	-	-
Contracts	\$4,250,000	\$250,000	Clean Water Fund	\$4,500,000
Fee Acquisition w/ PILT	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-
Easement Acquisition	-	\$750,000	CREP, RIM, Local Tax Levy	\$750,000
Easement Stewardship	-	-	-	-
Travel	-	-	-	-
Professional Services	\$700,000	\$140,000	Local Tax Levy, Clean Water Fund	\$840,000
Direct Support Services	-	-	-	-
DNR Land Acquisition Costs	-	-	-	-
Capital Equipment	-	-	-	-
Other Equipment/Tools	-	-	-	-
Supplies/Materials	\$1,000	-	-	\$1,000
DNR IDP	-	-	-	-
Grand Total	\$4,951,000	\$1,140,000	-	\$6,091,000

Amount of Request: \$4,951,000

Amount of Leverage: \$1,140,000

Leverage as a percent of the Request: 23.03%

DSS + Personnel: -

As a % of the total request: 0.0%

Easement Stewardship: -

As a % of the Easement Acquisition: -

Describe and explain leverage source and confirmation of funds:

The BRRWD is coordinating with BWSR and landowners to utilize programs (CREP, RIM) to implement the project to the extent possible. These funds have not been confirmed. The Watershed District has tax levy authority to raise some project funding as well.

Does this proposal have the ability to be scalable?

Yes

If the project received 70% of the requested funding

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

Reduced funding will limit the length of stream restoration work to be completed. The restoration reach would be shortened by more than 30%. As funding allows, additional stream restoration work will occur upstream or downstream. The BRRWD will continue to look for additional funding to stretch what the LSOHC provides.

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

N/A

If the project received 50% of the requested funding

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

Reduced funding will limit the length of stream restoration work to be completed. The restoration reach would be shortened by more than 50%. As funding allows, additional stream restoration work will occur upstream or downstream. The BRRWD will continue to look for additional funding to stretch what the LSOHC provides.

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

N/A

Contracts

What is included in the contracts line?

Restoration and enhancement work to include the implementation of the project, including 11.2 miles of stream restoration and over 225 acres of associated riparian habitat restoration.

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	0	100	0	125	225
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	0	0	0	0
Total	0	100	0	125	225

Total Requested Funding by Resource Type (Table 2)

Type	Wetland	Prairie	Forest	Habitat	Total Funding
Restore	-	\$475,000	-	\$4,476,000	\$4,951,000
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	-	-	-	-	-
Total	-	\$475,000	-	\$4,476,000	\$4,951,000

Acres within each Ecological Section (Table 3)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Acres
Restore	0	0	0	225	0	225
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	0	0	0
Total	0	0	0	225	0	225

Total Requested Funding within each Ecological Section (Table 4)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Funding
Restore	-	-	-	\$4,951,000	-	\$4,951,000
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-
Enhance	-	-	-	-	-	-
Total	-	-	-	\$4,951,000	-	\$4,951,000

Average Cost per Acre by Resource Type (Table 5)

Type	Wetland	Prairie	Forest	Habitat
Restore	-	\$4,750	-	\$35,808
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	-	-	-	\$22,004	-
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

11.2 miles

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

Sign-up Criteria?

No

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

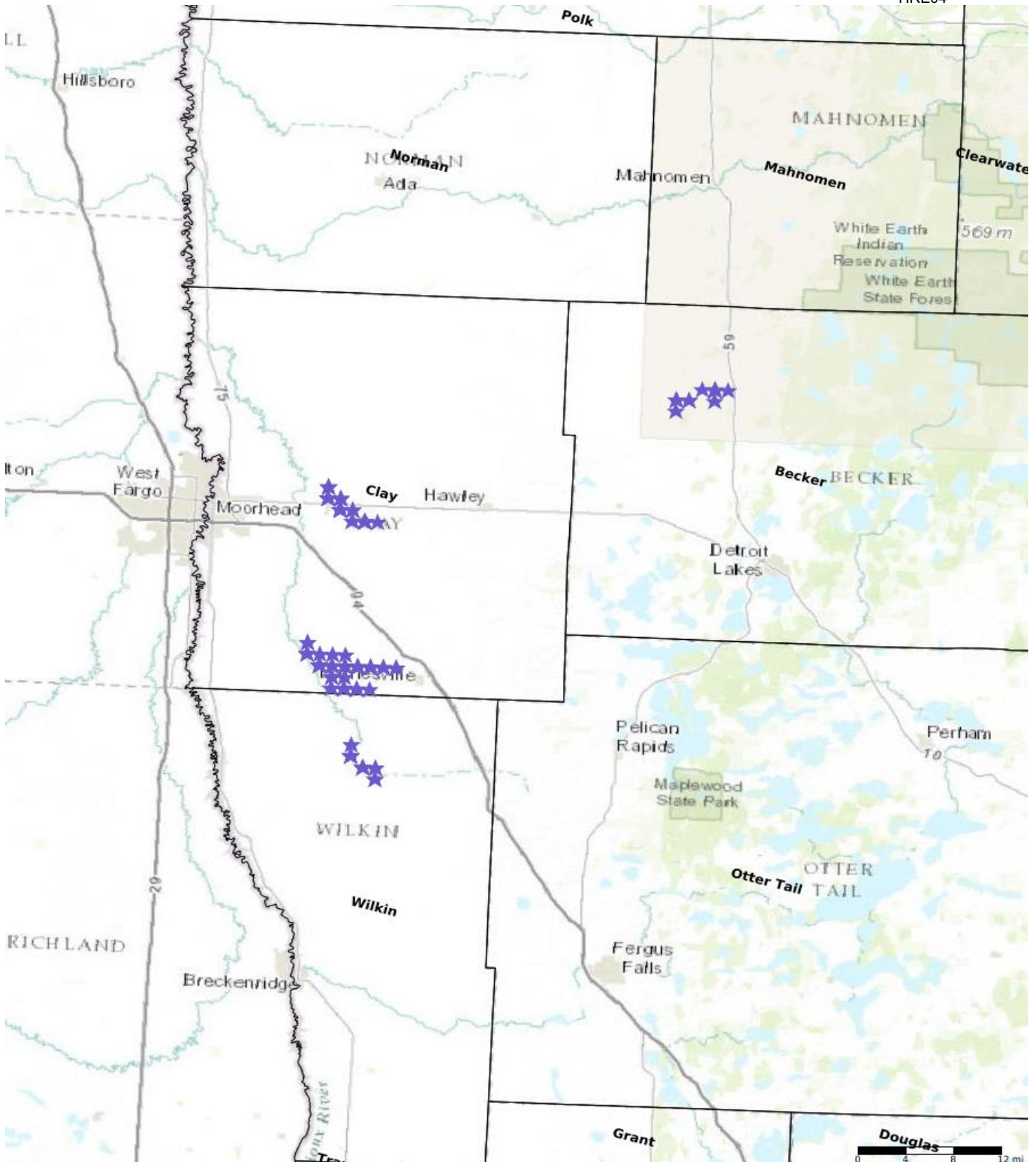
While numerous reaches in the Buffalo River watershed are identified, the Upper Buffalo and South Branch of the Buffalo River restoration reaches are being prioritized for implementation. These projects are nearly shovel ready and will be by the time LSOHC funding is available. Significant benefits to 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	\$52,327	No
23.0075.000	Becker	14142216	3	\$22,426	No
23.0077.000	Becker	14142216	11	\$82,229	No
23.0080.000	Becker	14142216	5	\$37,377	No
23.0108.000	Becker	14142221	18	\$134,556	No
23.7022.200	Becker	14142215	3	\$22,426	No
23.0056.001	Becker	14142212	18	\$165,000	No
23.0052.000	Becker	14142212	17	\$127,081	No
23.0055.001	Becker	14142212	2	\$14,951	No
23.0060.000	Becker	14142213	8	\$170,000	No
23.0048.000	Becker	14142211	12	\$89,704	No
23.0056.000	Becker	14142212	12	\$89,704	No
23.0055.000	Becker	14142212	7	\$52,327	No
04.0038.000	Becker	14141207	21	\$70,000	Yes
23.0053.000	Becker	14142212	1	\$7,475	No
23.0054.000	Becker	14142212	0	\$0	No
01.023.4001	Clay	13747223	1	\$7,475	No
01.023.4000	Clay	13747223	4	\$29,901	No
01.023.2201	Clay	13747223	1	\$7,475	No
01.023.0100	Clay	13747223	17	\$127,081	No
01.015.2000	Clay	13747215	1	\$7,475	No
01.015.1000	Clay	13747215	16	\$119,605	No
01.015.0300	Clay	13747215	2	\$14,951	No
01.014.3000	Clay	13747214	10	\$74,753	No
01.010.4001	Clay	13747210	1	\$7,475	No
01.010.3770	Clay	13747210	1	\$7,475	No
02.060.0101	Clay	13746220	1	\$7,475	No
02.023.3701	Clay	13746223	10	\$74,753	No
02.023.3301	Clay	13746223	4	\$29,901	No
02.023.3001	Clay	13746223	1	\$7,475	No
02.022.4600	Clay	13746222	7	\$52,327	No
02.022.4400	Clay	13746222	5	\$37,377	Yes
02.022.3000	Clay	13746222	11	\$82,229	No
02.021.4330	Clay	13746221	1	\$7,475	No
02.021.4000	Clay	13746221	5	\$37,377	No
02.021.2000	Clay	13746221	17	\$127,081	No
02.021.1800	Clay	13746221	1	\$7,475	No
02.020.2201	Clay	13746220	18	\$134,556	No
02.020.2000	Clay	13746220	2	\$14,951	No
02.020.1101	Clay	13746220	17	\$127,081	No
02.020.1000	Clay	13746220	2	\$14,951	No
02.019.1500	Clay	13746219	12	\$89,704	No

02.019.1101	Clay	13746219	1	\$7,475	No
02.019.0200	Clay	13746219	5	\$37,377	No
02.018.3000	Clay	13746218	16	\$119,605	No
01.013.4700	Clay	13747213	1	\$7,475	No
25.018.4000	Clay	13946218	1	\$7,475	No
25.018.1000	Clay	13946218	20	\$149,507	No
25.017.4100	Clay	13946217	1	\$7,475	No
25.017.4000	Clay	13946217	2	\$14,951	No
25.017.3600	Clay	13946217	3	\$22,426	No
25.017.3000	Clay	13946217	2	\$14,951	No
25.017.2600	Clay	13946217	1	\$7,475	No
25.017.2000	Clay	13946217	1	\$7,475	No
25.017.1000	Clay	13946217	3	\$22,426	No
25.016.3000	Clay	13946216	1	\$7,475	No
25.007.4701	Clay	13946207	13	\$97,179	No
25.007.4700	Clay	13946207	4	\$29,901	No
20.035.4303	Clay	14047235	3	\$22,426	No
20.035.4302	Clay	14047235	3	\$22,426	No
20.035.0401	Clay	14047235	1	\$7,475	No
10.012.9999	Clay	13947212	2	\$14,951	No
10.012.9001	Clay	13947212	1	\$7,475	No
10.012.4502	Clay	13947212	2	\$14,951	No
10.012.4501	Clay	13947212	10	\$74,753	No
10.012.2470	Clay	13947212	4	\$29,901	No
10.012.2300	Clay	13947212	1	\$7,475	No
02.033.2060	Clay	13746233	1	\$7,475	No
10.012.2202	Clay	13947212	1	\$7,475	No
10.012.2201	Clay	13947212	1	\$7,475	No
10.012.2104	Clay	13947212	1	\$7,475	No
10.012.1000	Clay	13947212	6	\$44,852	No
10.002.1801	Clay	13947202	1	\$7,475	No
10.002.1400	Clay	13947202	6	\$44,852	Yes
10.002.1301	Clay	13947202	1	\$7,475	No
10.002.1300	Clay	13947202	2	\$14,951	No
10.002.1201	Clay	13947202	4	\$29,901	No
10.001.3301	Clay	13947201	1	\$7,475	No
10.001.3000	Clay	13947201	10	\$74,753	No
10.001.2000	Clay	13947201	3	\$22,426	No
10.012.2203	Clay	13947212	3	\$22,426	No
02.032.3000	Clay	13746232	1	\$7,475	No
02.032.2000	Clay	13746232	10	\$74,753	No
02.032.1000	Clay	13746232	10	\$74,753	No
02.031.3000	Clay	13746231	7	\$52,327	No
02.031.2001	Clay	13746231	1	\$7,475	No
02.031.2000	Clay	13746231	7	\$52,327	No
02.031.0400	Clay	13746231	21	\$156,991	No
02.030.0300	Clay	13746230	2	\$14,951	No
01.036.1100	Clay	13747236	1	\$7,475	No
01.036.0100	Clay	13747236	8	\$59,803	No
01.025.4000	Clay	13747225	14	\$104,655	No
01.025.1000	Clay	13747225	13	\$97,179	No
01.024.4000	Clay	13747224	7	\$52,327	No
01.024.0000	Clay	13747224	14	\$104,655	No
01.023.4002	Clay	13747223	3	\$22,426	No
12-004-0400	Wilkin	13546204	13	\$97,179	Yes
12-005-0600	Wilkin	13546205	16	\$119,605	Yes
12-005-0300	Wilkin	13546205	8	\$59,803	Yes
12-005-0200	Wilkin	13546205	4	\$29,901	Yes

12-006-0100	Wilkin	13546205	13	\$97,179	Yes
12-009-0200	Wilkin	13546209	1	\$7,475	Yes
12-009-0100	Wilkin	13546209	1	\$7,475	Yes
12-004-0500	Wilkin	13546204	1	\$7,475	Yes
03-030-0400	Wilkin	13646230	1	\$7,475	Yes
03-031-0400	Wilkin	13646231	5	\$37,377	Yes
03-031-0500	Wilkin	13646231	3	\$22,426	Yes
03-031-0100	Wilkin	13646231	10	\$74,753	Yes
03-031-0200	Wilkin	13646231	4	\$29,901	Yes



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

Parcel Map
Buffalo River Watershed Stream Habitat Program -
Phase 2
(Data Generated From Parcel List)



Buffalo River Watershed Stream Habitat Program—Phase 2



Project Background & Scope

Throughout the last century, channel straightening efforts and poor field practices have significantly reduced the habitat quality within the Buffalo-Red River Watershed District (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 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 Minnesota Department of Natural Resources (DNR) Stream Habitat Program as well as the Minnesota Board of Water and 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 BWSR. As part of their comprehensive subwatershed planning process, the BRRWD

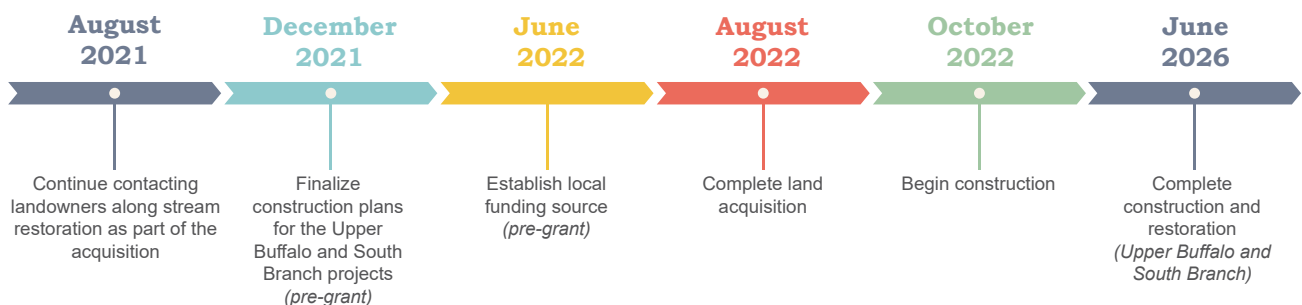
has completed planning and design on three additional stream reaches which are included as part of this application package. These include the restoration of Whisky Creek, its south tributary, and the Buffalo River tributary near Glyndon and their associated riparian corridors. Additional stream restoration 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.**

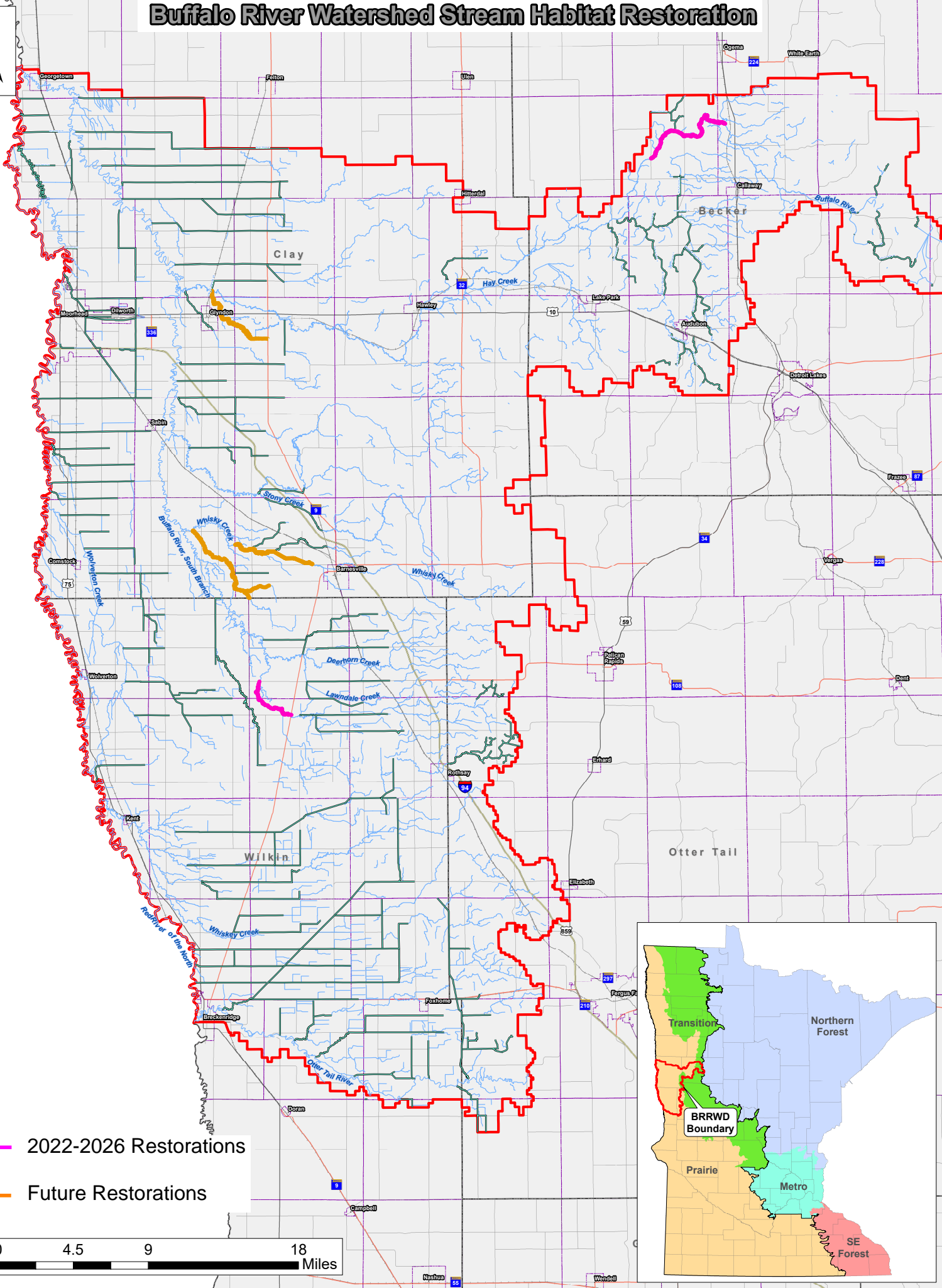
Outcomes/Benefits

- 11.2 miles of restored stable natural meandering stream with functional floodplain
- Restored hydrology for riparian wetlands and uplands
- Runoff Reduction
- Improved water quality
- Over 225 acres of permanently protected, restored, and enhanced riparian prairie habitat

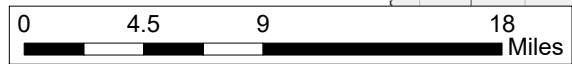
Timeline



Buffalo River Watershed Stream Habitat Restoration



- 2022-2026 Restorations
- Future Restorations



FILE: 172026R1.S03C_Graphic_2021.mxd



1150 Hwy 75 North, Breckenridge, MN 56520 (218) 643-2933

May 20, 2021

Peter Fjestad, President
Buffalo-Red River Watershed District
1303 4th Ave NE
Barnesville, MN 56514

Dear Mr. Fjestad,

The Wilkin Soil and Water Conservation District (SWCD) would like to express our support of the Buffalo-Red River Watershed District's (BRRWD) application to the Lessard Sams Outdoor Heritage Council (LSOHC) for funding to restore high priority streams.

Your project to restore 11.2 miles of natural stream channels with meanders, pools and riffles and more than 225 acres of riparian corridors will result in the restoration and enhancement of valuable wetland and prairie habitats and benefit fish, game and other wildlife.

For decades the Wilkin SWCD has worked collaboratively with the BRRWD, landowners and other partners in the comprehensive watershed planning process and to complete many complex natural resource restoration and enhancement projects. We are confident that the acquisition of LSOHC funding when coupled with existing landowner and stakeholder support will result in another successful project.

Sincerely,

Don Bajumpaa
District Manager
Wilkin SWCD

It is the mission of the Wilkin Soil and Water Conservation District to provide local leadership in the conservation of soil, water, and related natural resources through programs and partnerships with individuals, businesses, organizations and government.