



## Lessard-Sams Outdoor Heritage Council

Fairmont Chain of Lakes Habitat Restoration Plan, Phase 1  
Laws of Minnesota 2019 Final Report

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### General Information

**Date:** 01/27/2023

**Project Title:** Fairmont Chain of Lakes Habitat Restoration Plan, Phase 1

**Funds Recommended:** \$1,390,000

**Legislative Citation:** ML 2019, 1st Sp. Session, Ch. 2, Art. 1, Sec. 2, subd, 2(k)

**Appropriation Language:** \$1,390,000 the first year is to the commissioner of natural resources for an agreement with the city of Fairmont to restore and enhance grassland, wetland, and stream habitats in the Dutch Creek watershed. A list of proposed restorations and enhancements must be provided as part of the required accomplishment plan.

### Manager Information

**Manager's Name:** Troy Nemmers

**Title:** Director of Public Works / City Engineer

**Organization:** City of Fairmont

**Address:** 100 Downtown Plaza

**City:** Fairmont, MN 56031

**Email:** [tnemmers@fairmont.org](mailto:tnemmers@fairmont.org)

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**Fax Number:**

**Website:**

### Location Information

**County Location(s):** Martin.

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

- Prairie

**Activity types:**

- Restore
- Enhance

**Priority resources addressed by activity:**

- Wetlands

- Prairie
- Habitat

## Narrative

### Summary of Accomplishments

The Fairmont Chain of Lakes habitat restoration project converted almost 35 acres of existing undeveloped and row crop lands into prime habitat. The open water areas were designed to promote northern pike spawning areas to benefit that fish species within the Chain of Lakes. This was accomplished by connecting to the existing Dutch Creek channel that flows adjacent to the project and outlets into the downstream lakes. The restoration included native prairie plantings, removal of invasive species along the Dutch Creek corridor, and restoration of a highly eroded portion of the creek channel utilizing natural vegetation.

### Process & Methods

A consultant was hired to complete the final design after the city procured the grant funding. During design several partner agencies were consulted to ensure we met as many outcomes of those groups as were financially feasible. The consultant created the final plans and bids were requested. The low-bid contractor was hired to complete the grading and site establishment on the project. They began by excavating several thousand yards of material for the habitat basins. Much of this excavation was intended to be wasted on-site, but the city had another project that required fill so much of the excavated material was repurposed to a city lime pond closure project. This improved habitat included approximately 6 acres of newly created wetland and open water areas. The contractor then addressed a highly eroded bank of Dutch Creek adjacent to the project. This process involved excavation and installation of a significant toe-wood erosion control system. Following the establishment of the toe-wood, the contractor made the connection from Dutch Creek to the newly excavated habitat pond to supply water to the pond and allow fish passage in higher flows. Topsoil was spread back on the site and the subcontractor began establishing the site and installing trees, shrubs and plugs and 29 acres of native prairie plantings. The project included 42 trees, 135 shrubs, 500 live stakes, and 2000 herbaceous plugs. The restoration contractor has been maintaining the plantings through much of 2022. The project will be handed over to a restoration specialist to implement a 3-year vegetation management plan.

### How did the program address habitats of significant value for wildlife species of greatest conservation need, threatened or endangered species, and/or list targeted species?

This project was used to create open water/wetland spawning areas for the northern pike. The project will provide the largest, highest quality spawning habitat within the Fairmont Chain of Lakes Watershed. DNR fish surveys have shown very low counts of this top(apex) predator in the Chain of Lakes. The Chain of Lakes are typical Southern Minnesota lakes that struggle to maintain shoreline vegetation due to development, water clarity, and fluctuating water levels. This lack of appropriate vegetated/wetland areas limits the ability of the northern pike to naturally reproduce and has allowed the Invasive Carp and Yellow Bass populations to grow rapidly. The newly developed area was specifically designed to create habitat preferred by the pike species. In addition, restored floodplain wetlands and improved upland habitat will benefit Blanding's Turtles, a State of Minnesota Threatened Species. While no Blanding's Turtles have been identified at the Dutch Creek site, this species has been found on the north part of the lake chain habitat corridor and the south part of the lake chain habitat corridor. This site will provide suitable habitat for the introduction of listed plant species and has the potential to support species like the Monarch, pollinator species and other insects in need of habitat.

## **How did the program use science-based targeting that leveraged or expanded corridors and complexes, reduced fragmentation, or protected areas in the MN County Biological Survey.**

Just downstream of the site is a designated Minnesota County Biological Survey (MCBS) site with moderate biodiversity significance, Hall Lake Woods. This woodland park was identified as a Basswood – Bur Oak – Green Ash forest by MCBS in 2008. This native riparian forest extends south along the west shore of Hall lake and Budd Lake for over a mile and is included in the 260-acre City of Fairmont Cedar Park. The restored wetlands will expand the habitat corridor along the west side of the Fairmont Chain of Lakes. The five lakes in the City of Fairmont are part of a habitat corridor that expands from the south edge of the Martin County, into Iowa, and to the north edge of Martin County, into Watonwan County. It is in the Northern part of the habitat complex that the largest population of Blanding’s Turtles are being studied. We hope to expand their range with the addition of high quality habitat projects such as this. This would provide a 25+ mile corridor, with the proposed project area being a high priority area within the habitat corridor.

## **Explain Partners, Supporters, & Opposition**

The city partnered with several agencies on this project. The local Soil and Water Conservation District (SWCD) was involved in the design of the project and will be assisting with guidance on future vegetation establishment and maintenance. The Lakes Foundation was involved on the preliminary design and supported the streambank restoration and northern pike habitat portions of the project. Barr Engineering was hired as a consultant to complete the final design and assist with construction management. Beemer Companies, a local contractor, completed the site grading on the project and Landbridge Ecological completed the site seeding and planting. The MN Department of Natural Resources was consulted through the process by guiding the floodplain elevations that would control where the habitat basin could be connected to Dutch Creek. The DNR fisheries also provided input on the design of the basin and guidance on future maintenance. Opposition to the project was minimal.

## **Exceptional challenges, expectations, failures, opportunities, or unique aspects of program**

Site challenges included weather conditions and water levels. Since this project was completed adjacent to a creek it was challenging to complete the grading during any wet periods. Following a COVID hiatus, the project was fortunate to have a dry summer/fall of 2021 to complete much of the work. Expectations are that northern pike will be using the site in the spring 2023. One failure may be the evidence of carp from the main lake finding the habitat even before the grass began to grow on the project. The opportunity for the pike is their natural spawning cycle is earlier than the carp so the expectation is that carp will have only a minor affect on the process. This project is very unique in that it targets a highly agricultural nutrient-rich watershed and also targets a specific fish species that is lacking in the Fairmont Chain.

## **What other fund may contribute to this program?**

- Environment and Natural Resource Trust Fund

## **How were the funds used to advance the program?**

Funds from the ENRTF were utilized to construct a temperature enhanced nitrate bioreactor on the site. The bioreactor is a pilot project in partnership with the University of Minnesota to evaluate nitrate removal from agricultural watersheds at low temperatures. A greenhouse structure was constructed to heat the incoming water to increase nitrate removal during spring melt/runoff conditions. The combination of these 2 projects targeted both the water quality and the aquatic life of the Chain of Lakes. By tying the 2 projects together the city was able to higher one contractor to complete the entire project saving costs on mobilization and conflicts from overlapping contractors.

## What is the plan to sustain and/or maintain this work after the Outdoor Heritage Funds are expended?

The City owns the property and will work to maintain this habitat in the future. A contract is in place for a 3-year vegetation management plan with an restoration specialty company. Monitoring of the spawning activity will be completed in future years to identify how it is being utilized.

### Actions to Maintain Project Outcomes

Year	Source of Funds	Step 1	Step 2	Step 3
2023-2025	Local funds	Overseed, spray weeds, and water as needed	Burn and overseed	Spray weeds and overseed

## Budget

### Totals

Item	Requested	AP Amount	Spent	Antic. Leverage	Received Leverage	Leverage Source	Original Total	Final Total
Personnel	-	-	-	\$20,000	-	City of Fairmont	\$20,000	-
Contracts	\$1,090,000	\$1,090,000	\$824,600	-	-	-	\$1,090,000	\$824,600
Fee Acquisition w/ PILT	-	-	-	-	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-	-	-	-	-
Easement Acquisition	-	-	-	-	-	-	-	-
Easement Stewardship	-	-	-	-	-	-	-	-
Travel	-	-	-	-	-	-	-	-
Professional Services	\$300,000	\$300,000	\$297,000	-	-	-	\$300,000	\$297,000
Direct Support Services	-	-	-	\$10,000	-	City of Fairmont	\$10,000	-
DNR Land Acquisition Costs	-	-	-	-	-	-	-	-
Capital Equipment	-	-	-	-	-	-	-	-
Other Equipment/Tools	-	-	-	-	-	-	-	-
Supplies/Materials	-	-	-	\$300	-	City of Fairmont	\$300	-
DNR IDP	-	-	-	-	-	-	-	-
<b>Grand Total</b>	<b>\$1,390,000</b>	<b>\$1,390,000</b>	<b>\$1,121,600</b>	<b>\$30,300</b>	<b>-</b>	<b>-</b>	<b>\$1,420,300</b>	<b>\$1,121,600</b>

### Personnel

Position	Annual FTE	Years Working	Funding Request	Antic. Leverage	Leverage Source	Total
Program Manager	0.4	6.0	-	\$20,000	City of Fairmont	\$20,000

**Explain any budget challenges or successes:**

Project expenses came in below budget.

**Total Revenue:** \$0

**Revenue Spent:** \$0

**Revenue Balance:** \$0

**Of the money disclosed above, what are the appropriate uses of the money:**

- E. This is not applicable as there was no revenue generated.

## Output Tables

### Acres by Resource Type (Table 1)

Type	Wetland (AP)	Wetland (Final)	Prairie (AP)	Prairie (Final)	Forest (AP)	Forest (Final)	Habitat (AP)	Habitat (Final)	Total Acres (AP)	Total Acres (Final)
Restore	5	5	16	16	0	0	0	0	21	21
Protect in Fee with State PILT Liability	0	0	0	0	0	0	0	0	0	0
Protect in Fee w/o State PILT Liability	0	0	0	0	0	0	0	0	0	0
Protect in Easement	0	0	0	0	0	0	0	0	0	0
Enhance	0	0	14	14	0	0	0	0	14	14
<b>Total</b>	<b>5</b>	<b>5</b>	<b>30</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>35</b>	<b>35</b>

### How many of these Prairie acres are Native Prairie? (Table 1b)

Type	Native Prairie (AP)	Native Prairie (Final)
Restore	16	16
Protect in Fee with State PILT Liability	0	0
Protect in Fee w/o State PILT Liability	0	0
Protect in Easement	0	0
Enhance	14	14
<b>Total</b>	<b>30</b>	<b>30</b>

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

Type	Wetland (AP)	Wetland (Final)	Prairie (AP)	Prairie (Final)	Forest (AP)	Forest (Final)	Habitat (AP)	Habitat (Final)	Total Funding (AP)	Total Funding (Final)
Restore	\$1,308,400	\$1,045,000	\$61,600	\$61,600	-	-	-	-	\$1,370,000	\$1,106,600
Protect in Fee with State PILT Liability	-	-	-	-	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-	-	-	-	-
Enhance	-	-	\$20,000	\$20,000	-	-	-	-	\$20,000	\$20,000
<b>Total</b>	<b>\$1,308,400</b>	<b>\$1,045,000</b>	<b>\$81,600</b>	<b>\$81,600</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>\$1,390,000</b>	<b>\$1,126,600</b>

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

Type	Metro / Urban (AP)	Metro / Urban (Final)	Forest / Prairie (AP)	Forest / Prairie (Final)	SE Forest (AP)	SE Forest (Final)	Prairie (AP)	Prairie (Final)	N. Forest (AP)	N. Forest (Final)	Total (AP)	Total (Final)
Restore	0	0	0	0	0	0	21	21	0	0	21	21
Protect in Fee with State PILT Liability	0	0	0	0	0	0	0	0	0	0	0	0
Protect in	0	0	0	0	0	0	0	0	0	0	0	0

Fee w/o State PILT Liability													
Protect in Easement	0	0	0	0	0	0	0	0	0	0	0	0	0
Enhance	0	0	0	0	0	0	14	14	0	0	14	14	14
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>35</b>	<b>35</b>	<b>0</b>	<b>0</b>	<b>35</b>	<b>35</b>	<b>35</b>

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

Type	Metro / Urban (AP)	Metro / Urban (Final)	Forest / Prairie (AP)	Forest / Prairie (Final)	SE Forest (AP)	SE Forest (Final)	Prairie (AP)	Prairie (Final)	N. Forest (AP)	N. Forest (Final)	Total (AP)	Total (Final)
Restore	-	-	-	-	-	-	\$1,370,000	\$1,106,600	-	-	\$1,370,000	\$1,106,600
Protect in Fee with State PILT Liability	-	-	-	-	-	-	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-	-	-	-	-	-	-
Enhance	-	-	-	-	-	-	\$20,000	\$20,000	-	-	\$20,000	\$20,000
<b>Total</b>	-	-	-	-	-	-	<b>\$1,390,000</b>	<b>\$1,126,600</b>	-	-	<b>\$1,390,000</b>	<b>\$1,126,600</b>

## Target Lake/Stream/River Feet or Miles

## Outcomes

### Programs in prairie region:

- Protected, restored, and enhanced shallow lakes and wetlands ~ *The project created 6 acres of wetlands and open water in addition to enhancing 13 acres of native habitat that was in poor condition as well as adding 16 acres of new native habitat over previously tilled land.*

## Parcels

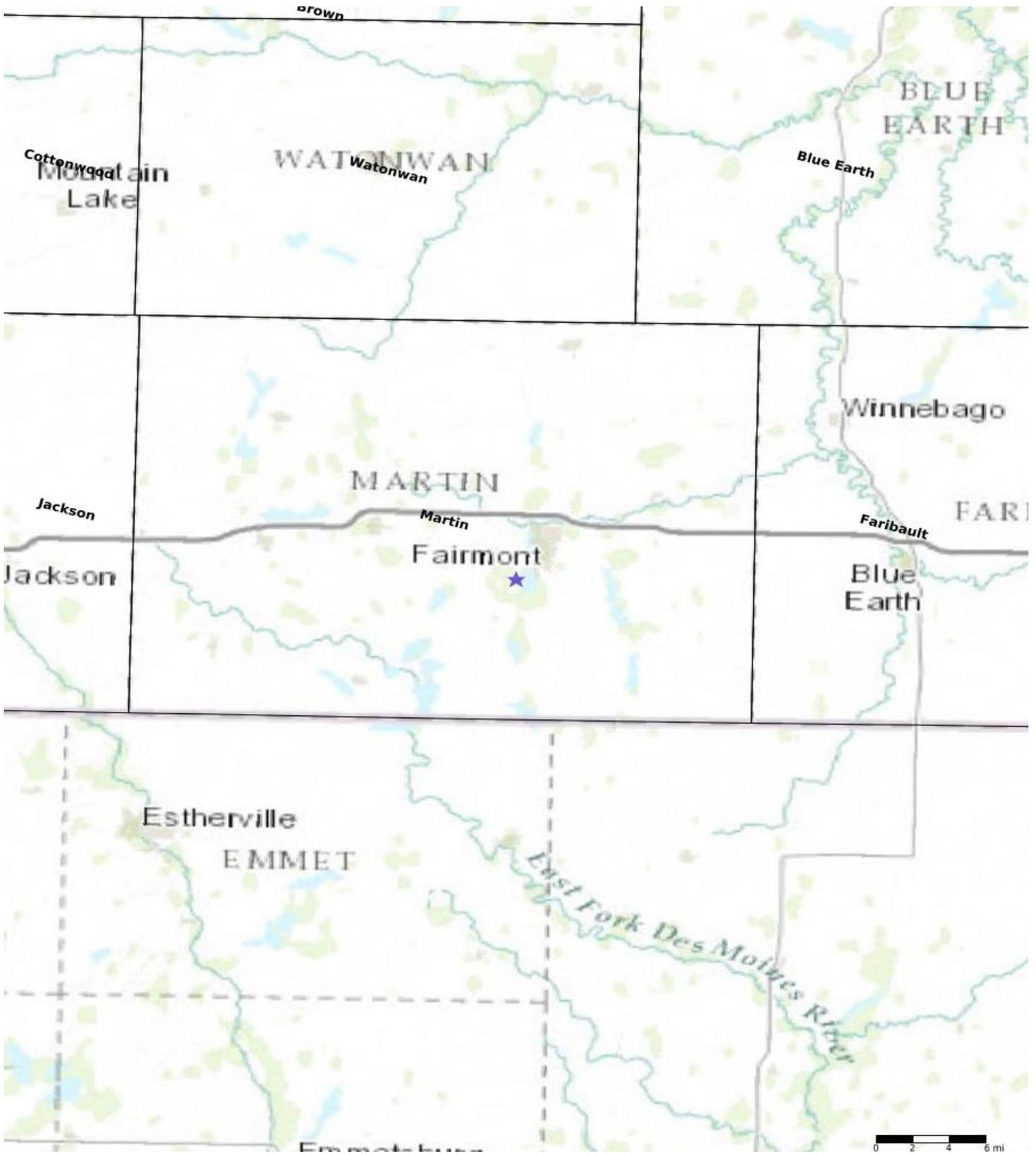
### Sign-up Criteria?

[Yes](#)

### Restore / Enhance Parcels

Name	County	TRDS	Acres	Est Cost	Existing Protection
City of Fairmont habitat property	Martin	10230219	35	\$0	Yes

# Parcel Map



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