AGENDA

Lakes Management Committee

Meeting date: 8/6/2025 Start time: 9:00 am End time: 10:30 am

Meeting location: Fairmont City Hall, Upstairs Confrence Room

TIME	DESCRIPTION	INTRODUCTION
9:00 am	**Begin Meeting**	Neusch/Oman
9:05 am	**Updates**	Neusch **Indran Kamalanathan, MDH**
9:15 pm	Curly Leaf Pondweed Mitigation Budget 2026 - Discussion	Oman
9:25 am	**CLP Timeline/CLP RFP**	**Neusch/Oman**
9:35 am	Invasive Carp Management Discussion	Neusch
9:45 am	**Water Control System - George Lake Dam**	Neusch
9:55 am	**Rock Arch Rapids - George Lake Dam**	**Neusch/Oman** Jon Lore, DNR
10:15 am	**1W1P - GBERBA Discussion**	**Jesse Walters, Martin SWCD**
10:20 am	**Other** **-Wakesurfing Lakebed Impact Study**	**Oman**
10:30 am	**Adjourn**	

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Included in this packet

1- Cedar Creek AgLand Restoration memo/photos

2- Curly leaf Pondweed Pickup service update

3- Curly Leaf Pondweed Budget

4- CLP Timeline

5- Rock Arch Rapids Info Sheet

6- GBERBA Map

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MEMORANDUM

TO: **Lakes Committee Members**
FROM: Hannah Neusch, Water Resources Coordinator
DATE: August 5, 2025
RE: **Update: Native Prairie Restoration**

Background: In the fall of 2024 the City worked with the Soil and Water Conservation District to seed the approximately 85 acres at the Cedar Creek farm and the approximately 2 acres at the Day Farm. The SWCD completed this seeding.

Expectations:
Sleep, Creep, LEAP
Sleep: The first year (2025) we may see very little growth above ground as native plants tend to put most of their energy into growing their roots, it may look like nothing is happening, but don't be fooled! All the growth is happening where we can't see it, underground.
Creep: The second year (2026) we will see more above ground growth, but it may look spotty and weedy. We might expect to see a few flowers and some small grasses. Some of these plants have roots which will reach 15 feet deep, it takes time to develop a healthy root system.
LEAP: The third year (2027) is when we will start seeing the different grasses and flowers really come into their own. As the years progess we wil begin to see an everchanging landscape as the established prairie ebbs and changes with the seasons.

The following observations were made by myself and Jesse Walters with Martin Soil and Water Conservation district. We are very pleased by the amount of growth we've seen so far this year. It looks excellent for a first year prairie, and Jesse was able to identify over 15 native species growing, some already entering a flowering stage. Our mixes have more than 15 species, but it is very difficult to Identify immature plants, so there may actually be more currently in a growth stage but not identifiable. It is uncommon, but very welcome, to have so many flowers during the first year or growth.

Because of the healthy growth and the low weed pressure the SWCD is not recommending a full mow of the prairie, which is customary in the first year. Instead the recommendation is to mow 'firebreaks' along the outside boundaries of the seeded fields. These mowed 'firebreaks' can double as walking paths for the 2025 season, allowing a unique secluded walk through the prairie. I have added some photos of the state of the restoration as of the beginning of July.

Again, this seeding was paid for using a grant offered through the SWCD and may not have been possible without this opportunity. A huge thank you to the staff at Martin SWCD!

Please keep these points in mind when you have conversations regarding these restorations with constituents, staff, and visitors. If there are any additional questions or concerns please contact me or Jesse Walters at the SWCD.

Hannah Neusch
Water Resources Coordinator











Curly Leaf Pondweed Pickup Data

Contractor Hired: Garrett Myren with Water's Edge

Pickup Began: June 16, 2025 with a curbside pickup service. Pickup continues with both curbside and dockside services. Ending August 4th.

Total CLP ermoved: 9.6 tons at a rate of $321/ton

The Numbers so far:

Total bags picked up:	Homes serviced:
480 bags	234 homes

Pickups By Curb	Pickups By Dock
222	12

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Project Name: Curly Leaf Pond Weed Management
Project #:

Category: Lake Restoration
Useful Life: 1 Year
Priority: High
Contact: Nick Lardy
Department: PW - Parks

Description

Management of Curly Leaf Pond Weed in the Fairmont Chain of Lakes

Justification

The Fairmont Chain of Lakes have experienced an abundance of curly leaf pond weed in the last few years. This invasive weed prevents residents from fishing, swimming, and boating in the spring and early part of the summer as they normally would. The management of curly leaf pond weed would hopefully decrease algae blooms later in the summer as well.

Operational Impact/Other

The possibility of algae blooms in the lakes may decrease from less organic matter decaying after the curly leaf pond weed dies off mid summer which would help with drinking water production.

Expenditures	Prior Yrs.	2025	2026	2027	2028	2029	Total
		$225,000.00	$ 230,000.00	$ 235,000.00	$ 240,000.00	$ 245,000.00	$ 1,175,000.00
							$ 0.00
							$ 0.00
Total	$ 0.00	$ 225,000.00	$ 230,000.00	$ 235,000.00	$ 240,000.00	$ 245,000.00	$ 1,175,000.00

Funding Sources	Prior Yrs.	2025	2026	2027	2028	2029	Total
Lake Restoration		$ 225,000.00	$ 230,000.00	$ 235,000.00	$ 240,000.00	$ 245,000.00	$ 1,175,000.00
							$ 0.00
							$ 0.00
Total	$ 0.00	$ 225,000.00	$ 230,000.00	$ 235,000.00	$ 240,000.00	$ 245,000.00	$ 1,175,000.00

Picture



Map



Curly Leaf Pondweed Management Timeline

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in partnership with

SWCD MARTIN

Late Summer 2024

Native Plant Survey

This delineation was funded by Martin SWCD. It was outside the window of CLP growth, however it gave us excellent insight on native species which are present in our lakes.

Winter 2024

City Budget Passed

$225,000 Set aside for CLP management in 2025, with funding into 2029.

Early Spring 2025

Contractors Identified

Contractors working with CLP must be certified with the DNR. A pool of certified contractors were selected based on availability and location.

Mid-May 2025

Wholistic Survey

This delineation is also funded by Martin SWCD and is expected to be a survey of CLP in full active growth. This survey is required to apply for a permit to manage CLP. This survey is anticipated to also include core samples of the lake bed to determine density of CLP turions.

Mid-June 2025

Results of Survey Anticipated

Data of the wholistic survey is analyzed, processed, and delivered. This may take up to a month. Timeline is estimated.

Mid-July 2025

Contractors Engaged

RFP sent to contractors identified as certified per the DNR.

Mid-August 2025

Contractor Hired

Contractor selected and hired. By this point CLP has ceased growing and will have died back, eliminating the need for CLP management in 2025. contractor will be scheduled for 2026.

Winter 2025

Apply for Permit

The Invasive Aquatic Plant Management (IAPM) permit is required by the DNR to conduct any type of management of CLP. A Permit will not be approved until there is a delineation of CLP locations and contractor(s) selected.

Spring 2026

Permit Approved

DNR may request changes or modifications to permit application. After discussions with DNR we expect to be issued an approved IAPM permit.

Late Spring 2026

Management Begins

DEPARTMENT OF NATURAL RESOURCES

Rock Arch Rapids

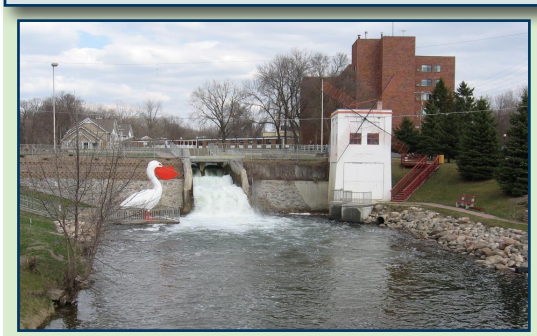
What are they and why are they used?

A **Rock Arch Rapids** is used to replace or modify dams.

- Reasons to modify dams:
- Dams are aging, degrading, and at increasing risk of failure.
  - Rainfall events are becoming more intense and frequent.
  - Land use changes direct extra runoff into river networks.
  - Dam maintenance is expensive and ongoing.
- Many dams no longer serve their original purpose.
- Dams present safety concerns.
  - Hydraulic undertows are a drowning hazard.
  - Dam failure risks lives and property damage down valley.
- Dams cause great ecologic harm to river ecosystems (*see back*).

MN DNR River Ecology Unit



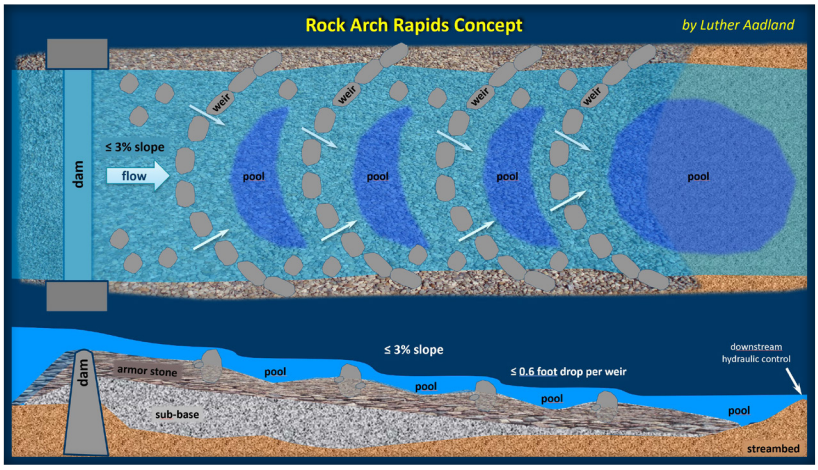


The deteriorating dam in Pelican Rapids, MN was modified into a Rock Arch Rapids winter 2022/2023. The ramp gradually steps down the water 5 feet over 12 arches.



Rock Arch Rapids Development and Features:

The Rock Arch Rapids (RAR) design concept was developed from years of research on natural stream features. Various naturally occurring riffle and rapids features were surveyed and analyzed for function, stability, fluid dynamics, habitat, and passability. Variations of this design have been constructed around the state (first one in 1994), studied, and refined over the years. *(Simplified graphic)*



Each RAR project is designed specifically since each river site is unique - considering total drop in water level, ramp length, flow conditions, flood size and frequency, floodplain concerns, structural constraints, fish community, etc. Each project also goes through a rigorous modeling process.

The RAR is composed of a rock ramp base that replaces the abrupt drop in water level with a gentle slope (less than 3%). The rock arches, or weirs, nested within the ramp are made of large boulders positioned in an arch with the top of the arch facing upstream and set lower than the 'legs' of the arch. This focuses the flow to the mid-line of the rapids. The large weir boulders are buried halfway or more in the rock base with the top of each boulder set at very precise elevations, to ensure less than half a foot of drop per weir. The boulders are set higher continuing towards the banks to dissipate flow energy along the banks and create slower flow areas for weaker swimming fishes. The boulders are also placed with varying sized gaps in between to create fish passage openings through the weirs. Deeper pool habitat is created between the arches for resting areas and low flow refuge.

Benefits of the **Rock Arch Rapids** design

Structural and Safety Benefits:



» structurally stable
» require minimal or no maintenance
» improve safety by eliminating hydraulic undertows or rollers known as drowning machines
» protect banks by directing flow towards mid-channel

Ecological Benefits:



- allows fish passage under all flow conditions (from spring floods to summer droughts) for fishes of all sizes and swimming abilities
- can include a low-flow channel for year-round aquatic passage
- fish species absent upstream return after dams are modified
- upstream expansion of native mussels via native fish hosts
- wildlife passage can be incorporated with bankfull flats
- creates high gradient stream habitat that is rare and crucial to the stream community that is often buried/submerged by dams
- accumulated reservoir sediments are stabilized in place
- stabilizes stream grade, or slope, preventing further up or downstream damage or degradation
- interstitial spaces in the rock ramp allow some subsurface flow through the hyporheic zone (the river's liver) that is very important to stream health and water quality
- restores natural sediment transport during higher flows through the boulder gaps and proper cross-sectional area
- design can be modified into alternating sine waves to accommodate larger, deeper pools for larger bodied fish species



Recreational Benefits:



- recreational boating opportunities for canoes, kayaks, paddle-boards, and tubing (flatter slopes are safer)
- fishing opportunities - migrating and spawning fish are drawn to this habitat and intentionally placed flat boulders can be incorporated as fishing platforms
- wildlife viewing opportunities for spawning fish and visiting birds and wildlife



Rock Arch Rapids Design Thresholds for Fish Passage:



- ramp slopes <= 3% slope (flatter slopes best, especially in large rivers)
- drops over the weirs <= 0.6 foot per weir
- pool depths >= 4 feet for small weirs; >= 6 feet in large rivers
- terraced or elliptical cross-section with gradual side slopes
- gaps between boulders sized to accommodate the range of body sizes of native fish and river flows

Blue Earth
Brown
Cottonwood
Faribault
Freeborn
Jackson
Le Sueur
Martin
Steele*
Waseca
Watonwan

NEW to GBERBA?

Check out our informational handbook for more information!

*non-members

Home

The Greater Blue Earth River Basin Alliance

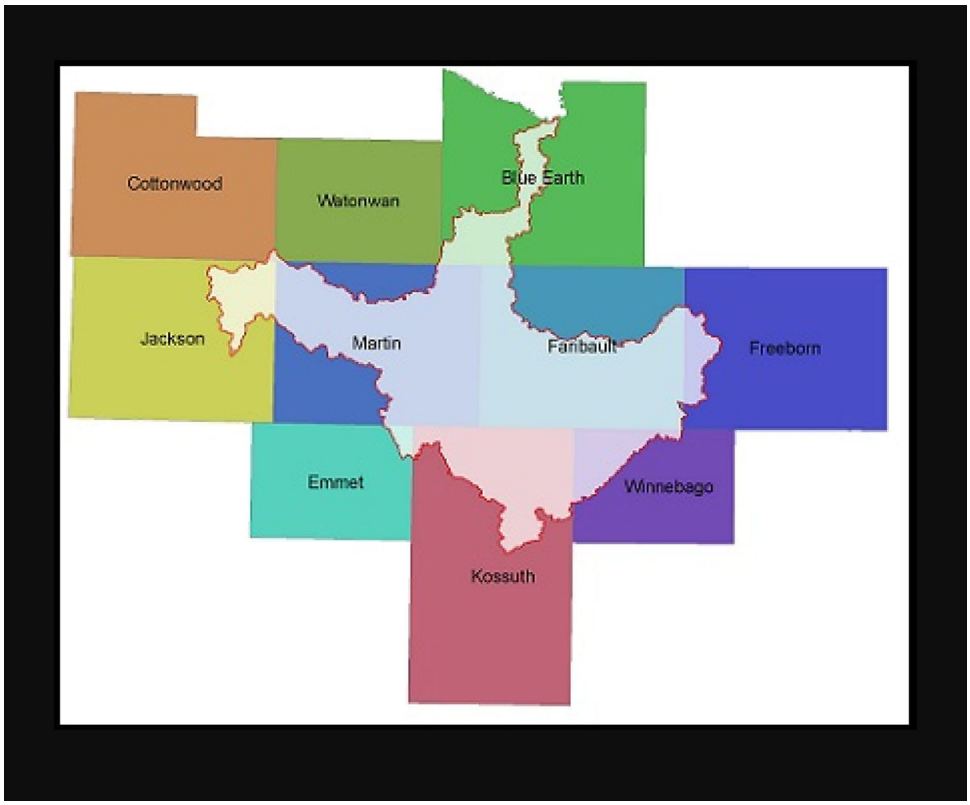
Is a Joint Powers Organization consisting of ten member Counties and SWCDs encompassing the Blue Earth, Le Sueur, and Watonwan River Watersheds.

Interactive map. Please click on the watershed that you would like to view.



The Greater Blue Earth River Basin Alliance's mission . . .

Is to lead in the implementation and promotion of economically viable watershed activities through the combined efforts of local partners and the Greater Blue Earth River Basin Alliances.


Cottonwood
Watonwan
Blue Earth
Jackson
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Faribault
Freeborn
Emmet
Winnebago
Kossuth