LOWER MINNESOTA RIVER
WATERSHED DISTRICT

Executive Summary for Action

Lower Minnesota River Watershed District Board of Managers Meeting
Wednesday, June 15, 2022

Agenda Item
Item 6. G. – Education & Outreach

Prepared By
Linda Loomis, Administrator

Summary
The Citizen Advisory Committee has been looking for opportunities to table at public events. Numerous opportunities, County Fairs, City Festivals, Home Remodeling Fairs, etc. have been identified. Jen Dullum, Education and Outreach Coordinator, has reached out to Carver County WMO, Riley Purgatory Bluff Creek WD and Nine Mile Creek WMO to see if there all these organizations can work together to cover more events. Jen will continue with this effort.

She has continued to follow up with schools and has received some response. She will update the Board once more specifics are available.

The LMRWD has received delivery of the educational signs. The City of Chaska has agreed to install the East Creek sign and the Savage Fen and Eagle Creek sign was delivered to the City of Savage for installation. The agreement that was used between Studio Lola and the LMRWD did not have language that would provide the LMRWD ownership of the images created by the artist. The LMRWD can purchase the artwork. Studio Lola has given the LMRWD two options to purchase the artwork:

Option 1: Unlimited use in any media without an end date - $1,800 (150% of the original cost to develop the images). With this option the artist will still own the right to the images and the LMRWD would credit the artist any time the artwork is used and the LMRWD cannot alter the artwork.

Option 2: Total copyright transfer - $2,875 (250% of the original cost to develop the images). With this option the LMRWD totally owns the artwork and can alter the artwork however it chooses.

Staff has discussed this and can see multiple uses for the artwork. Staff recommends the Board authorize Option 2. Money from the LMRWD Education budget would be used to pay for the purchase. Final sign design is attached.

Attachments
East Chaska Creek Sign
Savage Fen and Eagle Creek Sign

Recommended Action
Motion to authorize Option 2 purchase of artwork

EAST CHASKA CREEK RESTORATION

The City of Chaska and Lower Minnesota River Watershed District (LMRWD) coordinated efforts to restore and stabilize portions of East Chaska Creek in an effort to improve downstream water quality in the Minnesota River. The illustration shows the engineering techniques used in stabilizing the banks to prevent further erosion of the channel and reduce sediment from flowing to the Minnesota River. This will make the waters cleaner and healthier for the wildlife that relies on these waterways while also protecting city infrastructure like roads and trails.

DETAILS & IMPROVEMENTS

- **Repair a large scour hole in the creek channel downstream of Crosstown Boulevard**
- **Remove trees and debris within the creek to prevent further scour in the channel**
- **Improve creek resilience to high and low water flows by armoring the creek banks with streambank toe protection and installing in-channel supports, such as root wads and rock cross vanes**

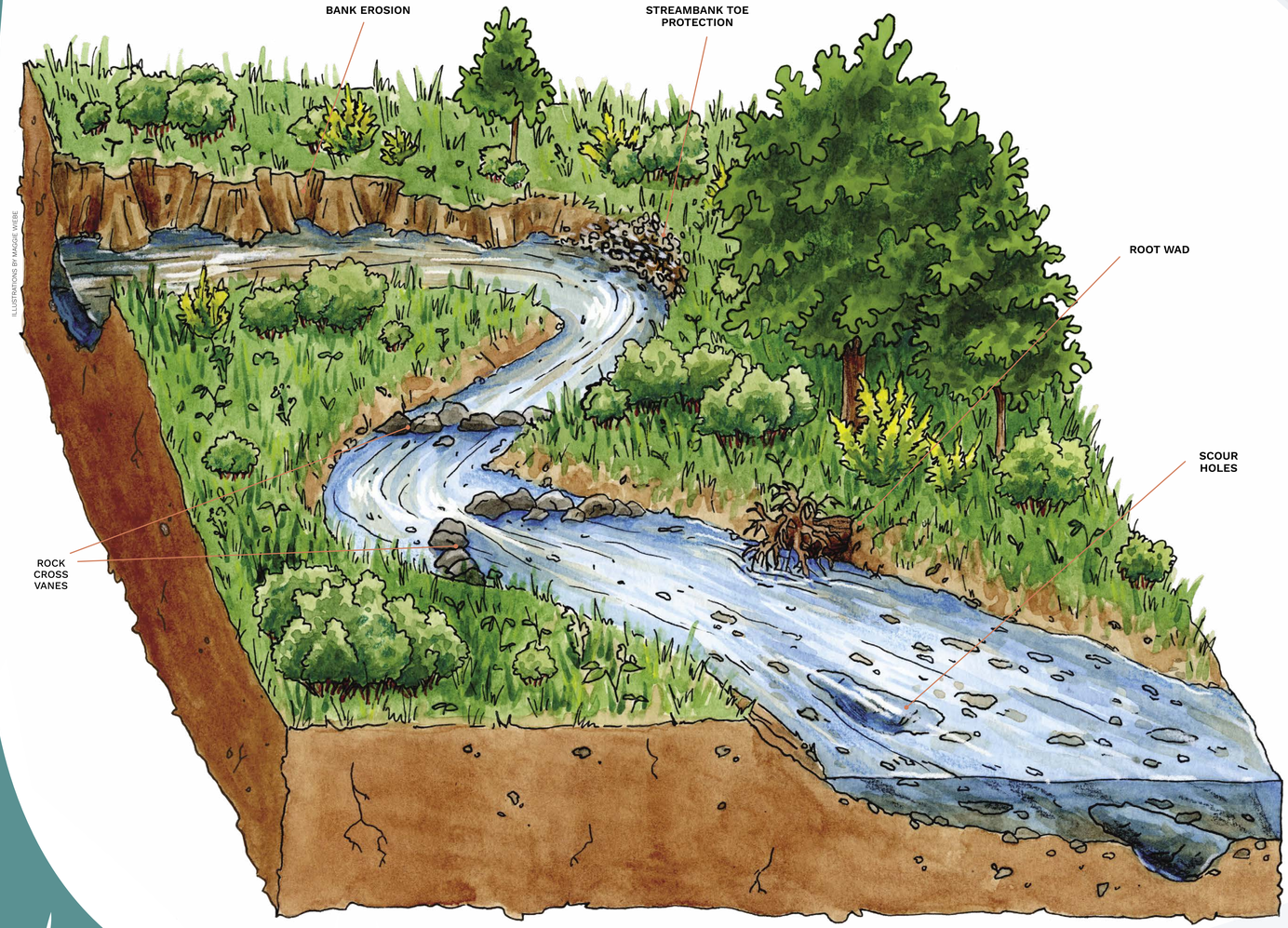
Why is it important to protect and restore? East Chaska Creek has an important role in the City of Chaska's stormwater management system by helping to drain local runoff and reduce flooding. By repairing the unstable creek banks of East Chaska Creek we reduce the likelihood of the creek to create a new path that may undercut public infrastructure like trails, roads, and buildings while reducing the amount of sediment entering our water resources.

HOW CAN YOU MAKE AN IMPACT?

Reduce Water Quantity—Think about ways to keep rainwater and snowmelt on your property where it can move into the soil naturally. Rain gardens, rain barrels, or simply aiming your downspouts onto the lawn or garden will reduce the amount of stormwater flushing from the storm sewers into the creek.

Improve Water Quality—Make sure to keep stormwater clean by picking up pet waste, disposing properly of chemicals, and keeping storm drains clear of litter, leaves, and debris. Water from rain and snowmelt that enters the drain on your street is not cleaned before entering your local waters.

Report to LMRWD if you see muddy water, unnatural colors, or bad smells coming into the creek from a pipe.



This is an artist rendition of engineering practices used in the project.

Q: WHAT IS EROSION

Erosion is the wearing away of soil by forces such as water, wind, gravity, and ice. While erosion has helped to form many distinct features of the Earth's surface including mountain peaks, valleys, and coastlines, excess erosion in the LMRWD is harming local ecosystems.

Q: WHAT IS A ROCK CROSS VANE?

A rock cross vane is a U-shaped boulder structure that redirects water flow away from streambanks to the center of the channel to increase stability. They also provide a habitat for fish and aquatic organisms.

Q: WHAT DO ROOT WADS DO?

Root wads are dead, or recently cut, trees that are buried into the streambank with the root system still intact to stabilize, reduce bank erosion, and provide fish and aquatic insect habitat.

Q: WHAT IS A SCOUR HOLE?

A scour hole is created by fast-moving water which carves out the creek bed material (soil and rocks) creating large holes in the channel that may cause infrastructure failure. However, engineered scour holes can provide areas of habitat for fish and other aquatic organisms if placed correctly in the stream.

Q: WHAT IS TOE PROTECTION?

Streambank toe protection is riprap (softball to basketball-sized boulders) installed where storm pipes enter the creek that slow the speed of entering stormwater, as well as protect the streambanks.

CLEAN WATER LAND & LEGACY AMENDMENT

City of Chaska

LOWER MINNESOTA RIVER WATERSHED DISTRICT

ABOUT THESE RESOURCES:
LMRWD has partnered with communities, cities, and counties locally to preserve and protect water and natural resources.

Learn more at lowermnriverwd.org.

SAVAGE FEN & EAGLE CREEK

UNIQUE NATURAL RESOURCES

Did you know that Savage is home to several rare natural resources? Savage Fen and Eagle Creek Trout Stream are two of these unique ecological features. What makes them so special?

SAVAGE FEN

Savage Fen is a rare calcareous fen, a unique peat-accumulating wetland that relies on a consistent supply of cool, calcium-rich groundwater. This fen was formed gradually after glaciers in the Minnesota River Valley receded, and its spongy, wet surface supports a variety of distinct species of plants, animals, and insects, including the threatened sterile sedge.

FACTS & FIGURES

- There are only about 200 known calcareous fens in Minnesota and most are less than four acres in size. Savage Fen is 55 acres.
- The plants that thrive in Savage Fen, such as sedges and rushes, enjoy an environment that is rich in calcium carbonate and low in oxygen and nutrient availability.
- To protect the rare native plant community found here, a Scientific and Natural Area was established encompassing Savage Fen in 1989.
- This balanced and fragile ecosystem is put at risk by changes in water levels. Too little moisture will cause the delicate peat to break down. Too much groundwater can flood plant species.

EAGLE CREEK

Eagle Creek is a nearly three-mile-long designated trout stream that flows into the Minnesota River and supports a self-sustaining brown trout population. The trout are cool-water-dependent and rely on groundwater that rises from natural springs along the stream.

FACTS & FIGURES

- In this area of the Minnesota River Valley, upward moving groundwater find breaks in the bedrock, forming the natural springs found along Eagle Creek. These springs support trout populations and keep the stream open year-round.
- The area surrounding Eagle Creek was Minnesota's first designated aquatic management area and is managed by the Minnesota Department of Natural Resources.
- Eagle Creek is one of seven state-designated trout waters in the Lower Minnesota River Watershed District (LMRWD).

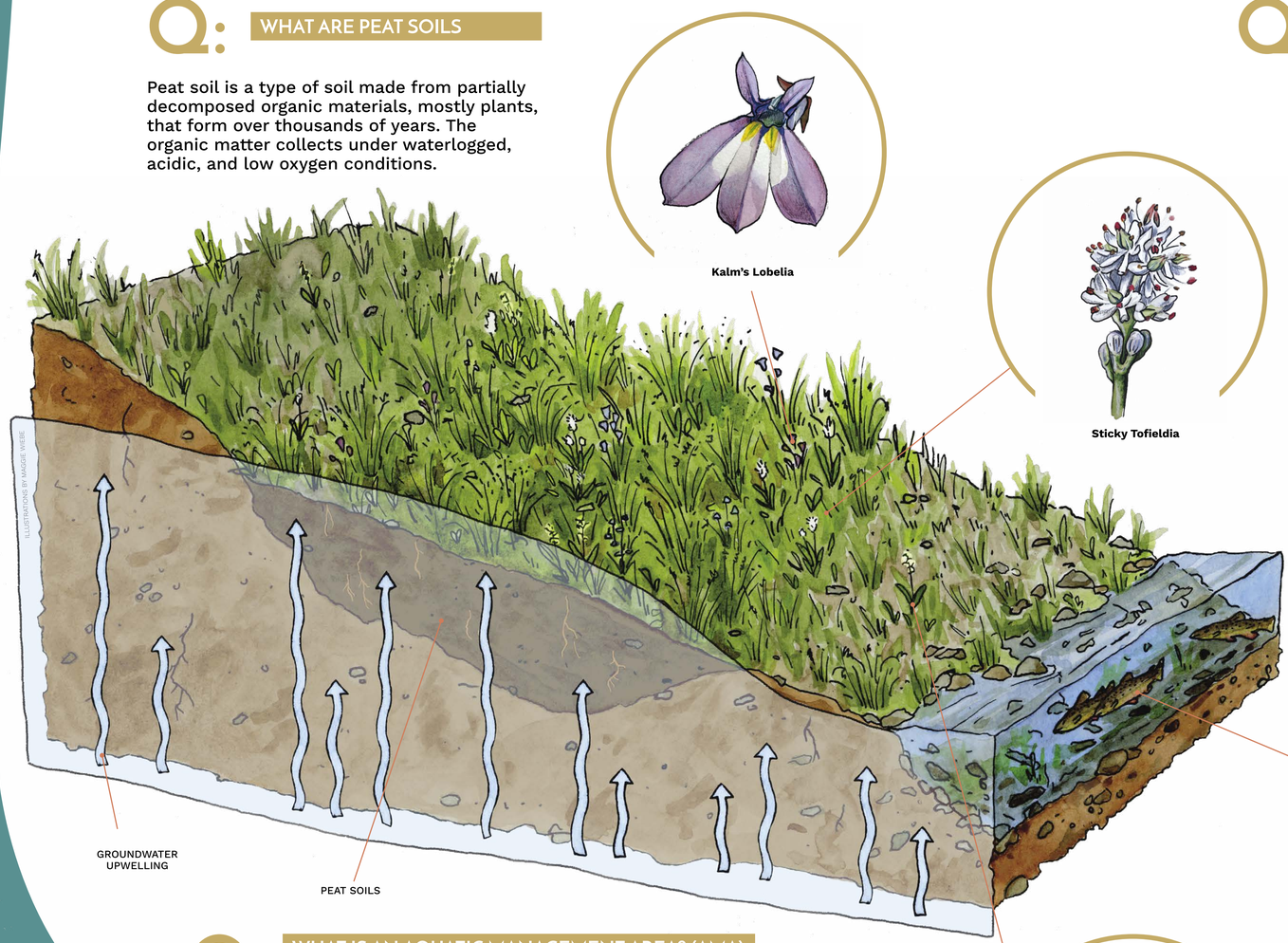
Q: WHAT IS A CALCAREOUS FEN?

Calcareous *[kal-kair-ee-uhs]*: containing calcium carbonate

Fen: a wetland predominantly fed by groundwater (as opposed to rainfall)

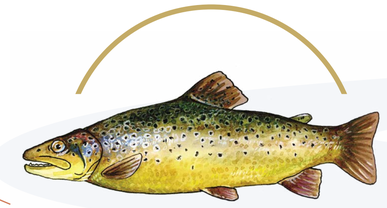
Q: WHAT ARE PEAT SOILS

Peat soil is a type of soil made from partially decomposed organic materials, mostly plants, that form over thousands of years. The organic matter collects under waterlogged, acidic, and low oxygen conditions.



Kalm's Lobelia

Sticky Tofieldia



Brown Trout

Yellow Widelip Orchid

Q: WHAT IS AN AQUATIC MANAGEMENT AREA? (AMA)

AMAs were established to protect and manage shoreland and riparian landscapes that are vital for fish and aquatic life, water quality, public fishing, and other outdoor recreation.

Q: WHAT CAN YOU DO TO HELP PROTECT THESE NEIGHBORHOOD GEMS?

Redirect Your Downspout: Angle your downspouts toward your lawn or gardens. This helps rainwater and snowmelt to flow into the ground where it can be naturally filtered and cooled to recharge the groundwater supply that feeds Savage Fen and Eagle Creek.

Conserve Water: Don't over water your lawn. Grass needs only about an inch of water per week (including rainfall). Overwatering directly affects fragile ecosystems because the water we use is pumped from the same sources the calcareous fens and trout streams depend on to survive.

Use Sidewalk Salt Minimally (or not at all): Shovel snow early and often so de-icers are not needed. One tablespoon of sidewalk salt permanently pollutes five gallons of water and can wreak havoc on the fragile trout stream and calcareous fen ecosystems. That adds up!

Savage

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