

Buckingham Creek Brook Trout Restoration Project



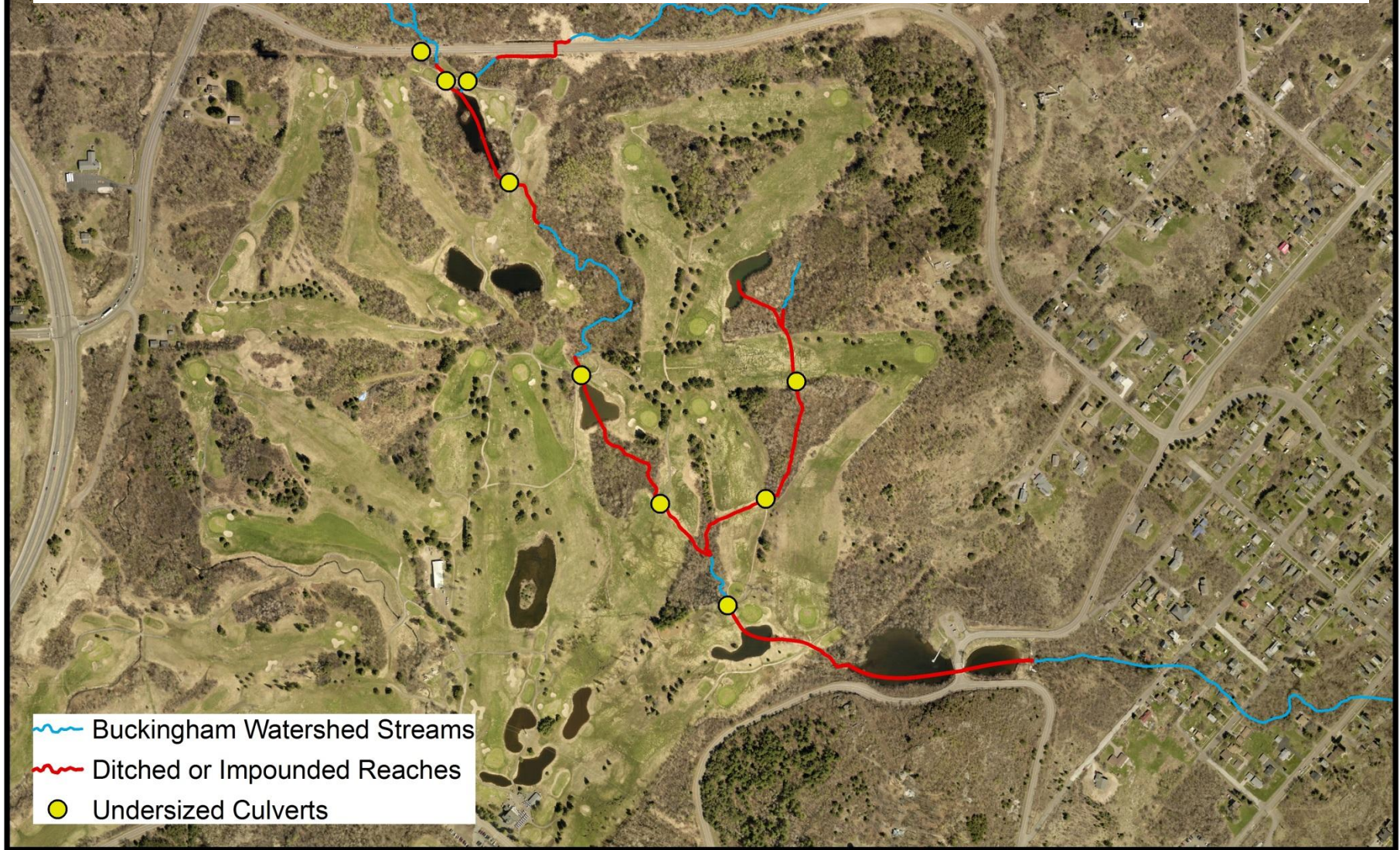
Duluth Natural Resources Commission Presentation – ~~March 6, 2024~~ October 1, 2025

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Buckingham Creek had high potential, but....

Natural processes had been disrupted

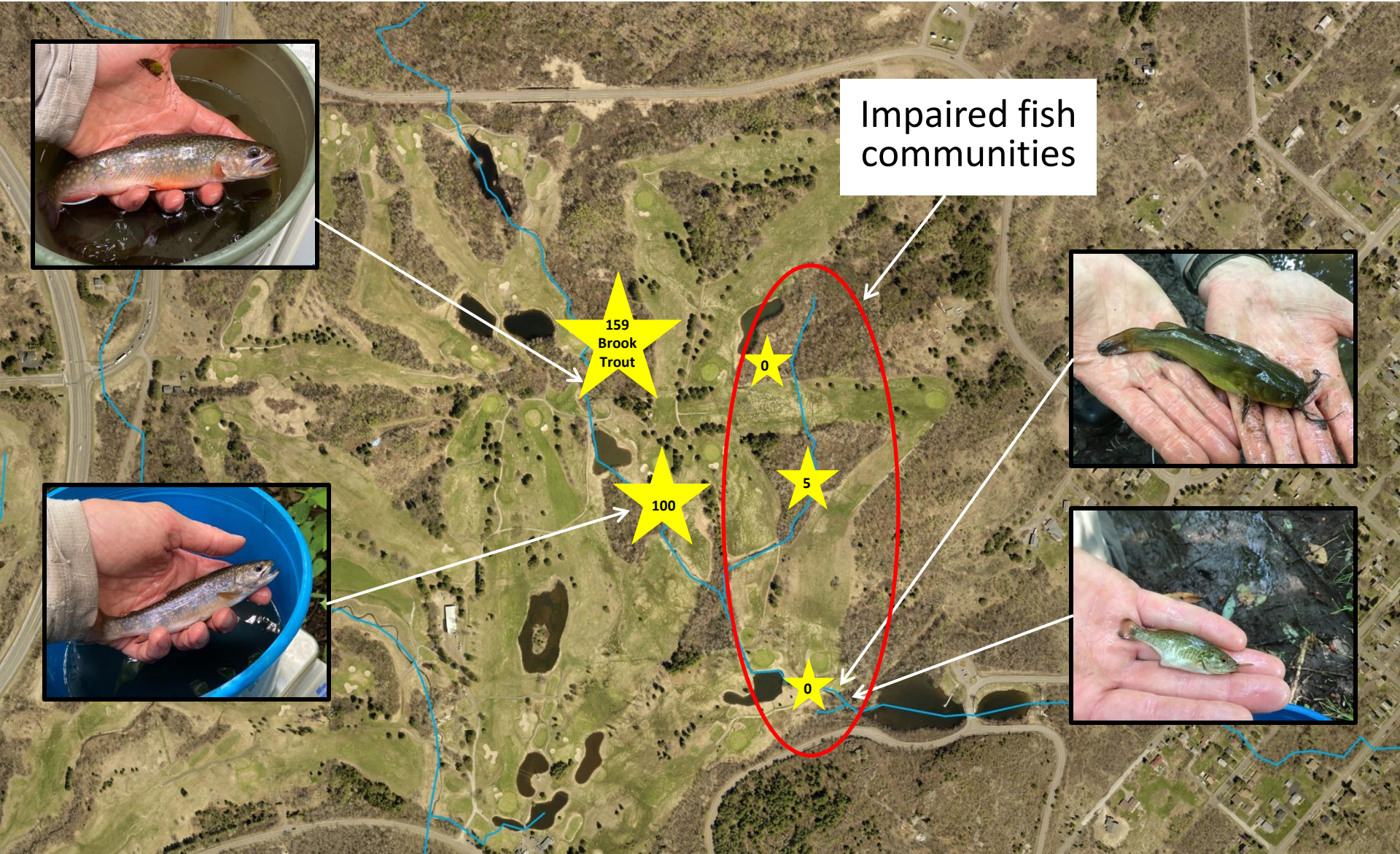


0 250 500 1,000 Feet

Buckingham Creek Site Overview



Impacts to Trout Stream



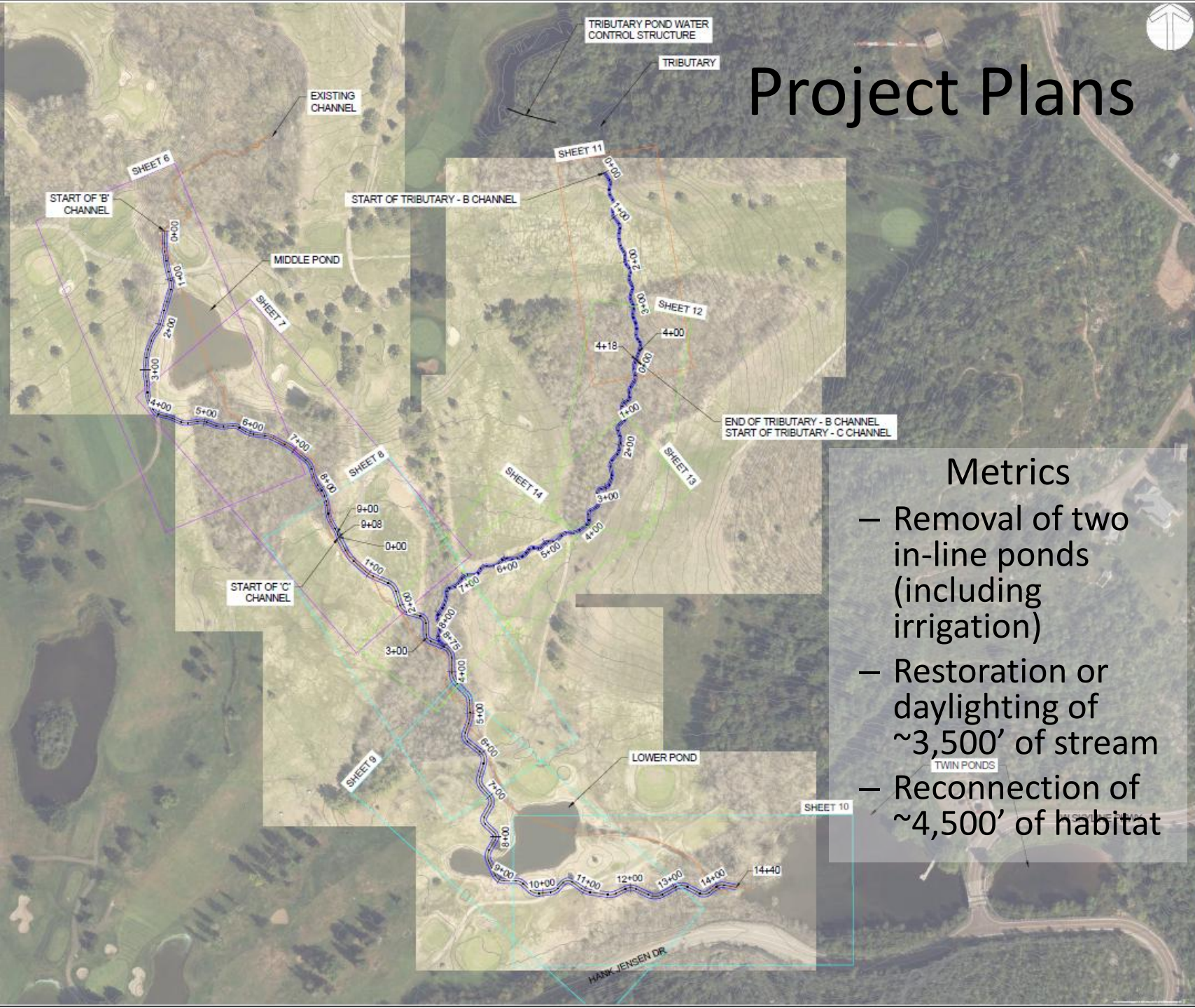
Project Background

- High priority trout stream restoration
- City of Duluth renovated Enger Park Golf Course in 2024
 - One-time opportunity to achieve significant water quality, habitat, and climate resilience outcomes
- Funding acquired - \$1,380,000
 - Design - \$50,000 from DNR
 - Design - \$120,000 from EPA via DNR (GLRI)
 - Construction - \$500,000 from Conservation Partners Legacy (OHF)
 - Construction - \$600,000 from EPA via DNR (GLRI)
 - Construction - \$110,000 from DNR

Goals and Objectives

- Goal: Maximize ecosystem services
- Achieved by emulating healthy stream/floodplain ecosystems
 - Eliminate unnatural in-line impoundments
 - Replace undersized culverts
 - Restore natural, meandering form
 - Establish floodplain connectivity
 - Establish native plant communities
 - Create habitat diversity
 - Overhead cover and large wood
 - Riffle-pool or step-pool morphology

Project Plans



Metrics

- Removal of two in-line ponds (including irrigation)
- Restoration or daylighting of ~3,500' of stream
- Reconnection of ~4,500' of habitat

APPROVED BY: XX	CHECKED BY: XX	DATE: 2/29/2024	SCALE (34"X22"): 1" = 100'	SCALE (17"X11"): 1" = 200'	0 100 200 SCALE IN FEET	SHEET NUMBER 4 OF 49
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BUCKINGHAM CREEK
 ENGER PARK GOLF COURSE
 CITY OF DULUTH
 ST. LOUIS COUNTY, MN
 60% NOT FOR CONSTRUCTION
 OVERVIEW



80% DESIGN
 NOT FOR
 CONSTRUCTION
 DESIGNER CERTIFY THAT THESE REPRESENTATIONS,
 OR REVISED, WERE PREPARED BY ME OR UNDER MY
 SUPERVISION AND I AM A LICENSED PROFESSIONAL ENGINEER UNDER THE
 LAWS OF THE STATE OF MINNESOTA.
 PROJECT NAME: BUCKINGHAM CREEK
 DATE: 2/29/2024
 LUC: 1604387

DATE: 2/29/2024
 SCALE (34"X22"): 1" = 100'
 SCALE (17"X11"): 1" = 200'
 0 100 200
 SCALE IN FEET
 SHEET NUMBER
 4 OF 49

Implementation did not go as planned...

Original Project Timeline - 2024

[illegible]

Actual Project Timeline - 2024 and 2025

[illegible]

July 2024



August 2024



September 2024



October 2024



November 2024



March 2025



March 17, 2025



April 2025



May 2, 2025



May 2, 2025





May 2, 2025

May 9, 2025





June 2025

June 2025



June 2025



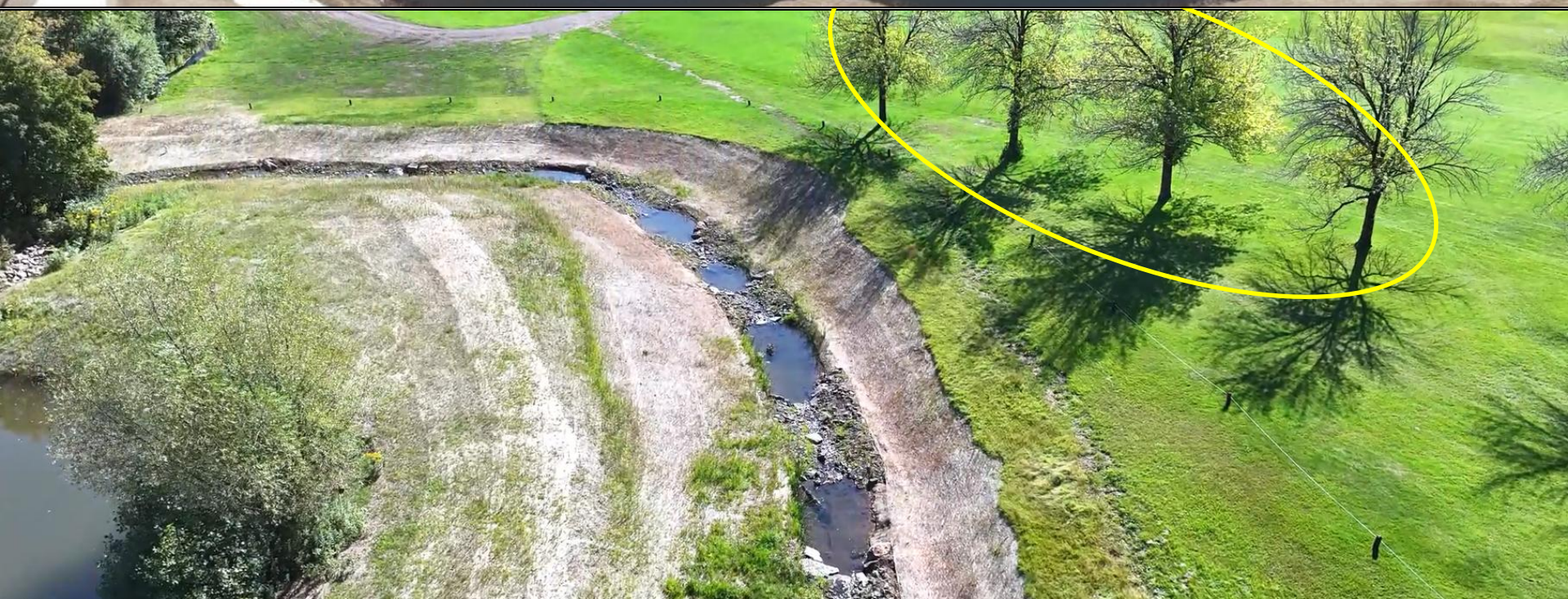
August 2025



October 1, 2025







Before



Outcomes

- Improved trout fishery
- Unimpaired fish and bug communities
- More resilient ecosystem
- Improved golf course aesthetics

After



What's Next?

- Monitoring
 - Stream temperature
 - Channel morphology
 - Floodplain vegetation
 - Aquatic life



Questions?

The map displays a proposed water control structure and channel system overlaid on an aerial photograph. Key features include:

- EXISTING CHANNEL**: A brown line indicating the current waterway.
- MIDDLE POND**: A large pond area in the upper left.
- START OF TRIBUTARY - B CHANNEL**: The beginning of a new tributary channel.
- TRIBUTARY POND WATER CONTROL STRUCTURE**: A proposed structure at the top center.
- TRIBUTARY**: A small stream entering the main channel.
- END OF TRIBUTARY - B CHANNEL**: The termination point of tributary B.
- START OF TRIBUTARY - C CHANNEL**: The beginning of another tributary.
- LOWER POND**: A smaller pond area in the lower right.
- HANK JENSEN DR**: A road running horizontally across the bottom.

The map is divided into sections labeled **SHEET 6** through **SHEET 14**. Stationing is provided along the channels, ranging from 0+00 to 14+40. A north arrow is located in the top right corner.

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Acknowledgements

- City of Duluth
 - Rob Hurd, Kate Kubiak, Jess Peterson, Jim Filby-Williams
- MN DNR
 - John Lindgren, Dan Wilfond, Karl Koller, Dean Paron
- Indigo Sports
 - Craig Smith, Josh Krause
- MPCA
 - Jeff Jaspersen, Tom Estabrooks, Amy Adrihan
- Contractors
 - Beaver River Consulting, SAS+ Associates, Superior Construction, Northern Ecological Services

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