FY25-FY27 Watershed Based Implementation Fund Projects

TIM SUNDBY

WATER RESOURCES SUPERVISOR

CARVER COUNTY WATER MANAGEMENT ORGANIZATION

4/30/2024 ADVISORY COMMITTEE MEETING

Tonight's Presentation

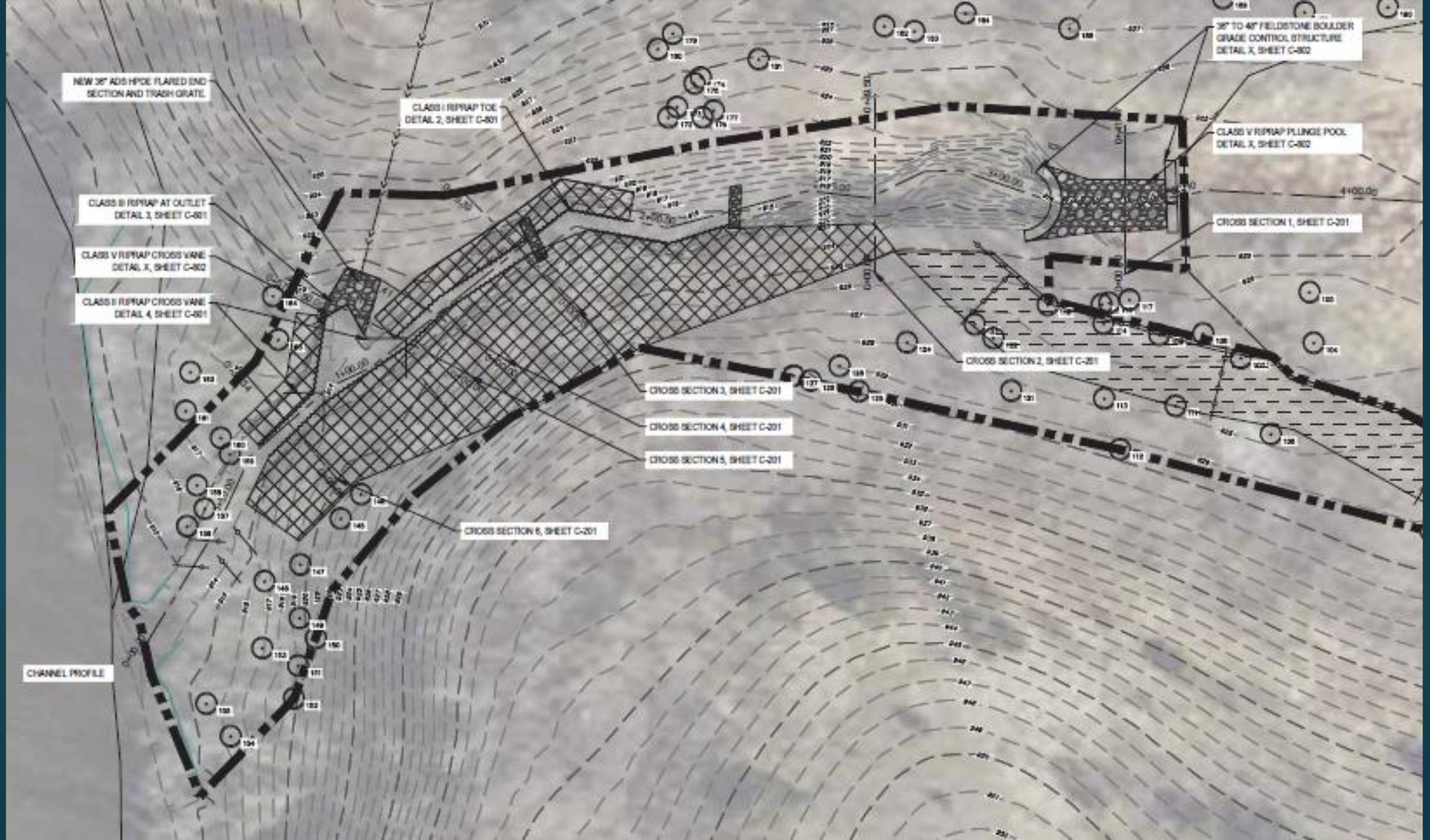
- Reviewing Convene Group project recommendations for Carver County WMO
  - Big Woods Ravine
  - Carver Creek Stream Restoration
  - Lyman Bridge Stream Naturalization
  - Eagle Lake Loading Feasibility Study
  - Goldfish Management
- Informational Presentation

Big Woods Ravine Project

- Design from previous feasibility study
- Received $76,500 in Grant Funding
- Estimated Total Cost is $85,000
- Matching funds $8,500

Big Woods Ravine Project

- The project will hard armor the head cut into the ravine, reshape the channel bottom with three grade checks and some slope grading.
- TP reduction estimate is 7.6 pounds/year
- TSS reduction estimate is 19 tons/year

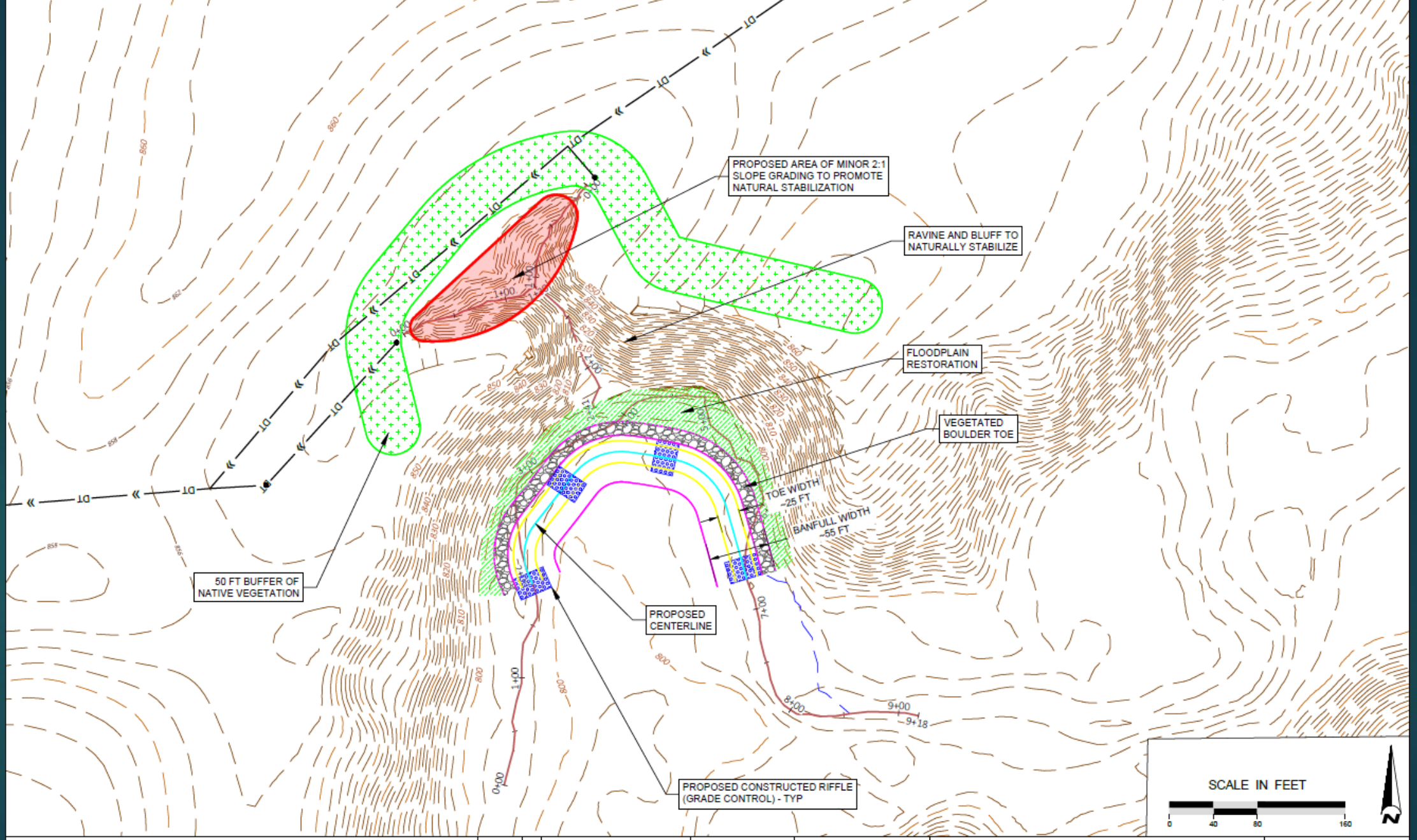

NEW 36" ADS HP0E FLARED END SECTION AND TRASH GRATE
CLASS I RIPRAP TOE DETAIL 2, SHEET C-601
CLASS III RIPRAP AT OUTLET DETAIL 3, SHEET C-601
CLASS V RIPRAP CROSS VANE DETAIL X, SHEET C-602
CLASS II RIPRAP CROSS VANE DETAIL 4, SHEET C-601
CROSS SECTION 3, SHEET C-201
CROSS SECTION 4, SHEET C-201
CROSS SECTION 5, SHEET C-201
CROSS SECTION 6, SHEET C-201
CHANNEL PROFILE
36" TO 48" FIELDSTONE BOULDER GRADE CONTROL STRUCTURE DETAIL X, SHEET C-602
CLASS V RIPRAP PLUNGE POOL DETAIL X, SHEET C-602
CROSS SECTION 1, SHEET C-201
CROSS SECTION 2, SHEET C-201

Carver Creek Stream Restoration Project

- Design from previous feasibility study
- Received $148,500 in Grant Funding
- Estimated Total Cost is $165,000
- Matching funds $16,500

Carver Creek Stream Restoration Project

- This project will move Carver Creek channel 50 feet south of its current location, building a floodplain at the base of the failed bank bluff to reduce the stress of flowing water at the basin of the bluff. Additional tile lines will be added to intercept ground water flow from further destabilizing the bank.
- TP reduction estimate is 585 pounds/year
- TSS reduction estimate is 688 tons/year



water ecology community
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NOT FOR CONSTRUCTION

DATE	NO.	DESCRIPTION
07/28/23	1	FEASIBILITY_STUDY
	2	
	3	
	4	
	5	
	6	

DESIGNED BY: EOR
DRAWN BY: DEM
CHECKED BY: EOR

EOR JOB #0042-0043

CLIENT PROJECT #

Carver County Water Management Organization

CARVER CREEK BANK FAILURE

CARVER COUNTY, DAHLGREN TOWNSHIP, MN

CARVER COUNTY WATER MANAGEMENT ORGANIZATION CHASKA, MN 55318

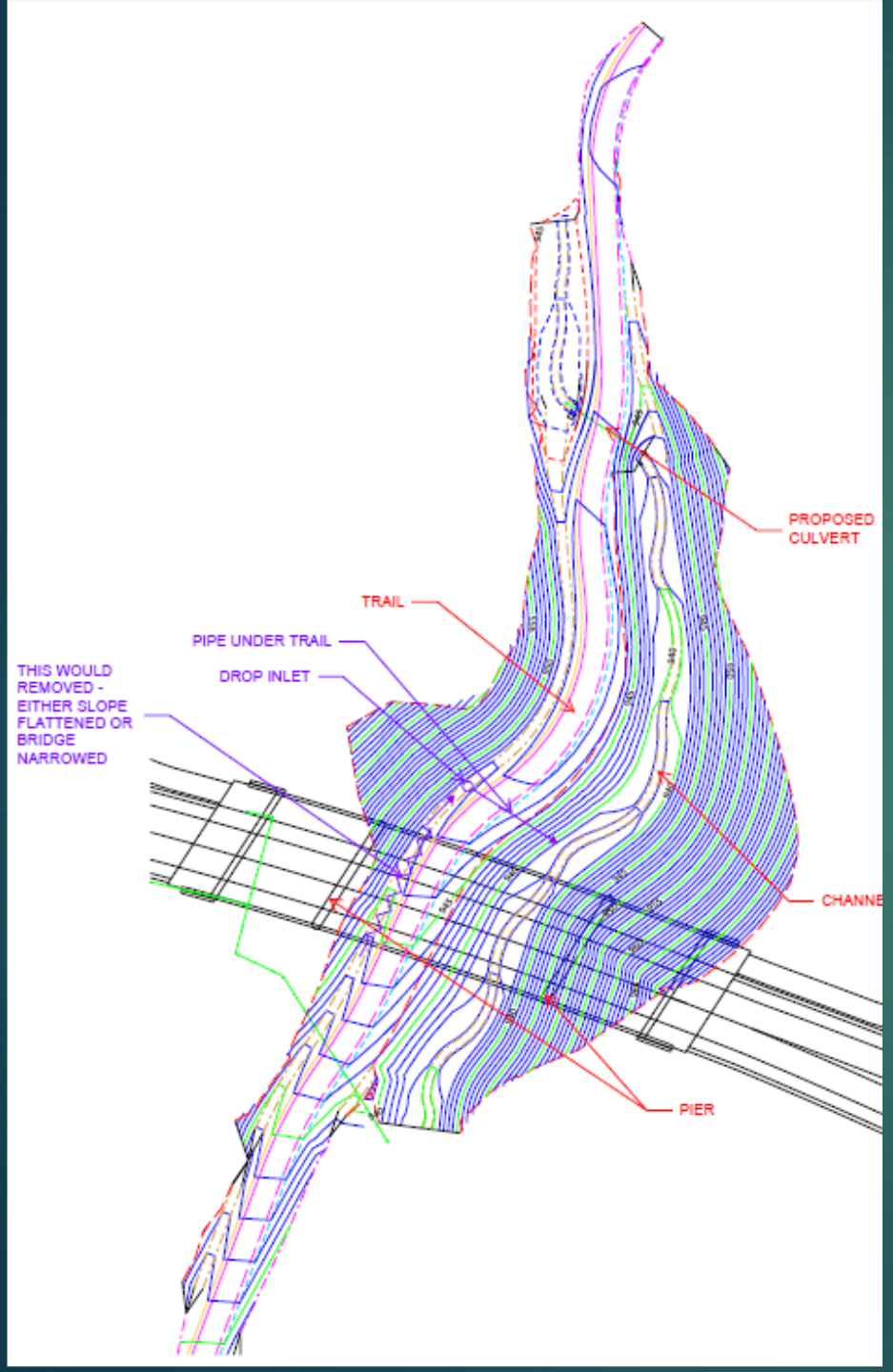
OPTION 1 - CHANNEL RE-ALIGNMENT AND RAVINE NATURAL STABILIZATION

SHEET 03 OF 06

Lyman Bridge Stream Naturalization

- A part of the 82nd Street Road Construction Project
- Received $180,000 in Grant Funding
- Estimated Total Cost is $200,000
- Matching funds $20,000


W 82nd St
CITY OF CHANHASSEN
CITY OF CHASKA
18
McKnight Cir
300ft

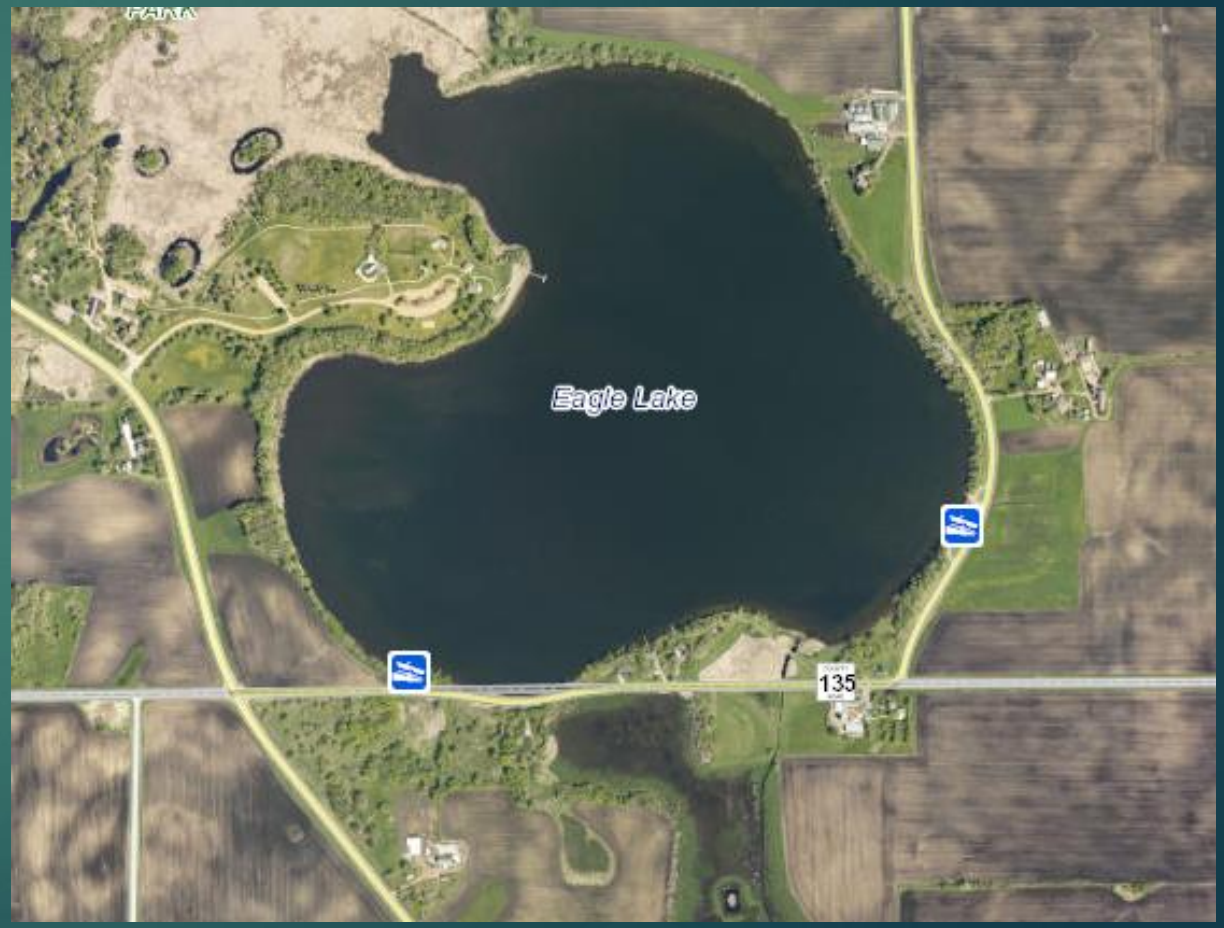


Lyman Bridge Stream Naturalization

- This project will restore a 130-foot section that currently is piped by daylighting the water into a newly constructed restored stream section.
- TP reduction estimate is 1.05 pounds/year
- TN reduction estimate is 2.16 pounds/year

Eagle Lake Loading Feasibility Study

- Feasibility Study for loading sources
- Received $65,000 in Grant Funding
- Estimated Total Cost is $75,000
- Matching funds $10,000

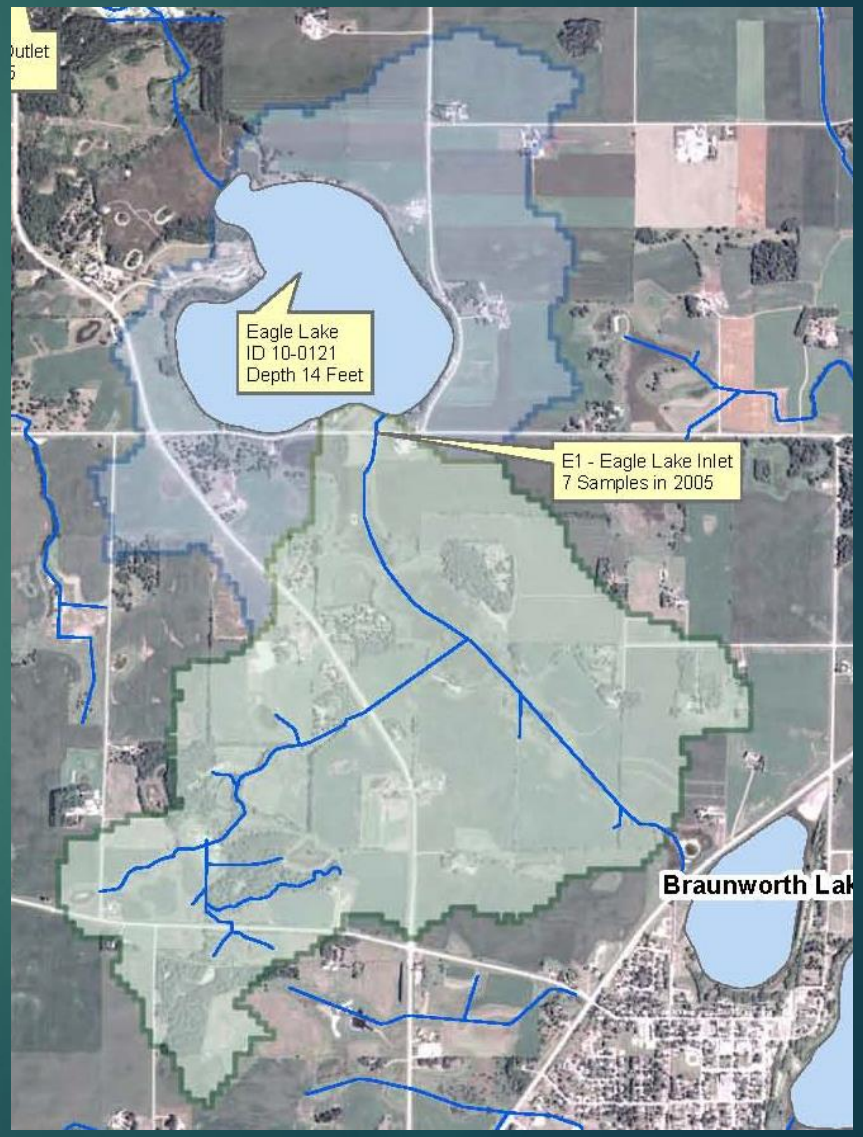


Eagle Lake Loading Feasibility Study

- Feasibility study will research the potential of using ALUM, impacts to the lake from removing curly leaf, quantifying soluble phosphorous entering from the wetland complex, and present various options to treat soluble phosphorus from the wetland.

Eagle Lake Loading Feasibility Study

- 2010 TMDL Study estimated phosphorus loading for Eagle Lake
- Internal Load represents 70% of all TP loading
- Loading from E1 represents 29%
- Required reductions
  - Internal Loading 82%
  - External Loading 95%



Goldfish Management

- Practices based upon feasibility study
- Received $50,000 in Grant Funding
- Estimated Total Cost is $60,000
- Matching funds $10,000

Goldfish Management

- Currently waiting on a draft of the 3-year Feasibility Study
- Will outline management practices for both Big Woods and Hazeltine
- Goal is to manage goldfish to improve water quality in both Big Woods and Hazeltine lakes

Goldfish Management

Final Breakdown

Grant Watershed	Entity Requesting Funds	Name of Activity/Project/Program	Timeframe for implementation	Grant funds requested	Local match (min. 10%)	Total project cost
East Chaska Creek	**CCWMO**	Big Woods Ravine	2024-2025	$76,500.00	$8,500.00	$85,000.00
Carver Creek	**CCWMO**	Carver Creek Stream Restoration	2025-2026	$148,500.00	$16,500.00	$165,000.00
East Chaska Creek	**CCWMO**	Lyman Bridge Stream Naturalization	2024-2026	$180,000.00	$20,000.00	$200,000.00
South Fork	**CCWMO**	Eagle Lake Loading Feasibility Study	2024-2026	$65,000.00	$10,000.00	$75,000.00
Lower MN	**Chaska**	Seminary Fen C2 Ravine	2024-2026	$201,356.00	$600,000.00	$1,008,000.00
East Chaska Creek	**CCWMO**	Goldfish Management	2024-2026	$50,000.00	$10,000.00	$60,000.00
Total				**$721,356.00**	**$665,000.00**	**$1,593,000.00**
CCWMO Totals				**$520,000.00**	**$65,000.00**	**$585,000.00**
FY 25 Match Amount					**$32,500.00**	

Questions