

Lower Minnesota River West
HICWD McLeod Nicollet Sibley



POLICY ADVISORY COMMITTEE

Project Tour



**COVER
CROPS**



**WATER AND SEDIMENT
CONTROL BASIN
(WASCOB)**



**GRADE
STABILIZATION
STRUCTURE**





Agenda

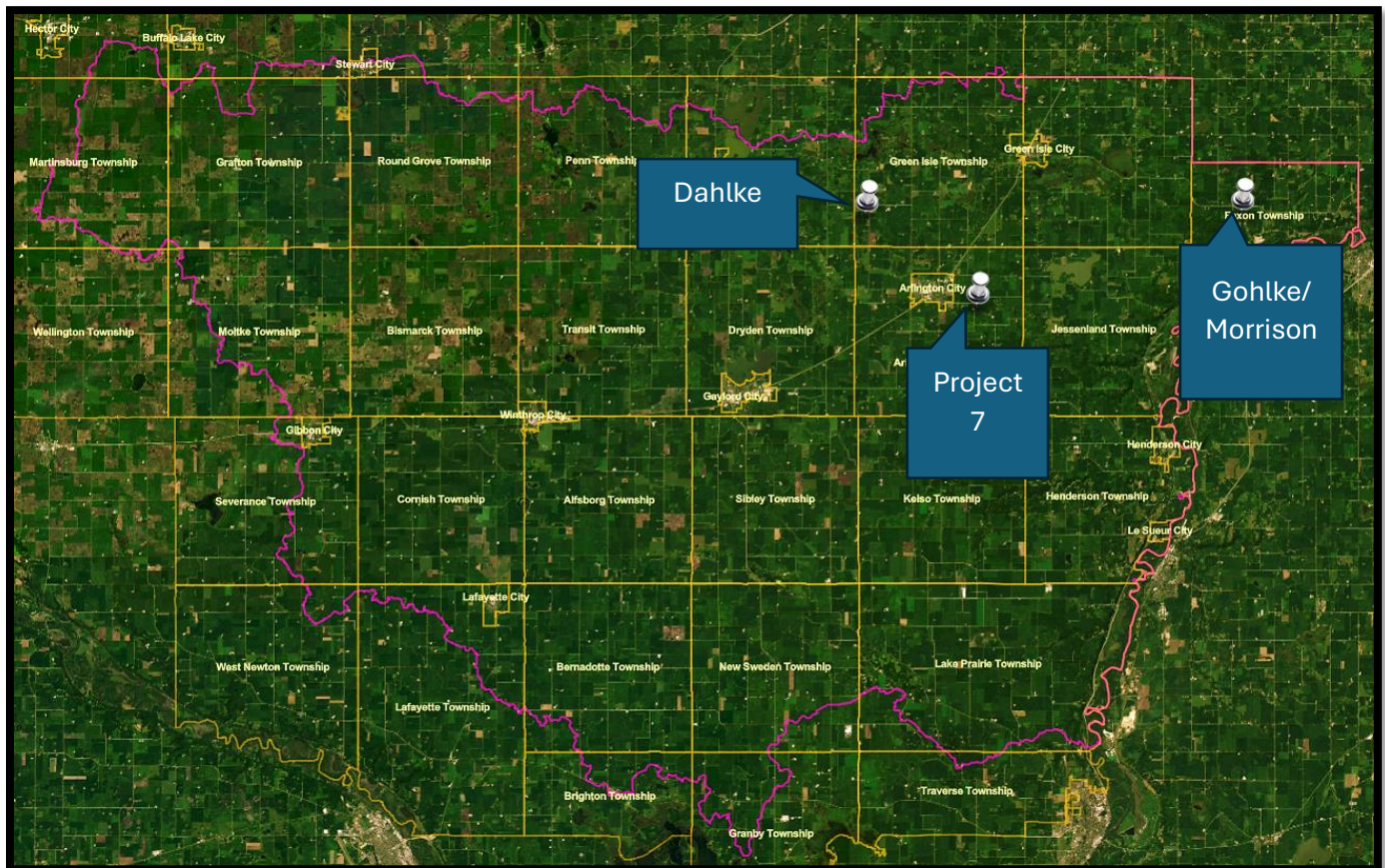
10:00am – 12:00pm PAC Meeting

12:00pm – 1:00pm Lunch/Break

1:00pm – 3:30pm Project Tour

1. Project 7 – WASCOB
2. Gohlke/Morrison – Grade Stabilization Structure
3. Travis Dahlke – Cover Crops

Project Map



Load Reduction Key:

TSS Load: Total Suspended Sediment Load Reduction

TP Load: Total Phosphorus Load Reduction

TN Load: Total Nitrogen Load Reduction



Priority Maps

Figure 1: Altered Hydrology and Drainage Priority Areas (HYD)

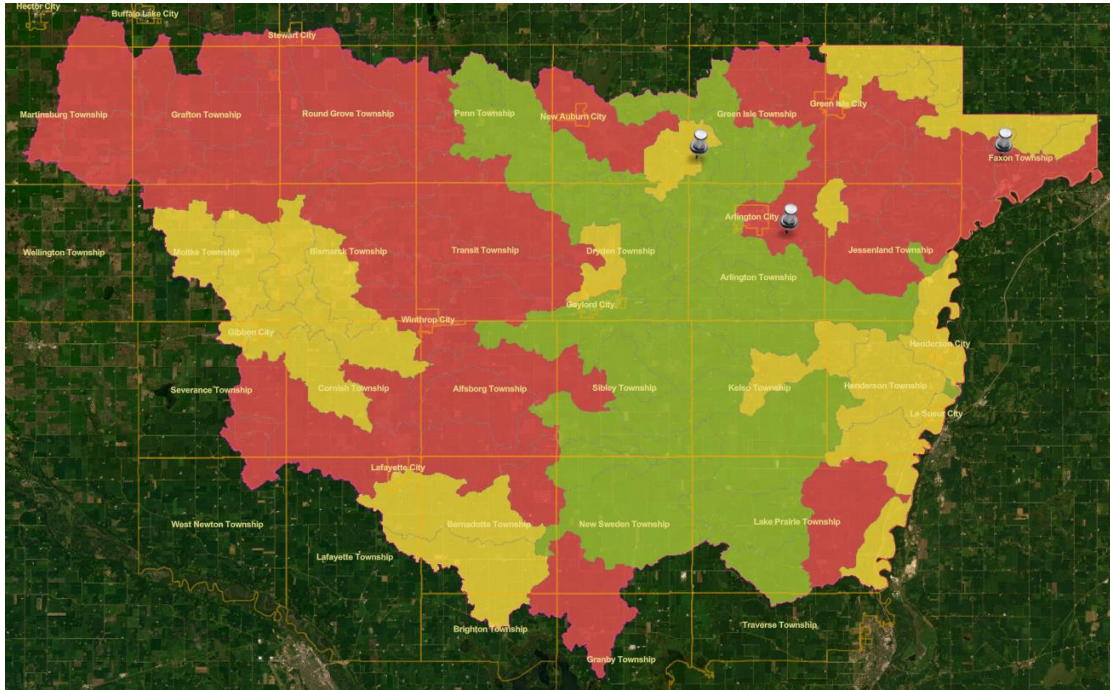
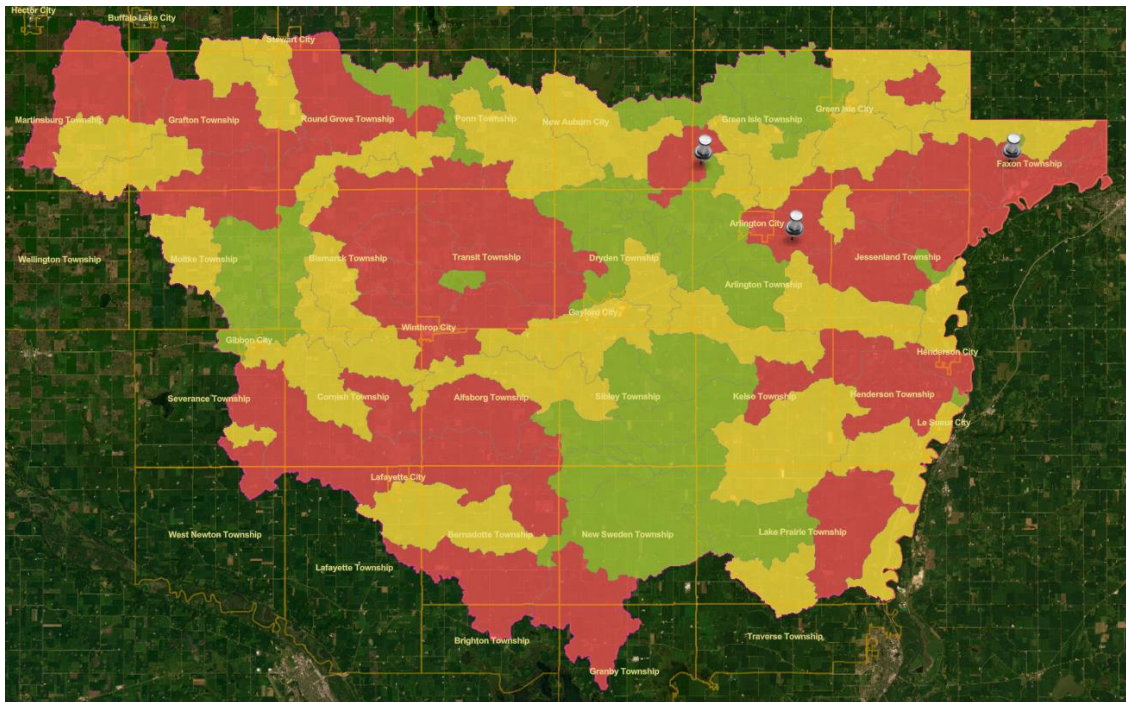


Figure 2: Surface Water Quality Priority Areas (SWQ)





Project 7

Water and Sediment Control Basin (WASCOB)

Landowner: High Island Watershed District

Project Partners: Sibley SWCD, HICWD, Arlington Township, City of Arlington

Contract: FY23 WBIF-22

Reason for Project: To fix and enlarge water storage basin.

A Water and Sediment Control Basin is an earth embankment or a combination ridge and channel constructed across the slope of a minor drainageway.

This practice applies to sites where:

- The topography is generally irregular.
- Gully erosion is a problem.
- Other conservation practices control sheet and rill erosion.
- Runoff and sediment damages land and works of improvement.
- Stable outlets are available.

Water quality benefits:

- Reduce gully erosion
- Trap sediment
- Reduce and manage runoff

Lifespan: 10 years

Lifespan TSS Load:
860.16 tons/lifespan

Lifespan TP Load:
6155.52 lbs/lifespan

Lifespan TN Load:
303744 lbs/lifespan

Total Project Cost: \$58,052.00

WBIF Amount: \$52,246.80

HICWD Match Amount: \$5,805.20



Before



Construction



Completed Project

Lower Minnesota River West

HICWD McLeod Nicollet Sibley



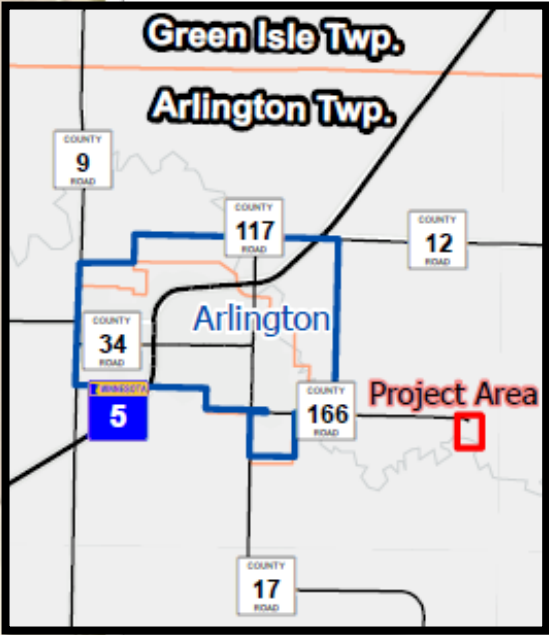
Before - Upstream looking West



After - Completed Project



Overlooking Sediment Pond





Grade Stabilization Structure

Landowner: Bill Morrison

Land Operator: Paul Gohlke

Project Partners: TSA

Contract: FY23 WBIF-10

Reason for Project: To reduce and control erosion issues.

A Grade Stabilization Structure is a structure used to control the grade in natural or constructed channels. The purpose of this practice is to reduce erosion and improve water quality. This practice applies where channels require a structure to stabilize the grade or to control gully erosion

Water quality benefits:

- Reduces the amount of sediment being transported to surface waters.
- Reduces particulate phosphorus concentrations in runoff.
- Reduces organic N concentrations in runoff.
- Requires little land disturbance and little maintenance.

Lifespan: 20 years

Lifespan TSS Load:
143.04 tons/lifespan

Lifespan TP Load:
1023.63 lbs/lifespan

Lifespan TN Load:
50511 lbs/lifespan

Total Project Cost: \$126,765.50

WBIF Amount: \$73,444.50

EQUIP Match Amount: \$53,321.00



Resource Concern



Resource Concern Cont.

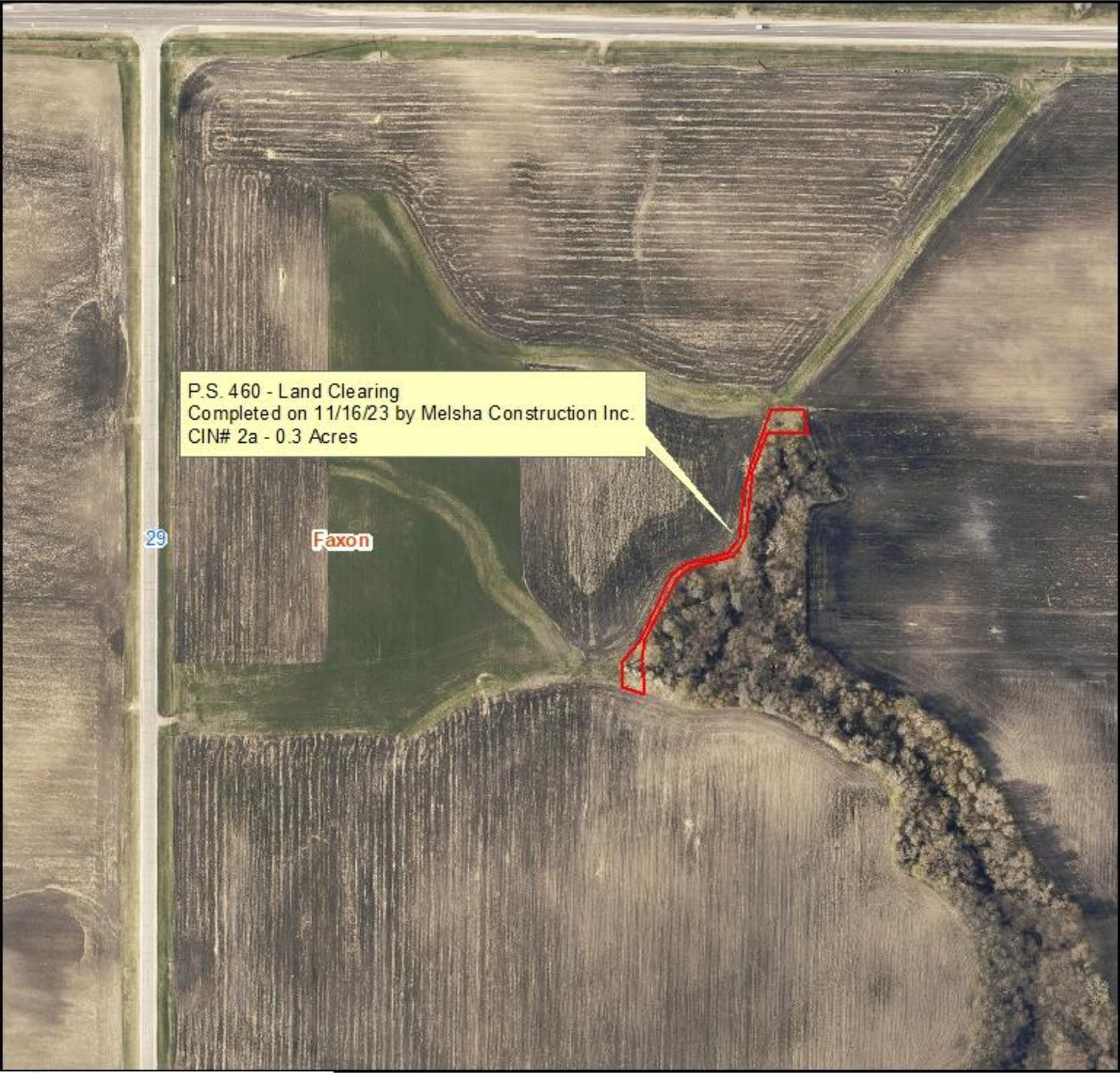




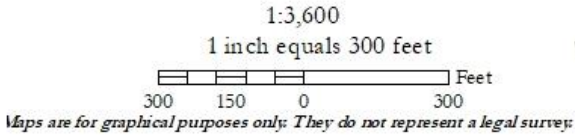
Paul R Gohlke
EQIP 2018 746322231RF
P.S. 460 Land Clearing Map

T114N. R25W, Sec.29
Faxon Township
Sibley County, MN
By: JCB

Date: 11/20/2023



-  1W1P - Lower MN River West Boundary
-  Civil Townships
-  Sections
- 2023**
- RGB**
-  Red: Band_1
-  Green: Band_2
-  Blue: Band_3





Cover Crops

Land Occupier: Travis Dahlke

Contract: FY23 WBIF -1

Acres: 154.18

Reason for Project: To reduce erosion, break up compaction, build organic matter and improve soil health.

Cover Crops are grasses, legumes, and forbs planted for seasonal vegetative cover. This practice applies to all lands requiring seasonal vegetative cover for natural resource protection or improvement.

Water quality benefits:

- Reduce erosion from wind and water.
- Maintain or increase soil health and organic matter content.
- Reduce water quality degradation by utilizing excessive soil nutrients.
- Suppress excessive weed pressures and break pest cycles.
- Improve soil moisture use efficiency.
- Minimize soil compaction.

Lifespan: 1 year

Lifespan TSS Load:
4.47122 tons/lifespan

Lifespan TP Load:
12.18022 lbs/lifespan

Lifespan TN Load:
524.212 lbs/lifespan

WBIF Amount: \$6,938.10

Year(s): 1 year multi-species mix

❖ *Radish, Rye, Winter Wheat* ❖

Method used: Aerial



Cover Crops in Beans



Cover Crops in Corn



Mixed Species in Corn



Dahlke 2023 Cover Crop Field Maps

Green Isle Township, Sibley County



*G.I. Twp., Sec. 13/14
Sibley County, MN*

*G.I. Twp., Sec. 19
Sibley County, MN*