

Mississippi River – Brainerd One Watershed One Plan

Technical Advisory Committee Meeting Report

January 24, 2023

Attendees

In Person: Bethany Chaplin (Crow Wing SWCD), Kaysie Maleski (Aitkin SWCD), Lance Chisholm (Morrison SWCD), Mitch Brinks (TSA 8), Jeff Hrubes (BWSR), Rick Johnson (Todd Co landowner), Dylan Christianson (Crow Wing County), Tim Terrill (MHB), Tad Erickson (Region 5), Moriya Rufer (Houston Engineering)

Online: Adam Ossefoort (Todd County/SWCD), Amy Kowalzek (Morrison County), Bonnie Goshey (MPCA), Jeff Wiess (DNR), Chris Pence (BWSR), Candi Fuller (NRCS), Perry Bunting(MLBO), Chad Weiss (MLBO), Shelly Larson (Shoreline Consultant)

Meeting Purpose

The purpose of this Technical Advisory Committee (TAC) meeting was to work on measurable goals.

Timeline

This graphic is a simplified version of the overall timeline. This timeline is a general guide, and the process can be adapted to fit as we go.



Draft Goals

Draft goals were discussed through a PowerPoint presentation (attached at the end of this report). The goal numbers were evaluated by Advisory Committee members on what was feasible to accomplish in 10 years. Suggestions included:

- Projection goal: average 1,500 acres/year between all SWCD partners, MHB, ACUB
- Riparian goal: average 10 shoreline restoration projects per year (2 miles of lakeshore restored in 10 years)
- Agricultural Land Management goal: average 500-700 acres/year, but run by the subcommittee
- Storage goal: base on future precipitation trends, not making up for past losses.

Plan Sections

The plan's table of contents was discussed, including an idea to have a plan section just focused on the Mississippi River. This Mississippi River section would have the issues, goals, and priority areas for just the Mississippi River. It would have some overlap with other sections, but would be organized in a way that information could stand alone and be used for future projects and grant applications. The Advisory Committee agreed a Mississippi River section would be beneficial.

Next Steps

All meetings are held at the Crow Wing County Land Services building.

- **January 24: CAC Meeting**
 - Issue review
 - Develop plan actions
- **February 28: TAC Meeting**
 - Finalize Goals
- **February 28: PC Meeting**
 - Approve Goals



Technical Advisory Committee Meeting
January 24, 2022



Measurable Goals



Draft Goals

1. **Phosphorus Reduction:** *reduce phosphorus (lbs) in priority lakes and streams*
2. **Stormwater Management:** *treating stormwater before it reaches the water bodies*
3. **Protection:** *adding acres of forest management and land protection*
4. **Riparian Stabilization:** *feet and miles of streambank and lakeshore stabilization*
5. **Agricultural Land Management:** *acres of Ag BMPs*
6. **Drinking Water Protection:** *wells sealed, DWSMA protection*
7. **Water Retention:** *acre-feet of water storage*



Draft Goals

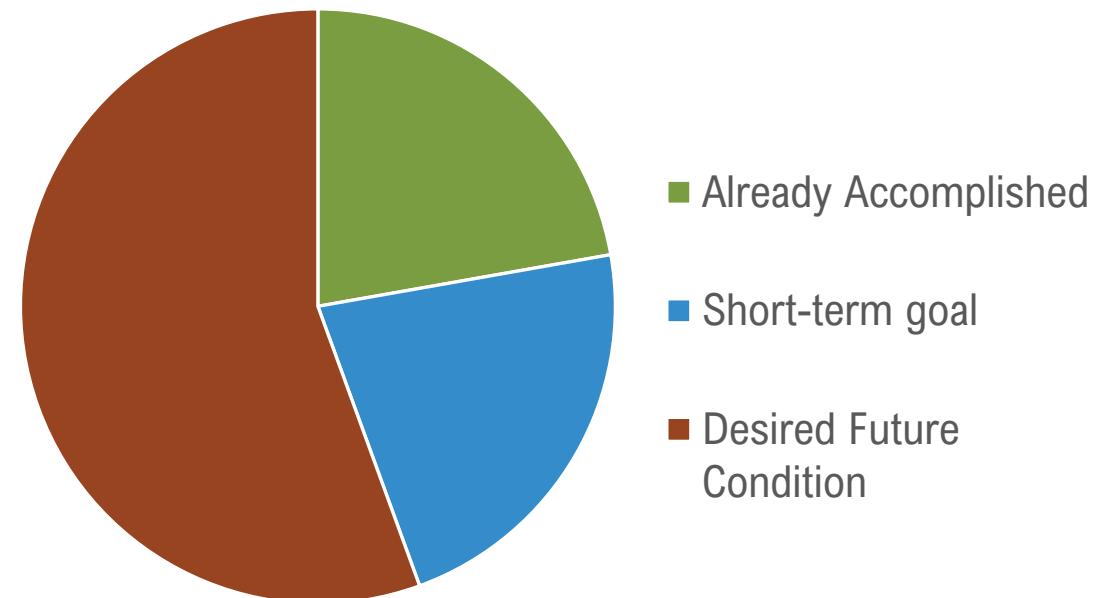
DESIRED FUTURE CONDITION

Long-term outcome we are striving to attain in the resources, regardless of the time frame.

SHORT-TERM GOAL

How much progress we will achieve in the next 10 years

How do we tell the story of what we're accomplishing?



Goal: Phosphorus Reduction

- Measure pounds of phosphorus reduction
- Actions:
 - Stormwater management
 - Agricultural BMPs

DESIRED FUTURE CONDITION

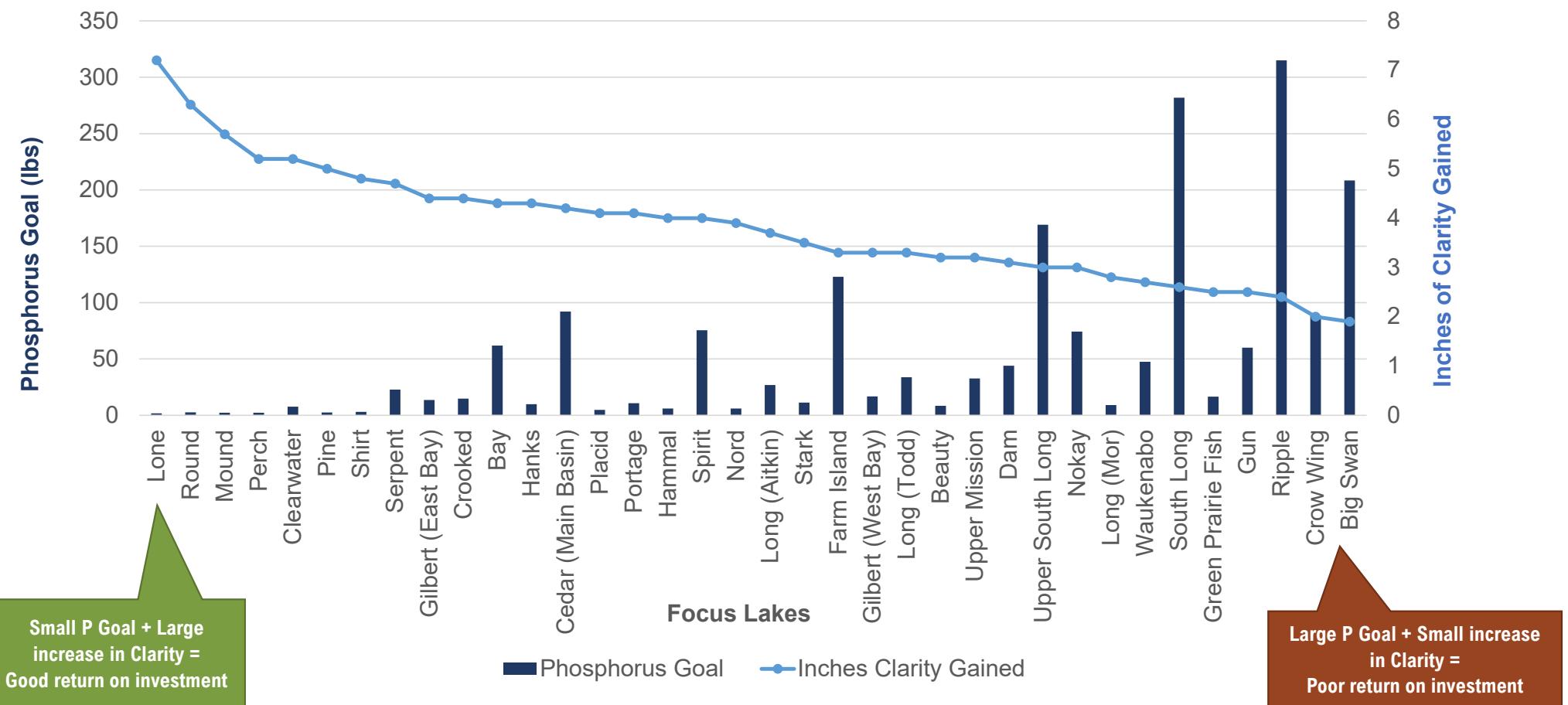
- **Restore**: TMDL met
- **Enhance**: no declining trends or nearly impaired lakes
- **Protect**: no increase in phosphorus (nondegradation)

SHORT-TERM GOAL

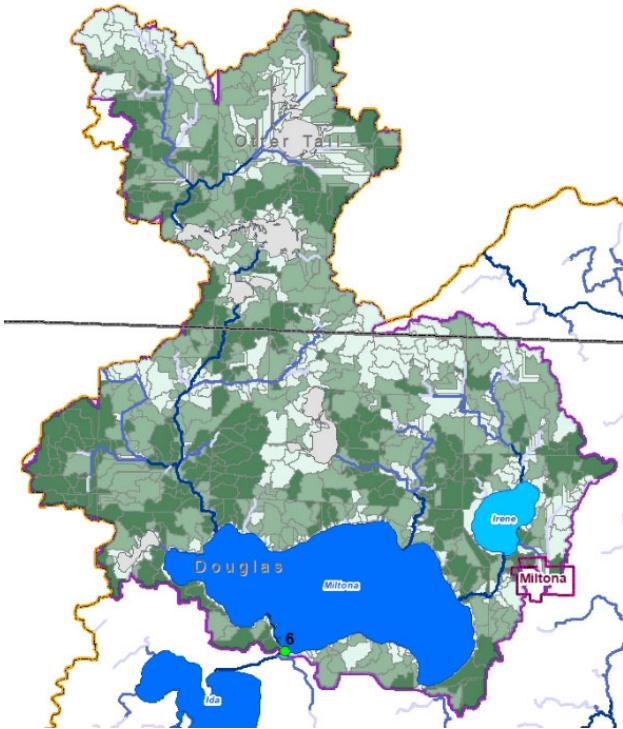
5% phosphorus reduction in priority lakes

- **Restore** (5%)
- **Enhance** (5%)
- **Protect** (5% or nondegradation?)

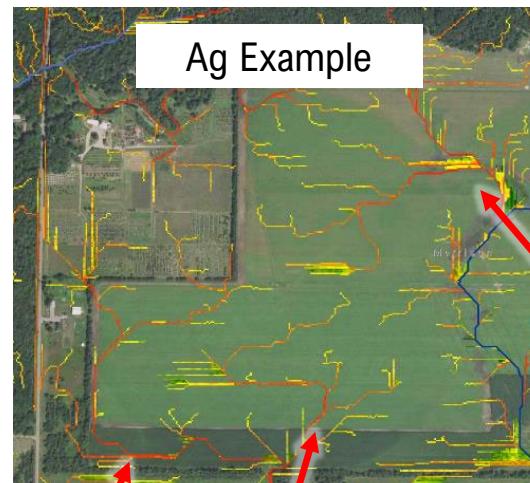
Goal: Phosphorus Reduction



Targeting: Phosphorus, Ag Lands



Phosphorus Heat Map – for targeting catchments



Terrain Analysis – for placing BMPs

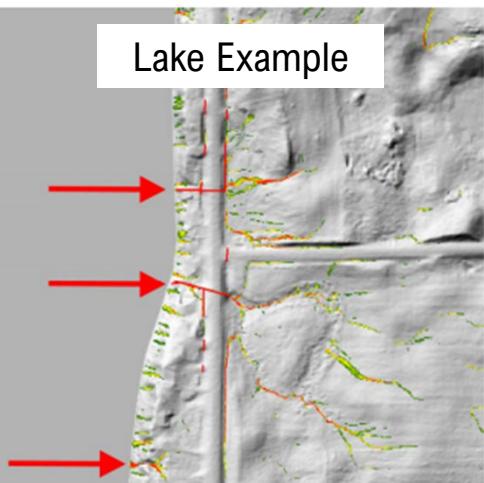


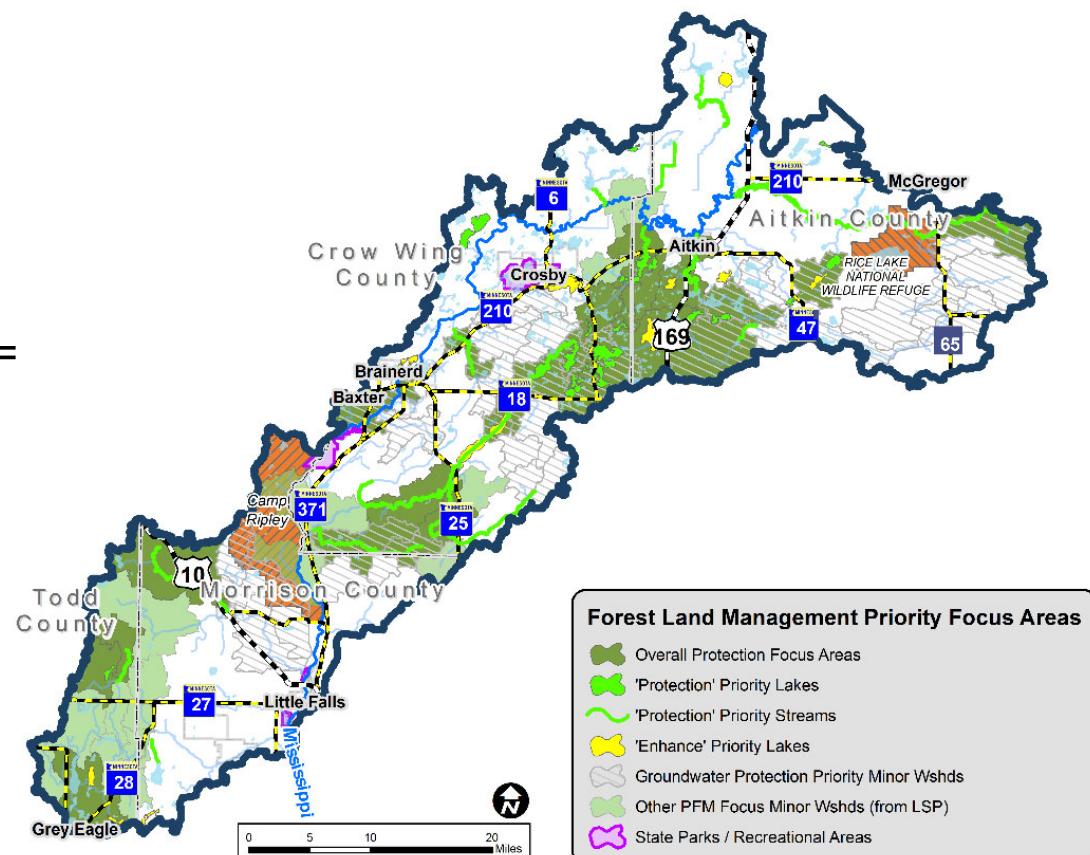
Figure 5-1 Example Area for Interpretation of Terrain Analysis Mapping

Goal: Protection

Increase land protection and forest management to benefit habitat, groundwater, and surface water quality.



Overall = 2 of:
(LSP priority, priority lakes, priority streams, priority groundwater)



Goal: Protection

Increase land protection and forest management to benefit habitat, groundwater, and surface water quality.

- Measure by # acres
- Actions:
 - Forest Stewardship Plans
 - Conservation Easements
 - Sustainable Forest Incentive Act
 - Acquisitions

DESIRED FUTURE CONDITION

Landscape Stewardship Plan Goals Met

- 151,823 acres of land protection
- 218,977 acres of forest stewardship plans (1,556 plans)

~15,000/yr

SHORT-TERM GOAL

10% progress towards LSP for priority areas

- ~ 1,000 acres/year? **1,500/yr?**
- Includes what all SWCDs, MHB, and ACUB does

Narrow down from LSP

Goal: Riparian Stabilization

Stabilize riparian areas and restore shorelines to benefit habitat and surface water quality.

Outline zoning requirements and protective nature of ordinances

Does score the shore correlate at all with the 25% impervious, or General Development

CWC Impervious surface maps

Data gap – impervious on other priority lakes

Priority Lakes	Score the Shore	=
<i>The priority lakes to focus on in implementation</i>	<i>Survey to estimate the amount of habitat in three lakeshore zones; shoreland, shoreline, and aquatic.</i>	

Prioritize lakes with the lowest scores?		
Lake	County	Score
Perch	Crow Wing	Low
Crow Wing	Crow Wing	Low
Round	Aitkin	Low
Serpent	Crow Wing	Low
Long	Todd	Low
Clearwater	Crow Wing	High
Gilbert***	Crow Wing	High
All the rest		Moderate

Goal: Riparian Stabilization soft armor, vegetative... wordsmith

Stabilize riparian areas and restore shorelines to benefit habitat and surface water quality.

Another idea – measure in acres of area



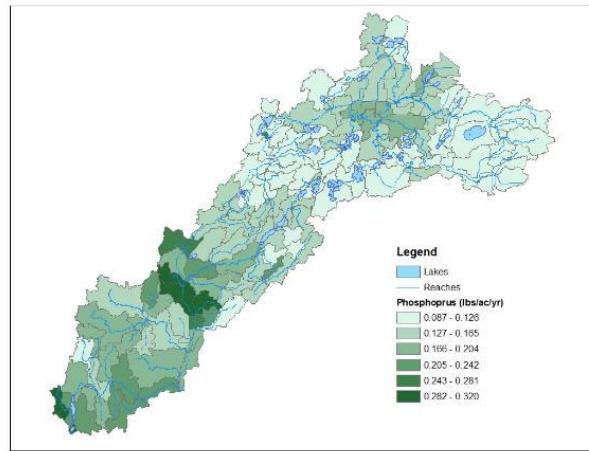
DESIRED FUTURE CONDITION

Calculate length of shoreline needed to get low lakes to moderate and moderate to high?

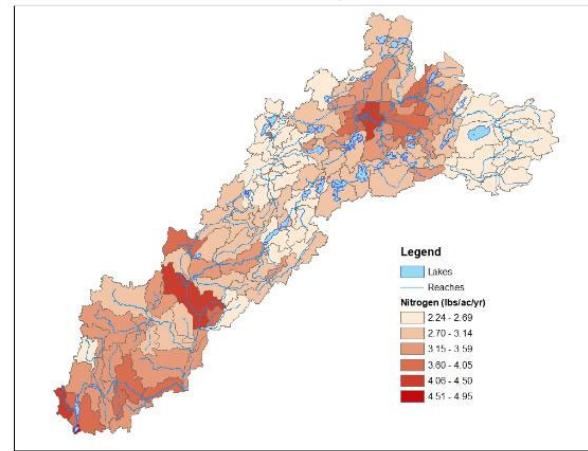
SHORT-TERM GOAL

- 1 mile of lake shoreline restored
- 5,280 ft @100 ft per project (length of shoreline)
- 5 projects/year (~100 ft per project)
- **10 projects/yr – what is the depth of the buffer?**

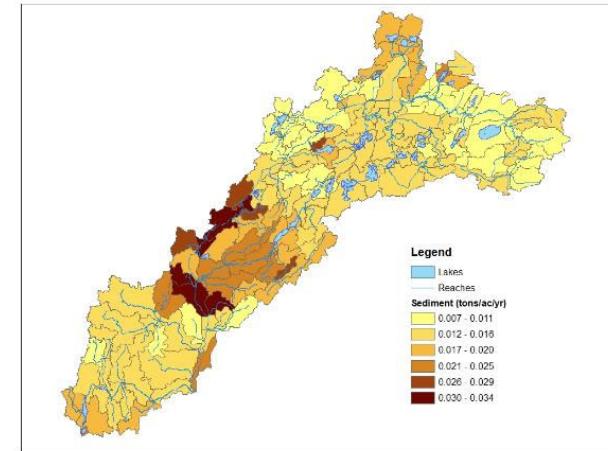
Phosphorus



Nitrogen



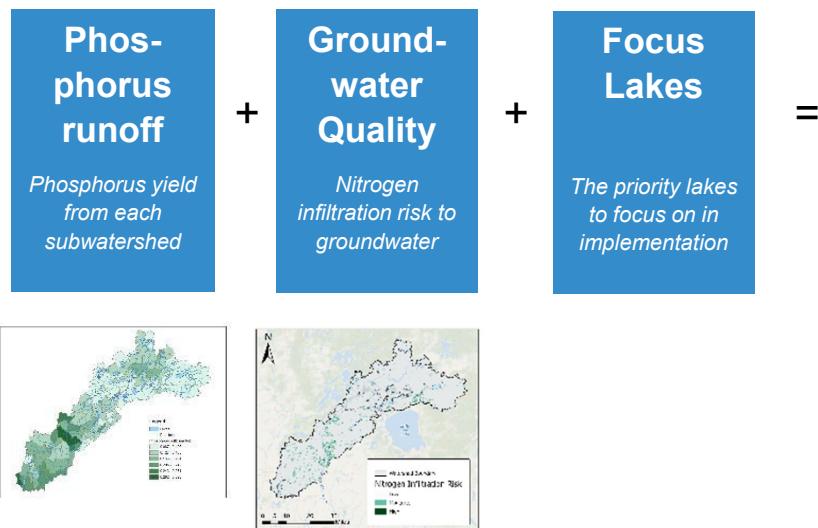
Sediment



Pollutant Loads (HSPF Model)

Goal: Agricultural Land Management

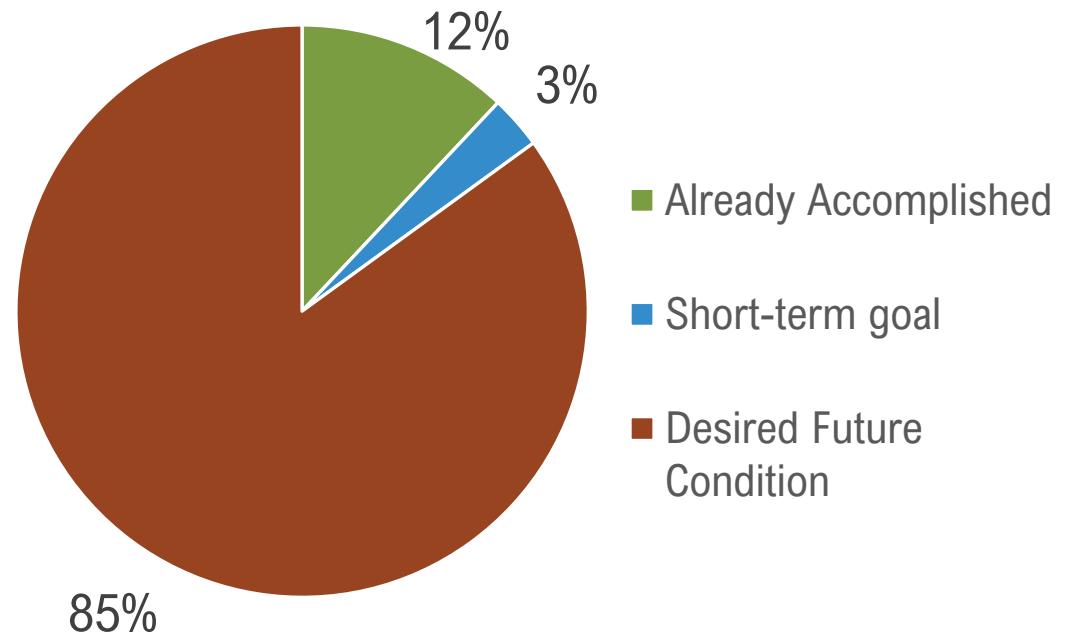
Implement agricultural best management practices to benefit surface and groundwater quality.



Goal: Agricultural Land Management

Implement agricultural best management practices to benefit surface and groundwater quality.

- Measure by # acres
- Actions:
 - Nutrient Management
 - Cover Crops/No till
 - Pasture Management
 - Irrigation water management
 - Structural Ag practices



Goal: Agricultural Land Management

Implement agricultural best management practices to benefit surface and groundwater quality.

- Measure by # acres
- Actions:
 - Nutrient Management
 - Cover Crops/No till
 - Pasture Management
 - Irrigation water management
 - Structural Ag practices

DESIRED FUTURE CONDITION

Ag BMPs on all acres, or just to acres with high priority?

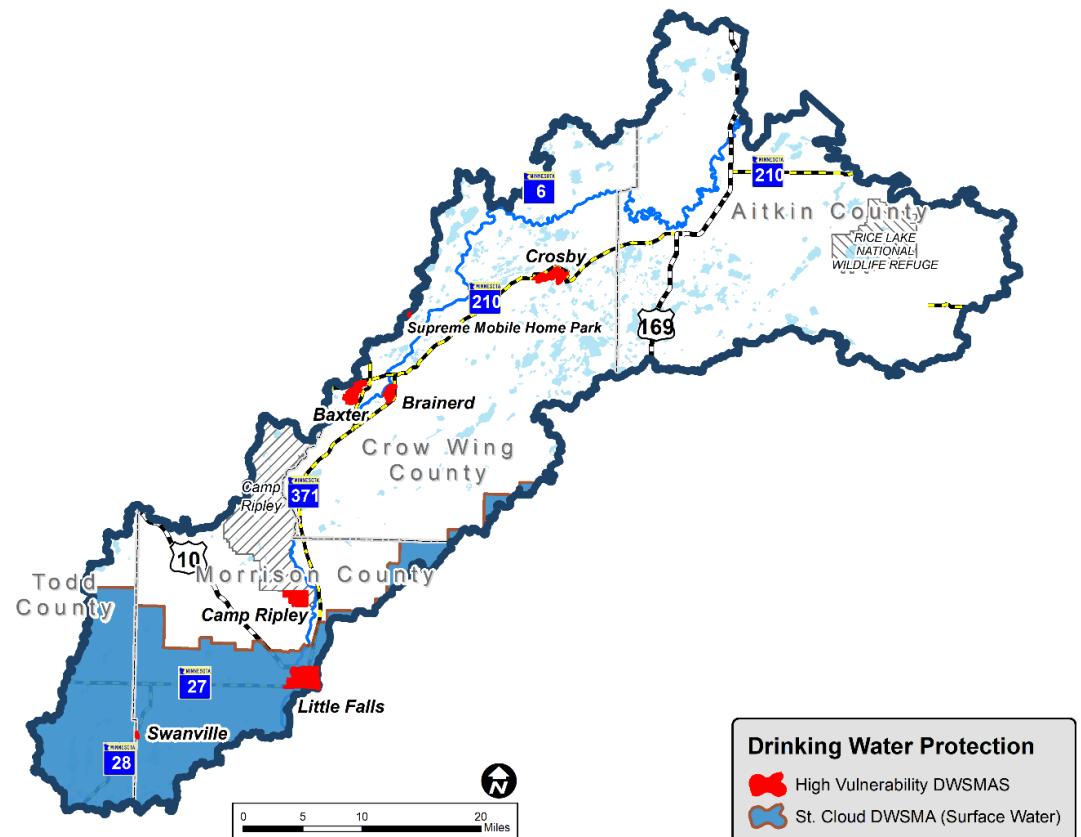
SHORT-TERM GOAL

3% increase in Ag BMPs to reach 15% overall

- 713 acres/year

Goal: Drinking Water Protection

- Measure by:
 - Unused wells sealed
 - Acres of DWSMA protection or management



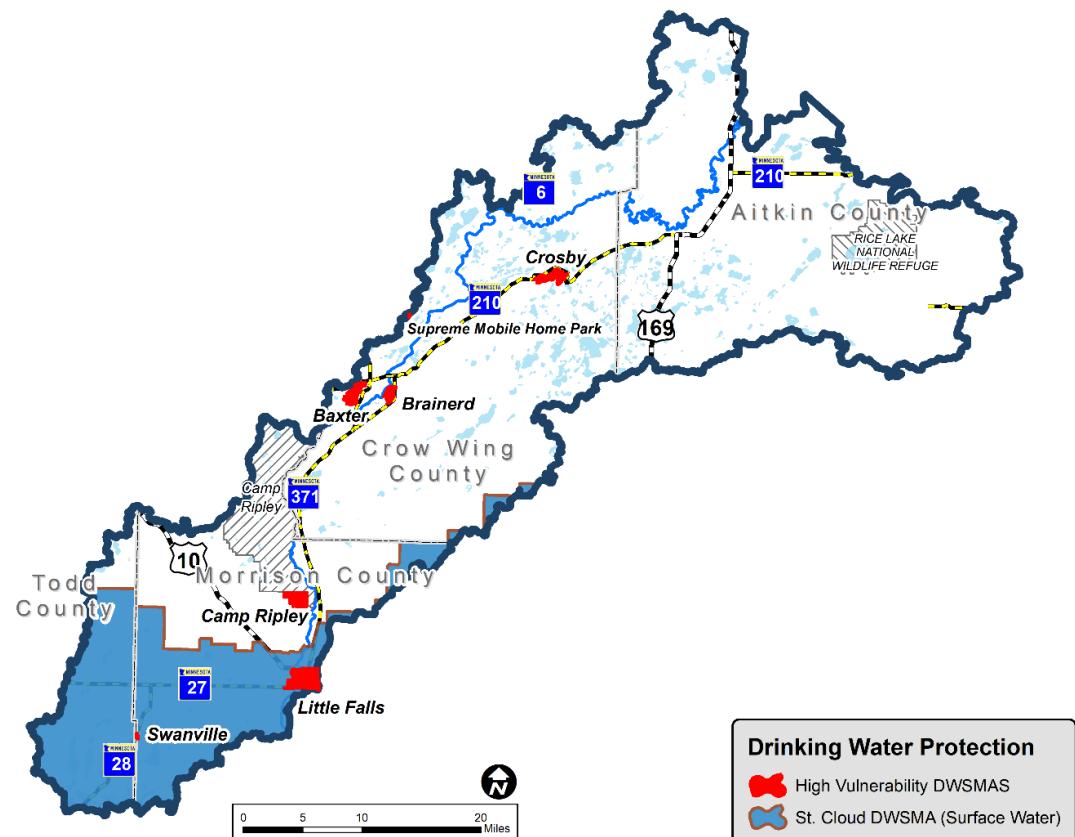
Goal: Drinking Water Protection

DESIRED FUTURE CONDITION

All high vulnerability DWSMA acres with protection or management practices.

SHORT-TERM GOAL

- Seal 7 wells/year (70 total)
- Septic systems
- 808 acres of DWSMA protection or management (10% of 8,082 acres)
- Change to non-lake acres...

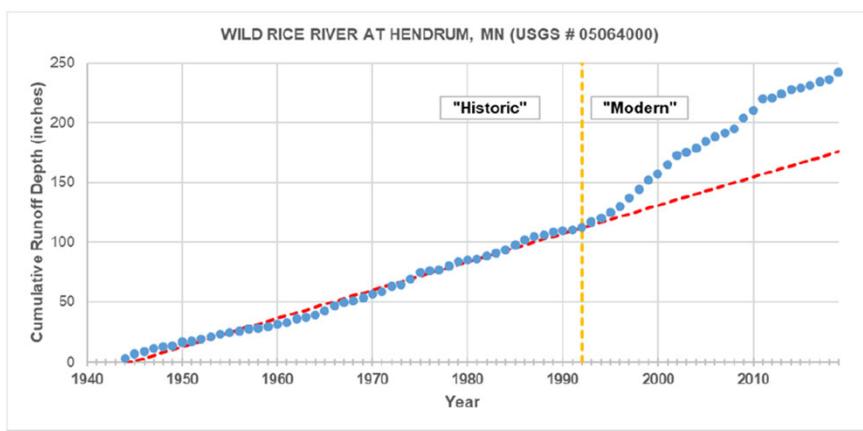


Goal: Water Retention

- Gage data is not showing large increases in erosive flows (peak flow)
- Likely due to storage in peatlands, lakes, forests



Red River Basin



Mississippi River @ Royalton

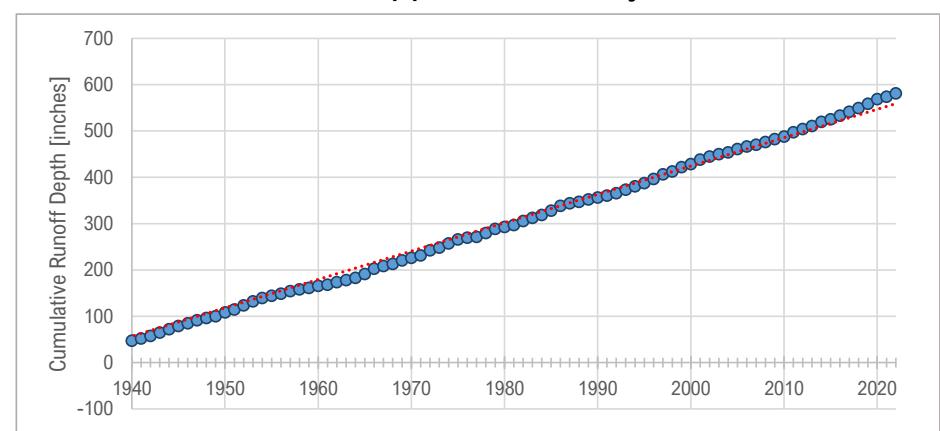


Figure 5. Cumulative streamflow for the Wild Rice River at Hendrum, MN (USGS# 05064000).

Goal: Water Retention



- Focus on building resiliency into new BMPs and projects to retain water from increasing precipitation trends



Trend is + 0.48 inches per decade from 1983-2022

x 23% runoff ratio =

extra runoff from precip trends (report in acre-feet)

What is an acre-foot?





Plan Sections



Table of Contents

1. Executive Summary	<i>Approved</i>
2. Land & Water Resources Narrative	<i>Approved</i>
3. Priority Issues	<i>Approved</i>
4. Focus Resources	<i>Approved</i>
5. Measurable Goals	<i>Working on now</i>
6. Targeted Implementation Schedule	
7. Mississippi River?	<i>Working idea</i>
8. Plan Implementation Programs	
9. Plan Administration	
10. Appendices	



Mississippi River Section

- Stand alone section
- Plan issues that apply directly to Mississippi River
- Plan goals that apply directly to Mississippi River
- Priority areas for Mississippi River
- Implementation Table? Wait and see if necessary.
- Will have some overlap with the rest of the plan, but easy to access just Mississippi River info





Next Steps

TAC – February 28, 1:00-3:30-pm

- Finalize Draft Goals

PC – February 28, 2:00-3:30-pm

- Approve Draft Goals

Next Up: Actions!