# ATTACHMENT B

LOWER MINNESOTA RIVER
WATERSHED DISTRICT

# PUBLIC LISTENING SESSION

**WEDNESDAY**
**JANUARY 8, 2025**
**1-4PM**

MINNESOTA VALLEY
NATIONAL
WILDLIFE REFUGE |
BLOOMINGTON, MN

LOWER MINNESOTA RIVER
WATERSHED DISTRICT

PUBLIC LISTENING SESSION
WED. JANUARY 8, 2025
1-4PM

# Welcome/Schedule

- 1:00pm: Listening Session Opens
- 1:15pm: Testimony Presentations
- 2:15pm: Brief Recess
- 3:00pm: Public Forum
- 3:55pm: Listening Session Closes

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WED. JANUARY 8, 2025
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## LMRWD

## What do we do?

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# PUBLIC LISTENING SESSION

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## Why a Listening Session?

- Convene partners, experts, the public to magnify our voices and build collective testimony
- Lower Minnesota River Watershed District is at the bottom of the funnel
  - Nine-foot channel management
  - Legislative agenda
  - Watershed management plan

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# Thematic Topics

1. Scientific Causes of Flooding
2. Climate Change
3. Water Storage along the Minnesota River
4. Natural Mitigation Strategies
5. Financial Costs of Flooding
6. Costs and Benefits of Proposed Solutions

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# Holly Bushman
# Lower Minnesota River East Watershed Partnership

## Altered Hydrology, Flooding, and Funding Watershed Initiatives

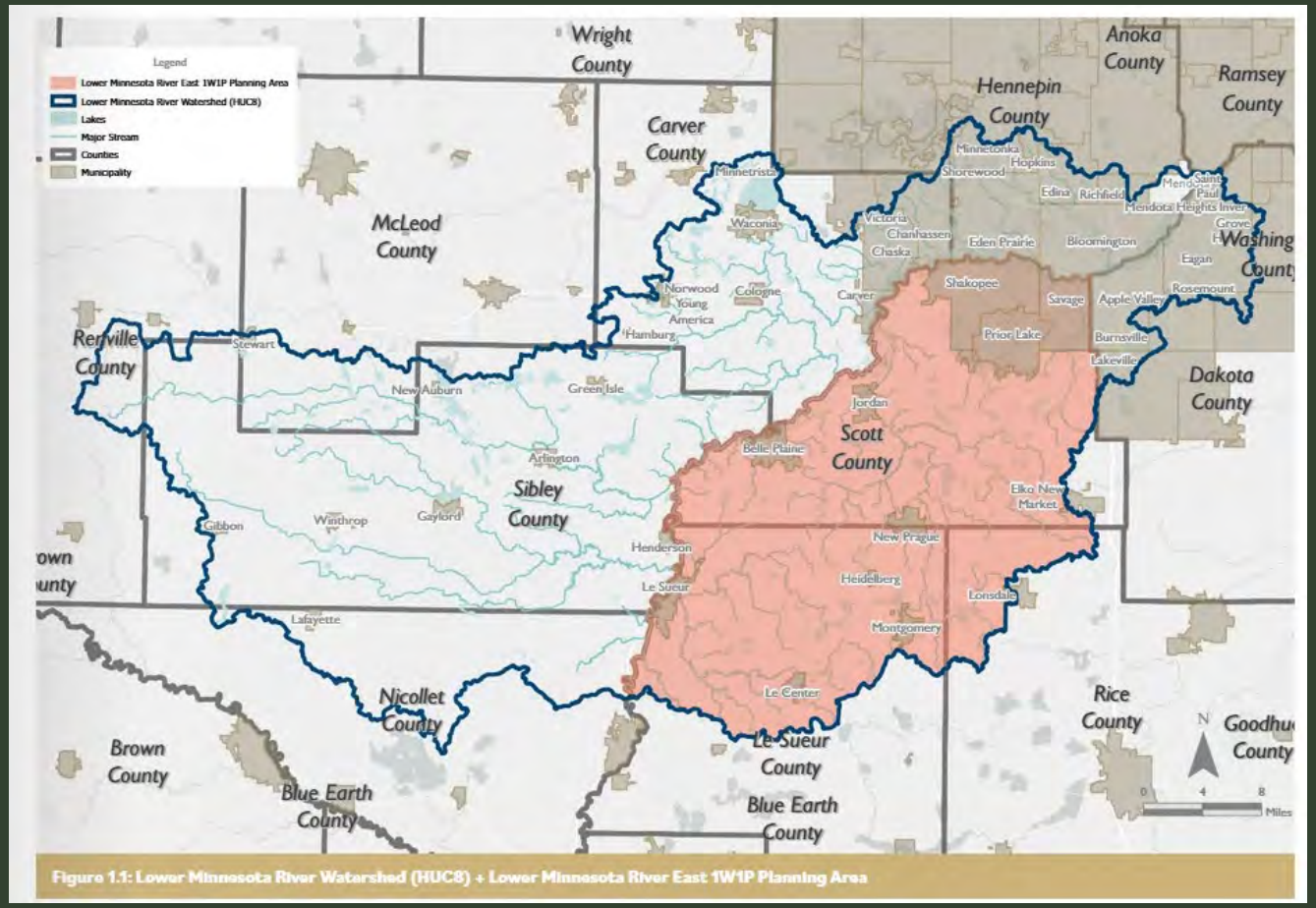
1:15-1:30pm

# ALTERED HYDROLOGY, FLOODING, AND WATERSHED INITIATIVES

Lower Minnesota River East Watershed Partnership

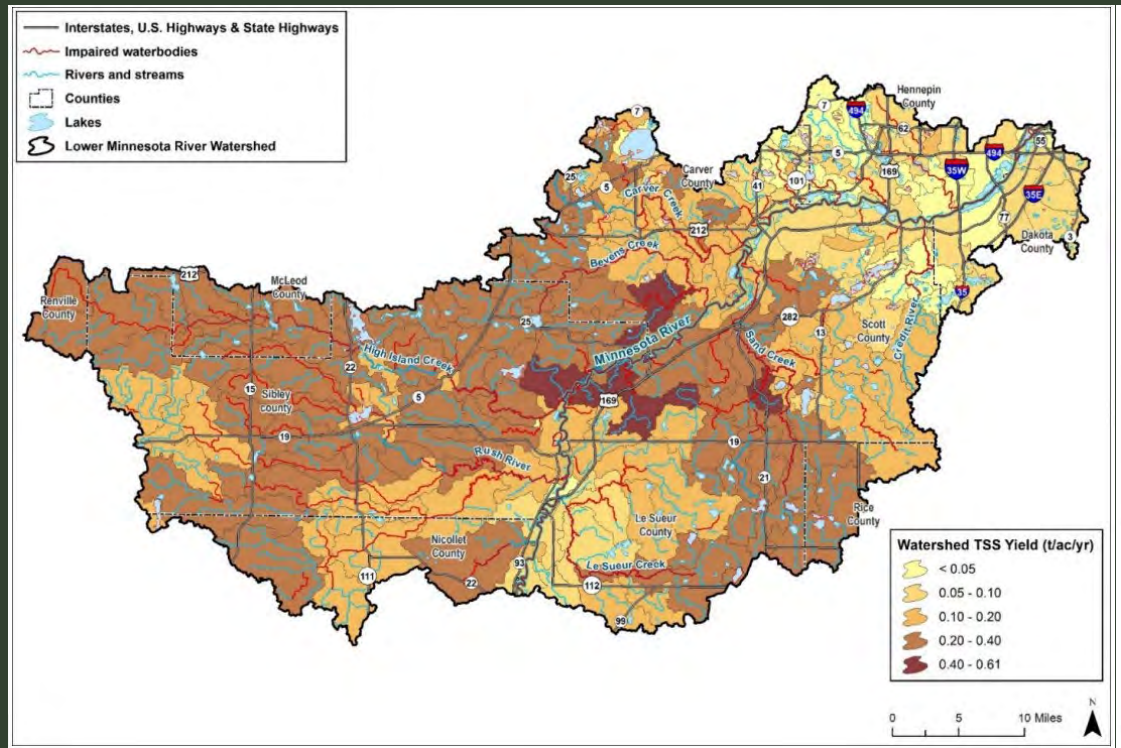
# Lower Minnesota River Watershed

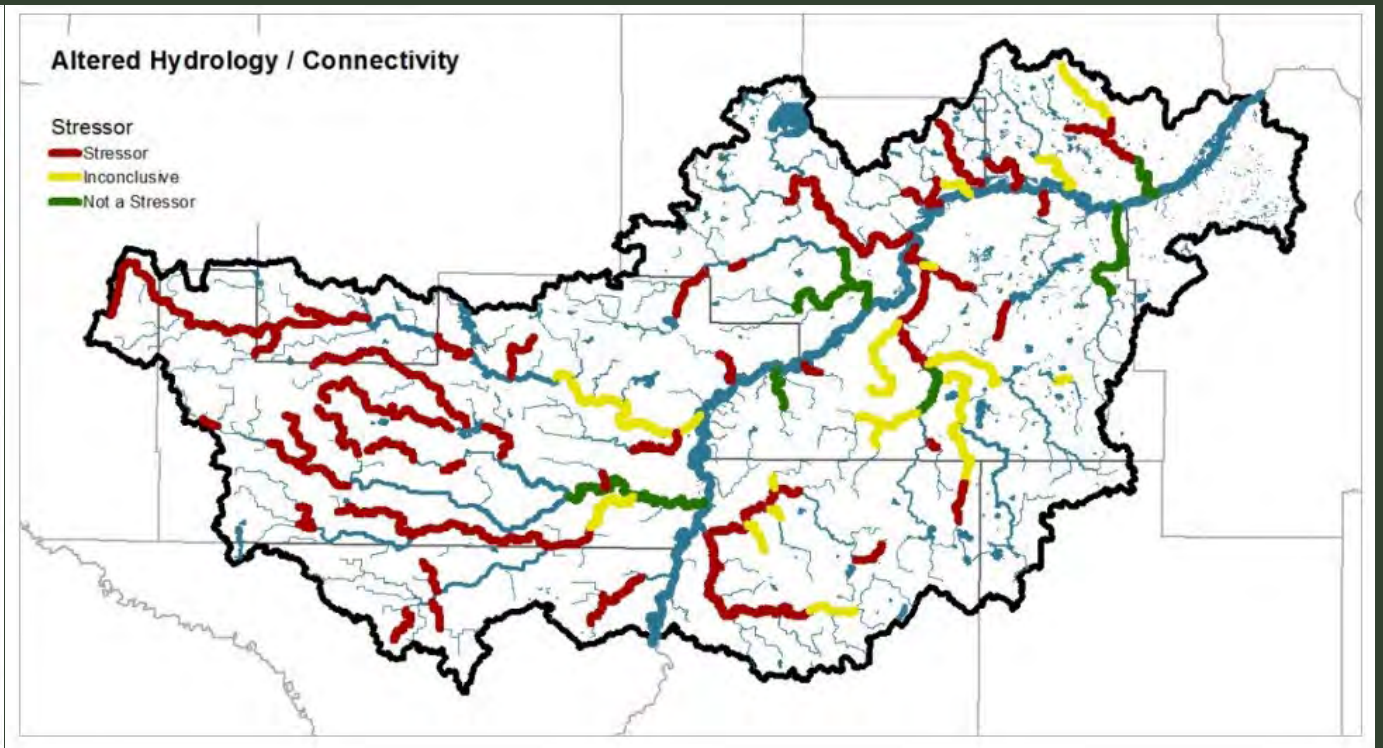
- Focus on the Lower Minnesota River Watershed
- One of 12 Major Watersheds within the Minnesota River Basin
- 1,174,400 acres
- Mixed land use of agriculture and urban
- Contains 50 miles of the Minnesota River
- Contains 2,482 miles of flowing water from streams, rivers, and drainage ditches
- Highest elevation point of watershed=1200ft
- Lowest elevation point in watershed=682ft

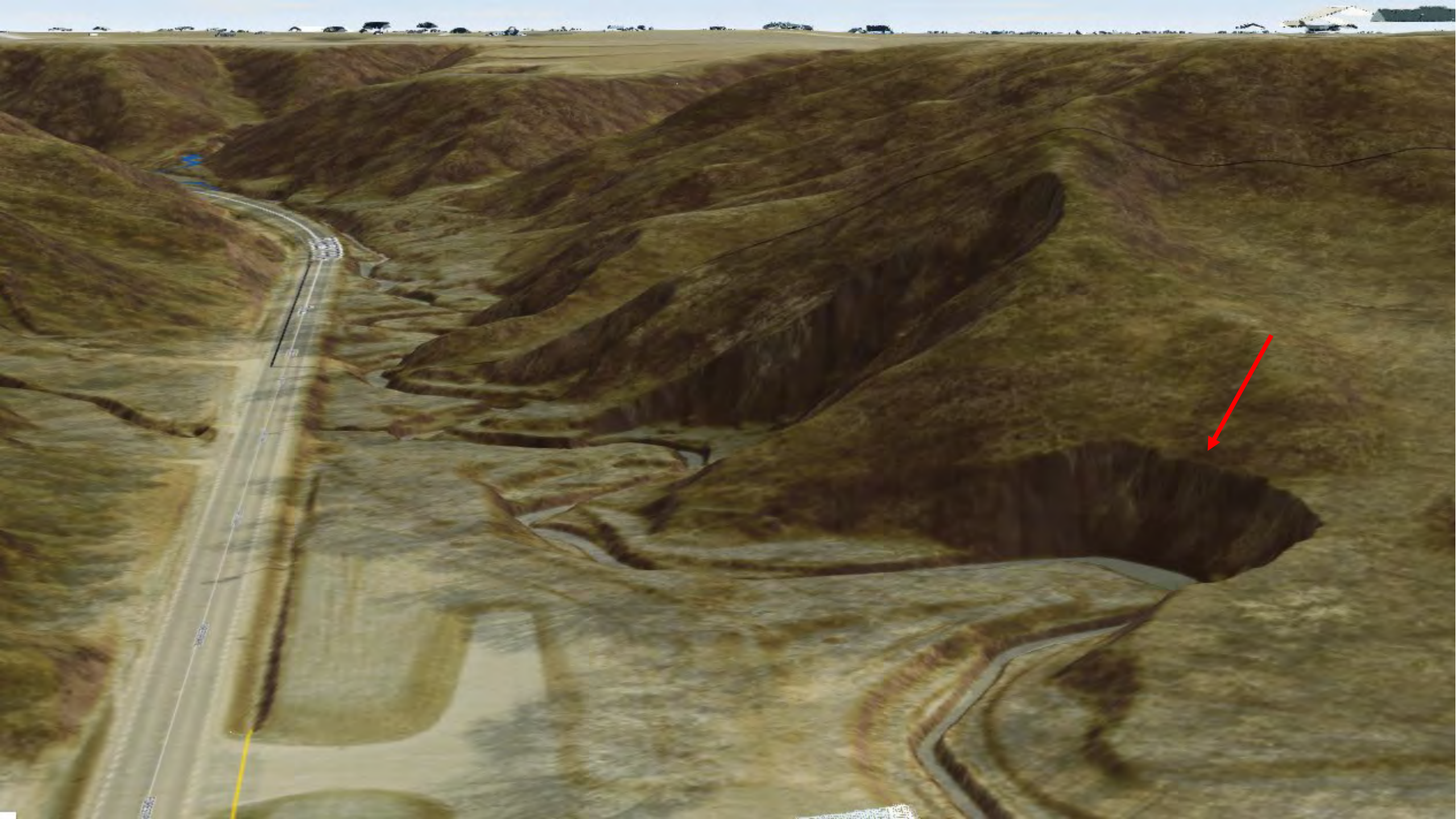


# Water Quality Concerns

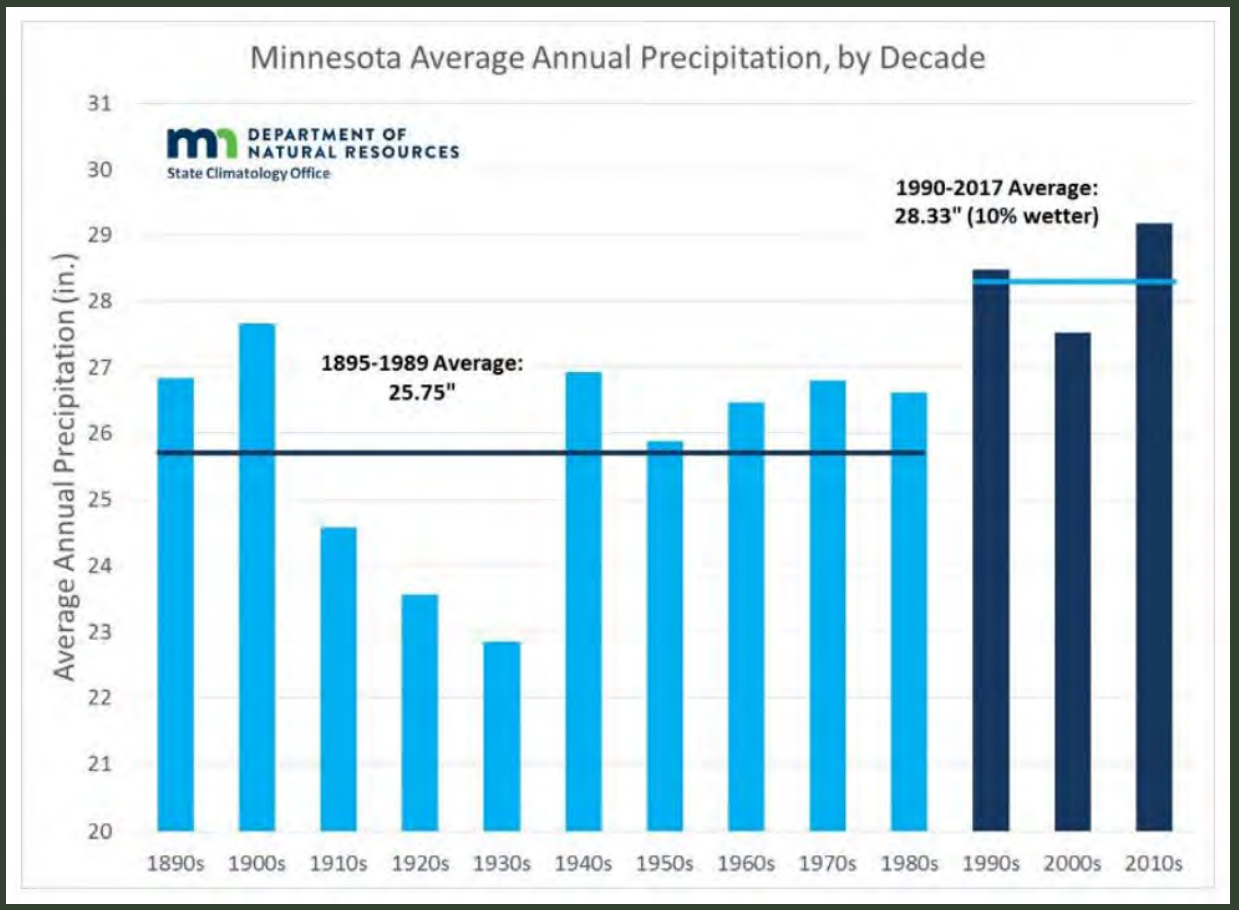
- Sediment
  - 58% of stream impairments within watershed contain Sediment
  - Near/In Channel erosion largest source of sediment
- Altered Hydrology
  - 65% of streams within watershed have been altered
    - 63.2% of watercourses within the Watershed are altered
    - 1.2% of watercourse impounded

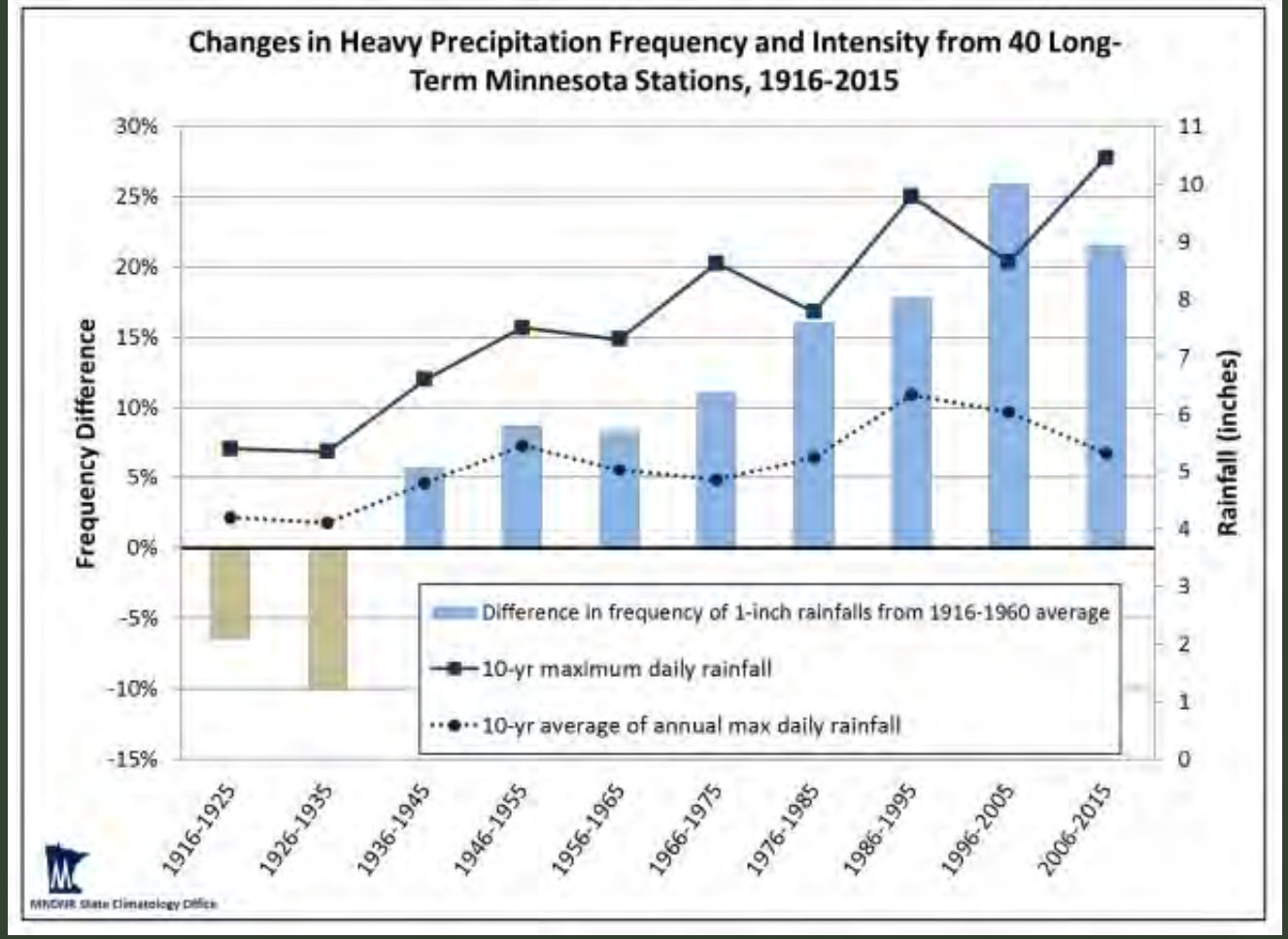




# Long Term Precipitation Patterns




March 2023


May 2024


July 2024

# Projects and Practices

- Projects and Practices that reduce peak flows and volumes, provide water storage, and reduce sediment
- Use models to create goals in order to achieve water quality benefits (mentioned above)
- Priority areas where to target in watershed based off precipitation events, flooding events, and sediment loading
- Multiple projects and practices available to use.  Each project dependent on the following:
    - Water quality goals
    - Landowner goals
    - Landowner willingness
    - Funding Availability

# Financial Resources Available

- Reoccurring Cost share
  - WBIF starting 2025
    - $538,396 for 2 year cycle
  - SWCD Cost-Share
- Remaining funds available are competitive funding streams
  - Historically what has been available to Greater Minnesota
- Greater Minnesota is in its first round/version of Comprehensive Watershed Management Plans
- Population outside of Metro Area is significantly smaller
  - Smaller Tax Base
- Very few Watershed Districts in Greater Minnesota
- Le Sueur County
  - Started a Water Storage Fund
  - Levy Dollars

# Comprehensive Watershed Management Plan

- Just for the Lower Minnesota River East Watershed Partnership
- 10 year Lifespan
- Each additional Comprehensive Watershed Management Plan for the other 11 major watersheds and the 7 County metro area have their own goals and budgets

| TABLE 6.2: PLAN COSTS | |
|---|---|
| **Costs for Plan Implementation** | |
| Best Management Practices | $14,090,050 |
| Education + Outreach | $403,750 |
| Technical Assistance | $538,400 |
| Data, Studies, and Monitoring | $1,883,000 |
| Policy + Regulation | $205,000 |
| Administrative | $269,200 |
| **Total** | **$17,389,400** |

# Policy Changes

Existing policies that are established create programs

- One Watershed One Plan
- Water Storage
- Climate Resiliency

Additional policies that support:

- Protecting Water Resources
- Promoting Best Management Practices
- Building Resiliency
- Long Term Funding

# Questions?

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# Norm Senjem
# Lake Pepin Legacy Alliance

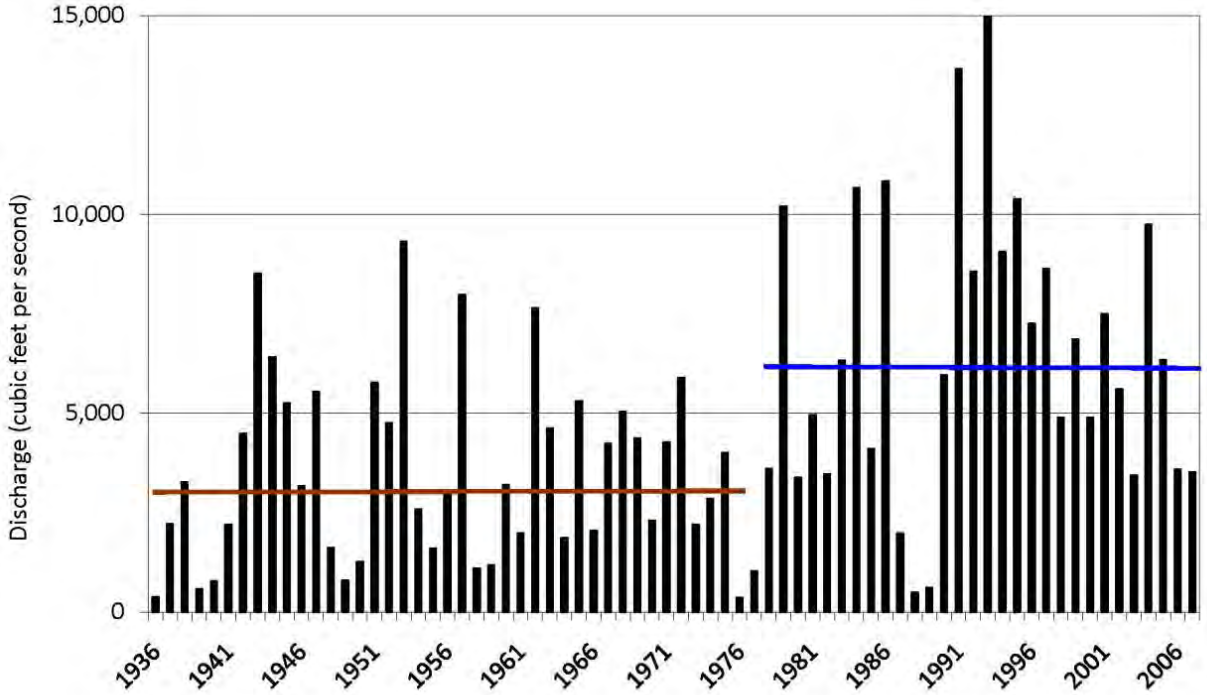
## Minnesota River Flooding Causes, Impacts, and Amelioration through Water Storage

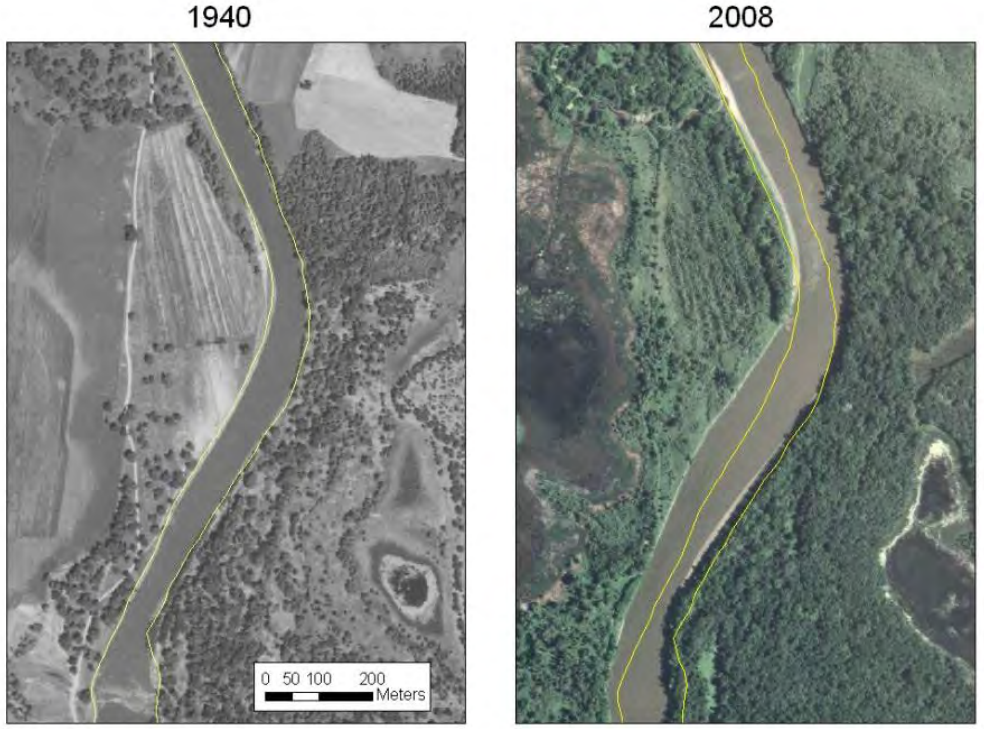
1:30-1:45pm


# Minnesota River Flooding Causes, Impacts and Amelioration

Norman Senjem, Lake Pepin Legacy Alliance, Jan. 8, 2025

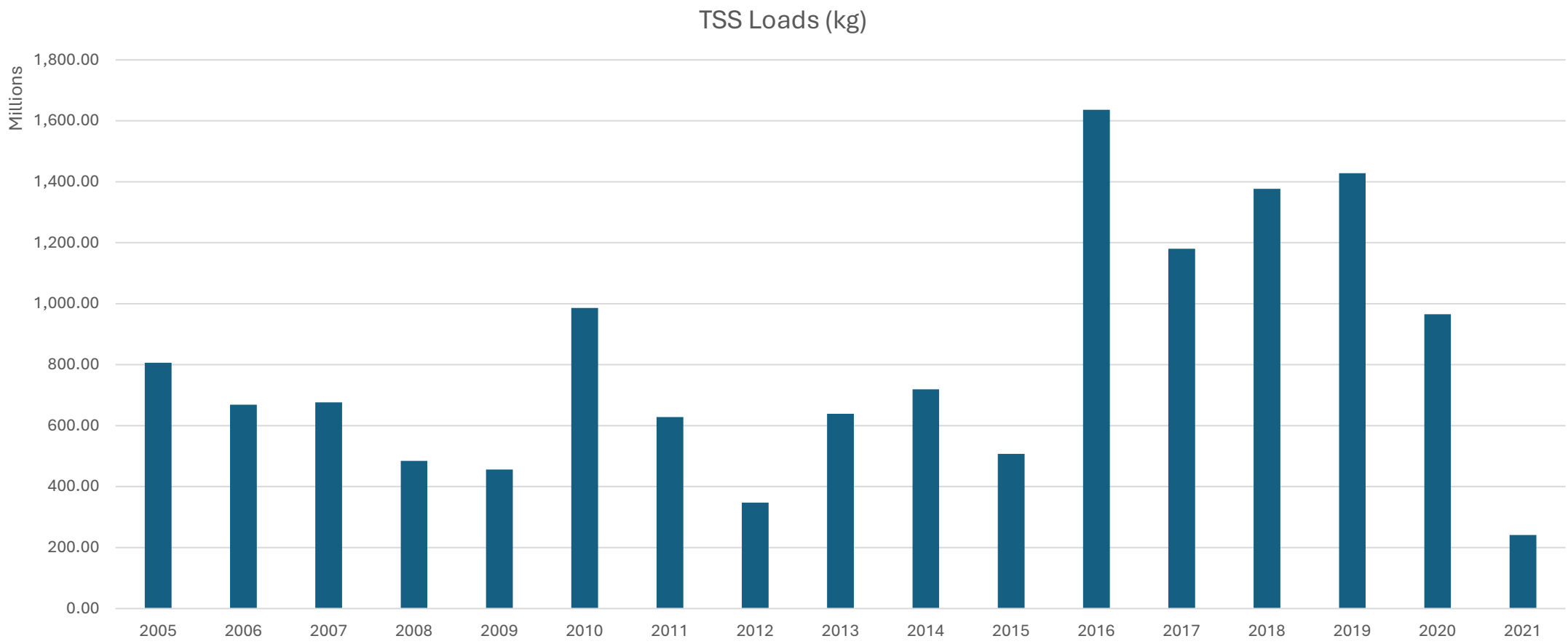
# Doubling of Flow, Widening of Channel



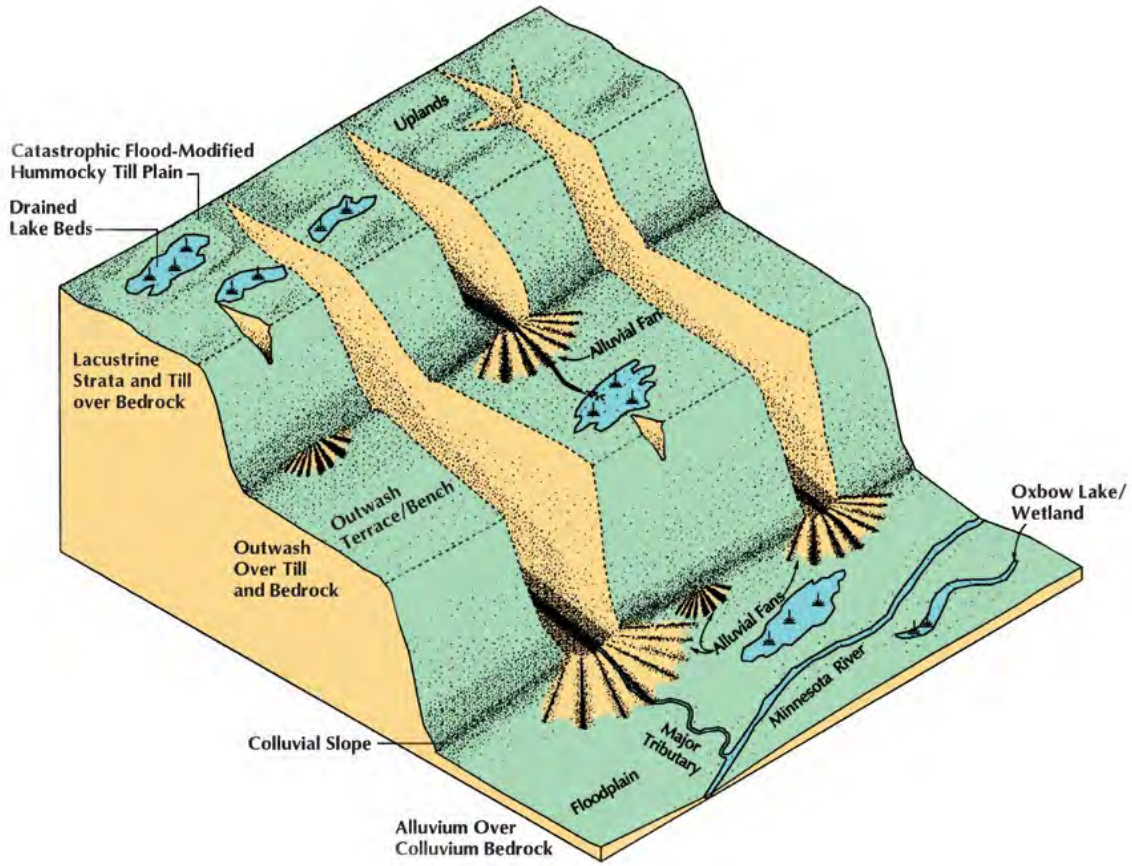



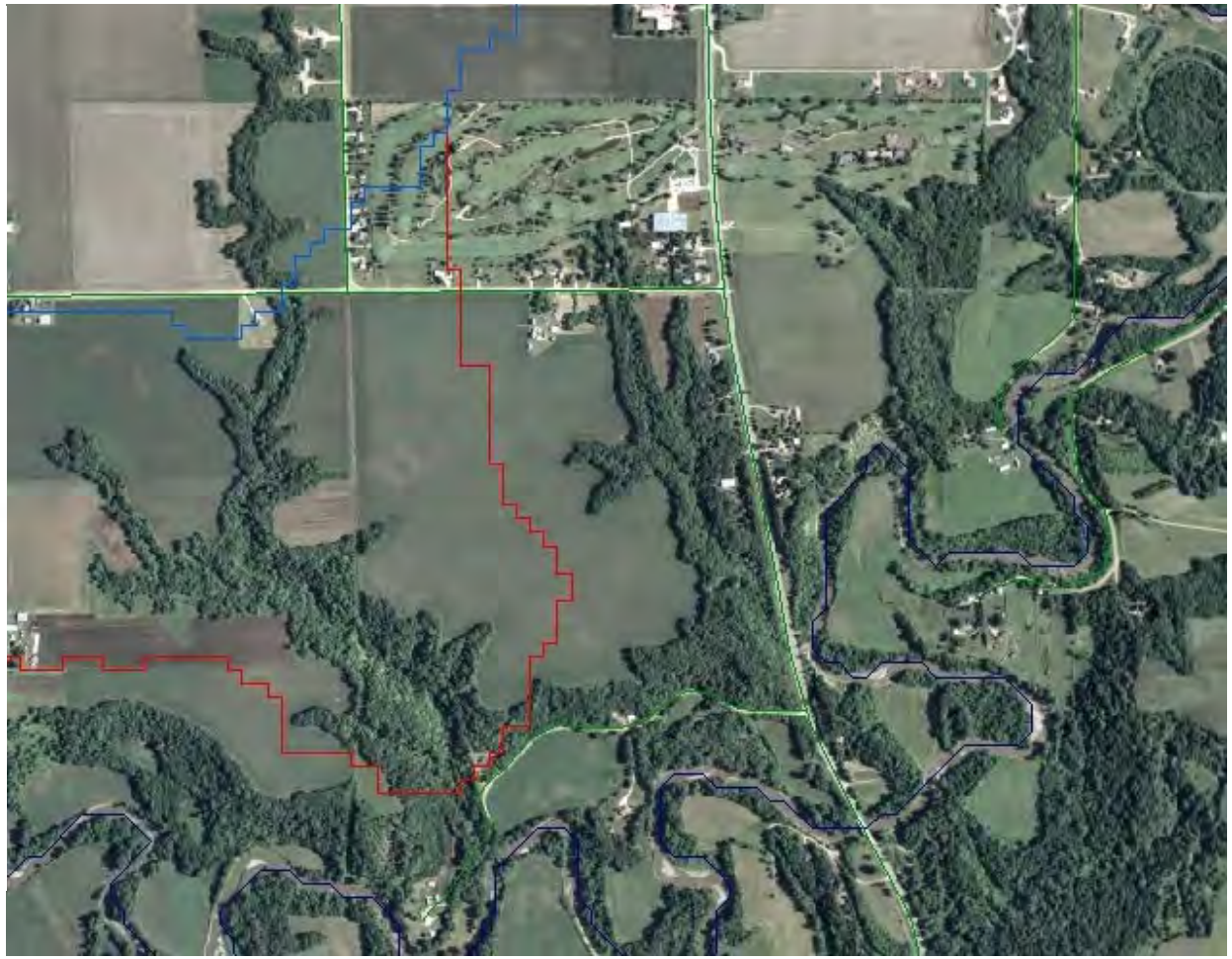

Minnesota River channel widened by 50% near Jordan.
Source: Wes Lauer, University of Washington

# Total Suspended Solids Annual Loads



# Landscape Primed to Erode



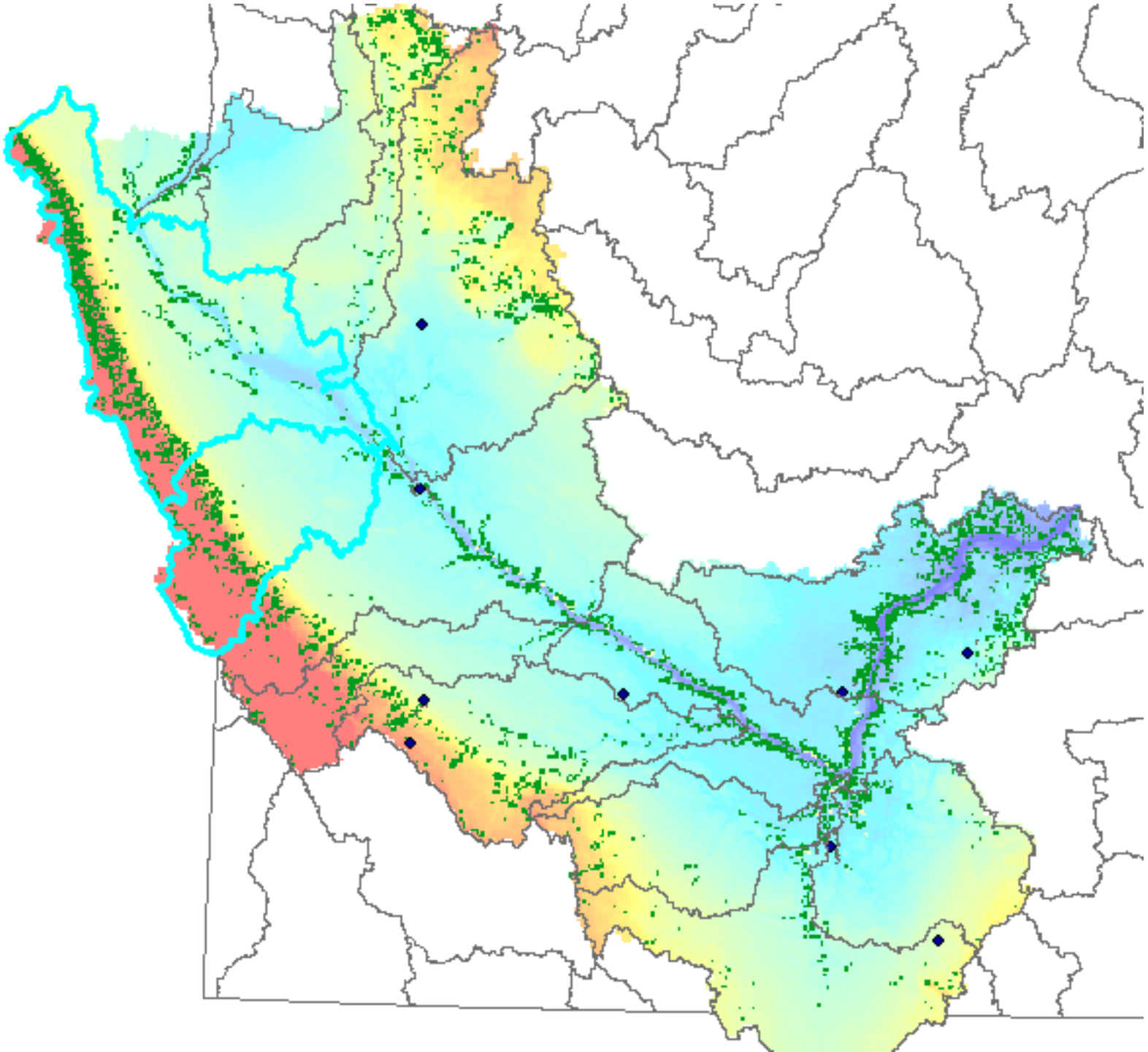
# Near-Channel Sources

- Bluffs
- Streambanks
- Ravines

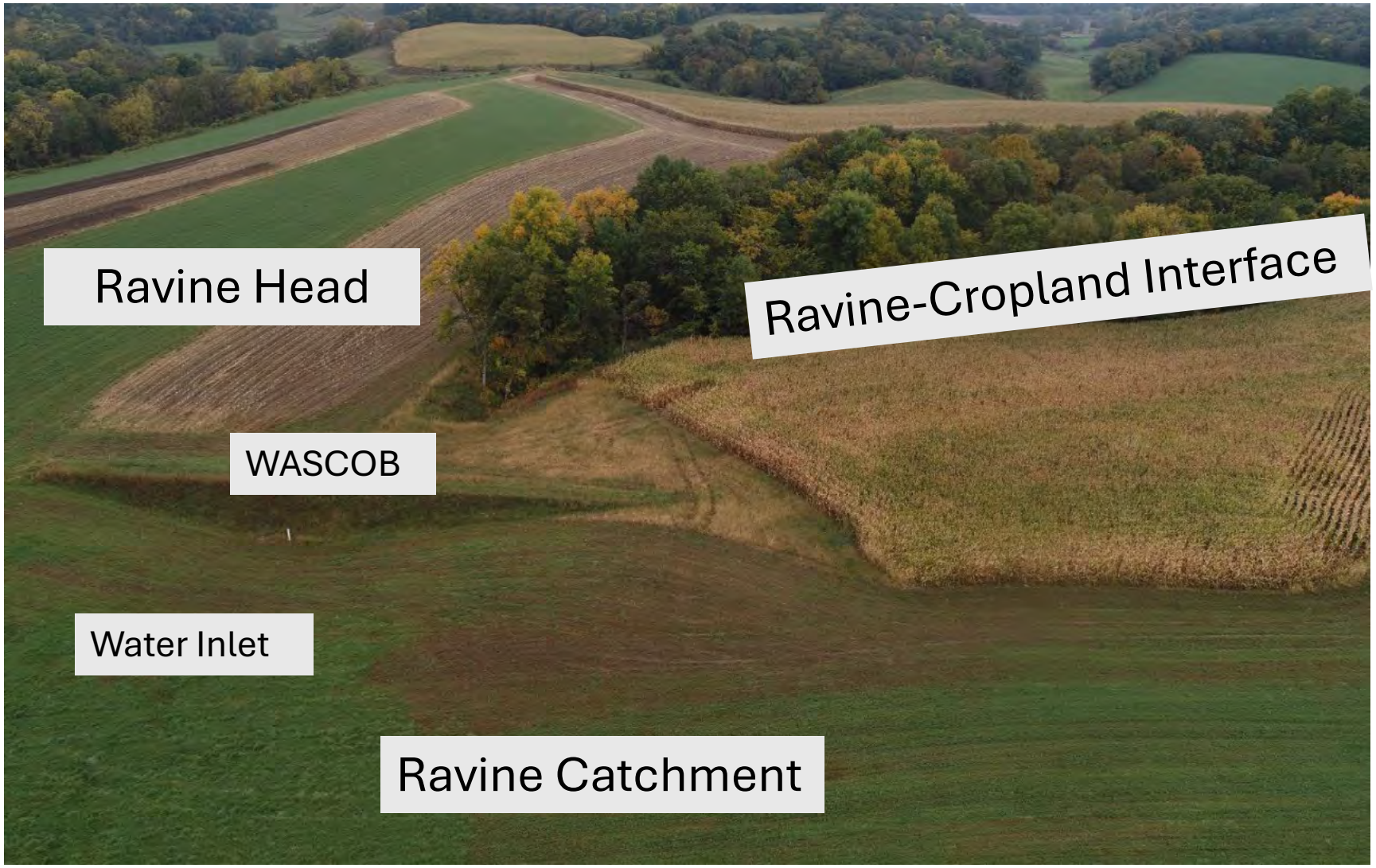
# Focus on Ravines

Ravines in Minnesota River Basin
Indicated by green dots

Source: John Niebuhr, University of Minnesota



# Treatment Train Approach – USACE Study



# Legislative Agenda: Catchment

- Incentives for cover crops followed by no-till or strip-till row crops
- Priority for wetland restoration
- CREP for catchments – Conservation Reserve Program plus Reinvest in Minnesota – perpetual easements

# Legislative Agenda: Ravine Head

- Designate ravine heads as priority areas for WASCOB CP-638 projects
- State funds to cover owner's cost-share requirements
- Add technical design staff through regional SWCD Technical Joint Powers Boards

# Legislative Agenda: Ravine/Cropland Interface

- **Promotion:** “Square the field” and protect the edge with perennial grass buffers.
- **Fund Minnesota CP-38E** from the CRP continuous signup program.
- Include ravine/cropland interface buffer in **CREP** for ravine erosion control.

# Conclusion: Bring Ravines Out of Hiding

- Publicity and education campaign
- Landowner incentives

- Technical assistance – treatment train approach

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# Scott Sparlin
# Minnesota River Congress

## Tools for Minnesota River Health: Water Quality and Storage Program and Minnesota River Commission

1:45-2:00pm

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# Minnesota River Board

- Subdivision 1: Duties
- Subdivision 2: Membership

**103F.378 MINNESOTA RIVER BOARD.**

Subdivision 1.**Duties.**

The Minnesota River Board, established under section 471.59 for the purpose of coordinating efforts to improve water quality in the Minnesota River Basin and achieving the goal of making the Minnesota River suitable for fishing and swimming by providing leadership, building partnerships, and supporting watershed programs in collaboration with the Water Resources Center at Minnesota State University, Mankato, has the following duties:

(1) compiling and submitting to the governor, the legislature, the Board of Water and Soil Resources, and all watershed partners:

(i) comprehensive water quality and flow stability improvement goals for the Minnesota River Basin, prepared by reviewing and summarizing the work plans of those responsible for the development and implementation of the 12 major watershed plans, basin counties, state agencies, and other partners active and identified as watershed management organizations.

(ii) a biennial report on the results of projects in the 12 major watersheds of the Minnesota River Basin, and

(iii) periodic basinwide water quality and flow stability improvement plans;

(2) advising on water quality and watershed management projects, including implementation and coordination of TMDLs under the Clean Water Legacy Act as provided in chapter 114D, and promotion of data incorporation into the planning processes associated with county water plans, watershed plans, and, as appropriate, planning and zoning decisions in the Minnesota River Basin;

(3) conducting public meetings of the board on a bi-monthly basis at locations within the Minnesota River Basin and providing virtual attendance access by members, invited guests and the general public.

(4) conducting an ongoing information and education program concerning the status of the Minnesota River Basin and sponsoring and coordinating continuing education opportunities in cooperation with watershed partners in the basin;

(5) providing periodic reports and budget requests to the governor's office, appropriate committees of the legislature, and the Board of Water and Soil Resources regarding progress on meeting river water quality and rate flow stability management goals, future funding required for this effort, and biennial legislative requests to provide funding for the effort;

(6) coordinating and promoting, in partnership with and on behalf of water quality and watershed management stakeholders, policy development and implementation of projects that affect multiple major watersheds and target reduction of pollutant inputs and rate flow stabilization into the Minnesota River;

(7) facilitating the identification of and application for water quality improvement implementation and research funding for projects that affect multiple major watersheds and benefit local watershed efforts and providing assistance to local project managers, partners, state agencies, the legislature, or the governor's office;

(8) advocating to promote and advance basin water quality and rate flow stabilization issues identified by various watershed partners at the legislature, among the state agencies, and with the governor;

(9) promoting cooperation among the numerous water quality and watershed management units in the basin;

(10) providing an on-going open forum for conflict resolution and meeting facilitation services as requested; and

(11) striving to advance basinwide water quality and rate flow stabilization projects and goals while promoting both local projects and managing regional initiatives.

Subd. 2.**Membership**

**Local organizations**
These members should be elected officials or agency staff who have already been working to clean up the river and who have been cooperating with other local organizations in that effort.

**State agencies**
These members should be the Commissioners or Deputies of agencies directly involved in Minnesota River issues, including MPCA, BWSR, MDA, and MDNR. In addition, one or more top representatives from Minnesota Extension Service (MES) or the University of Minnesota should be included.

**Dakota communities**
Members should include representatives of the Shakopee Mdewakanton, Lower Sioux, Upper Sioux, and Prairie Island Dakota communities.

**Citizens**
These members should be chosen to represent the diversity of interests in the river basin farmers, businesspeople, educators, and conservationists. These citizens should be knowledgeable about and actively interested in the Minnesota River. To convince the general public that the Commission is not just another government agency, it is essential that at least half the members of the Commission come from this group.

(A list for discussion on membership makeup and size)

Minnesota State University Mankato, Water Resources Center
Minnesota Farmers Union
MN Corn Growers Assn.
MN Soybean Growers Assn.
MN Cattlemen's Assn.
Land Stewardship Project
Minnesota Soil Health Coalition
Izaak Walton League (UMRI)
Ducks Unlimited
Pheasants Forever
MN Fish
The Coalition for a Clean Minnesota River
Clean Up our River Environment Reps.
Friends of the Minnesota Valley
Minnesota Center for Environmental Advocacy
Lake Pepin Legacy Alliance
MN Conservation Federation
Anglers for Habitat
Mankato Paddling and Outing Club
Retired Land Engineers
Minnesota Watershed Dist. Mgrs.
County Commissioners
US Fish and Wildlife Service
Area 2 Joint Powers Board
Redwood Cottonwood Rivers C A
US Army Corps of Engineers
Conservation Minnesota
MN Well Owners Assn.
MN Wastewater Operators Assn.
Catholic leadership representation
Lutheran leadership representation
Faith Community representation
Districts 5 and 6 SWCD

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# Minnesota River Board Potential Structure Makeup Considerations

- Local Organizations
- State Agencies
- Dakota Communities

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# Minnesota River Board Initial Vision Clarifications

- Minnesota River Basin Joint Powers Board/Minnesota River Board
- Lack of diversified official voting power membership
- Makeup of this entity would provide clarity for accountability
- Makeup of the Board is the most important part – not as much the "how and why" but the "who".

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## Brief Recess

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## Testimony Presentations

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# Tom Crawford
# Friends of the Minnesota Valley

## Solutions for Clean Water Advocacy

2:15-2:30pm

Tom Crawford
River Watch Director -
Friends of the MN Valley

# Clean Water Advocacy & Education

# LMRWD as a…
# Downstream Advocate

# Issues Affecting LMRWD




## Flooding

**Causes:**

- Climate Change
- Lack of Storage
- Landscape-Scale Drainage

**Concerns:**

- Summer Flooding
- Degraded Water Quality
- Infrastructure Damage

## Polluted Watershed

**Causes:**

- Landscape-Scale Drainage
- Impermeable Surfaces
- Lack of Storage

**Current State:**

- Exceed TMDLs
- Sediment + Nitrates
- Dead Zone

## Status Quo

**Concerns:**

- Prioritizing Business over Communities
- Voluntary Compliance
- Reports with no Accountability
  - WRAPS
  - Sediment Reduction Strategy
  - 1W1P

# Artificial Drainage

Impacts on Flooding & Sediment

**"This strongly suggests that artificial drainage – the rapid removal of water from depressional areas, which significantly reduces depressional Evapotranspiration – is a major driver of increased river flow."**

Schottler, Shawn P. Et al. "Twentieth Century Agricultural Drainage Creates More Erosive Rivers." Hydrological Processes. (2013) Wiley Online Library.

Data from Lake Pepin indicates much of the excess sediment in the flowing into the Mississippi is from near channel erosion, caused by increased river flow.

Estimated Sources of Nitrogen Pollution (2013)

- Cropland Tile Drainage ~ 37%

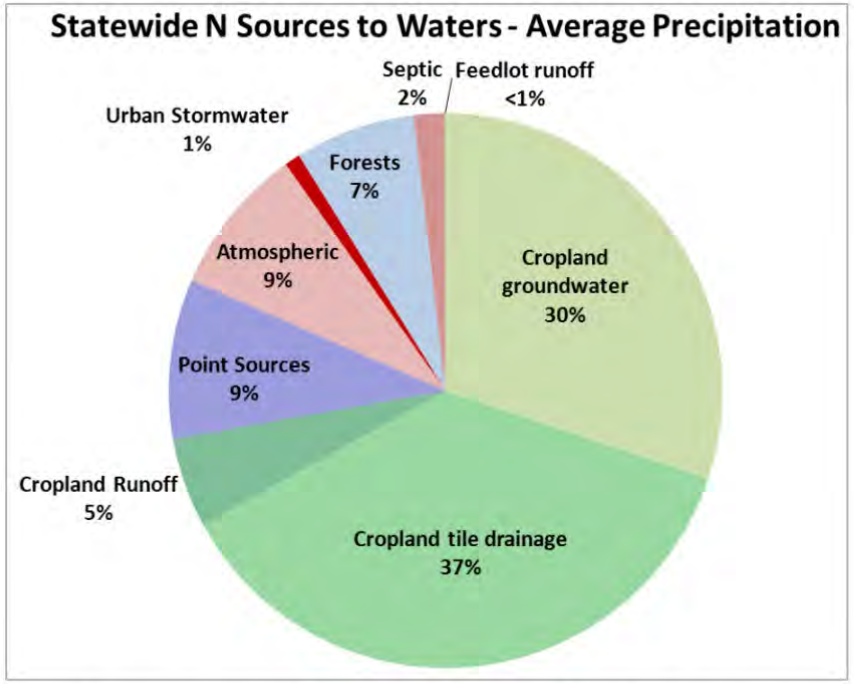
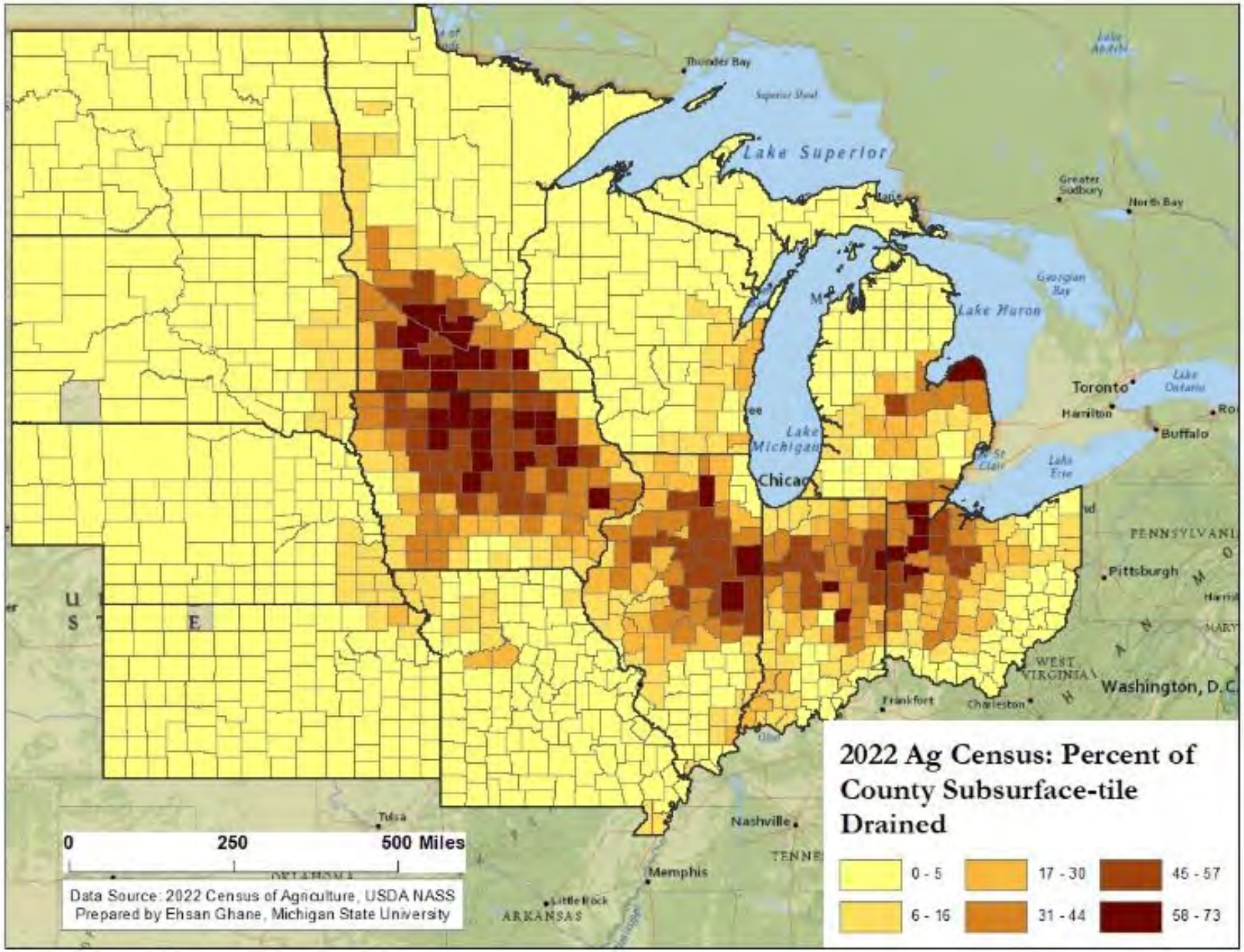



**Figure 6. Estimated statewide N contributions to surface waters during an average precipitation year (rounded to whole numbers).**




2022 USDA Survey

Percentage of County Drainage by Subsurface Tile

**11 Counties in MN River Watershed over 45%**

# As it relates to the LMRWD Mission…

| Organizational Management | Surface Water Management | Floodplain & Flood Management | Erosion & Sediment Control |
|---|---|---|---|
| Coordinate with upstream Counties & Watershed Districts to reduce impacts of artificial drainage & promote sustainable agriculture BMP's | Water Quality restoration requires reduction in sediment & nitrates both heavily impacted by upstream land use practices | Flooding is exacerbated by landscape-scale artificial drainage and climate change fueled weather events | Involvement in upstream activities is crucial to reducing sediment loads & erosion risks. |

# Accountability

As residents downstream of the rest of the river, the LMRWD region needs an advocate with expertise & resources to report, and litigate (if necessary) actions upstream that result in/from ignoring impacts to water, environment, and quality of life.

Pressure the regulatory agencies to regulate:

- MPCA
- BWSR
- EQB

# LMRWD as a… Watershed Education Hub

# Education Opportunities



## Schools

**Needs:**

- Access to Nature
- Volunteer Science Initiatives
- Hub for Opportunities
- Water Related Career Info

## Community

**Needs:**

- Hands-On Workshops
- Collective Action Opportunities
- Public Forum

## Businesses

**Needs:**

- Environmental Workshops
  - Smart Salting
  - Water Conservation
- Resources to Implement Environmental Alternatives

# LMRWD Role

As a community funded water resource organization, the LMRWD is both perfectly positioned and ostensibly obligated to serve its region

- As an advocate for clean water & against the status quo
- As a hub for organizational networking & collective action
- As a benefactor for water education in the region

These responsibilities include the need to advocate for alternative to rampant and excessive chloride use.

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# Tom Worthington and Vicki Sherry Minnesota Valley National Wildlife Refuge

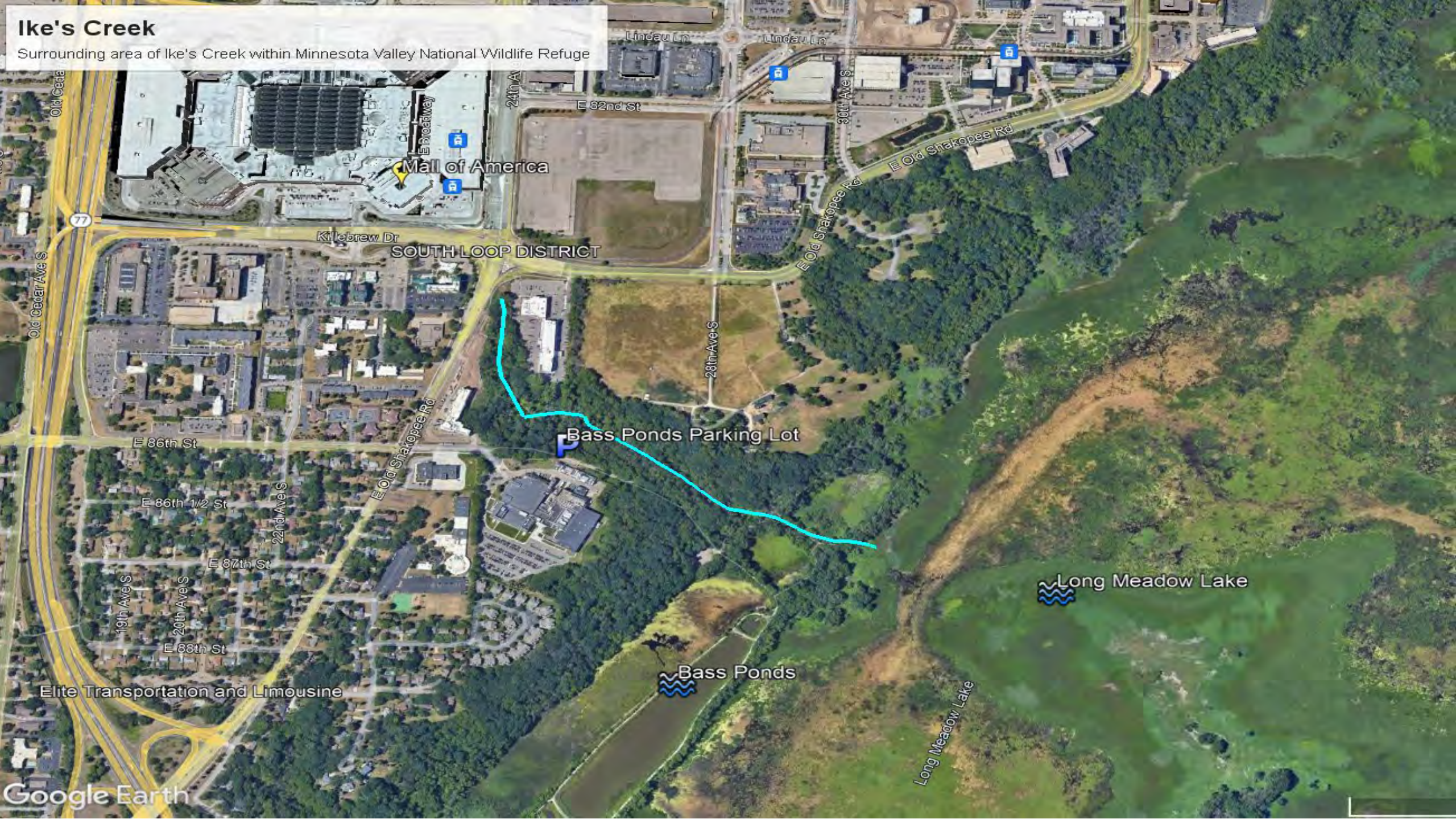
## Solutions for Ike's Creek

2:30-2:45pm

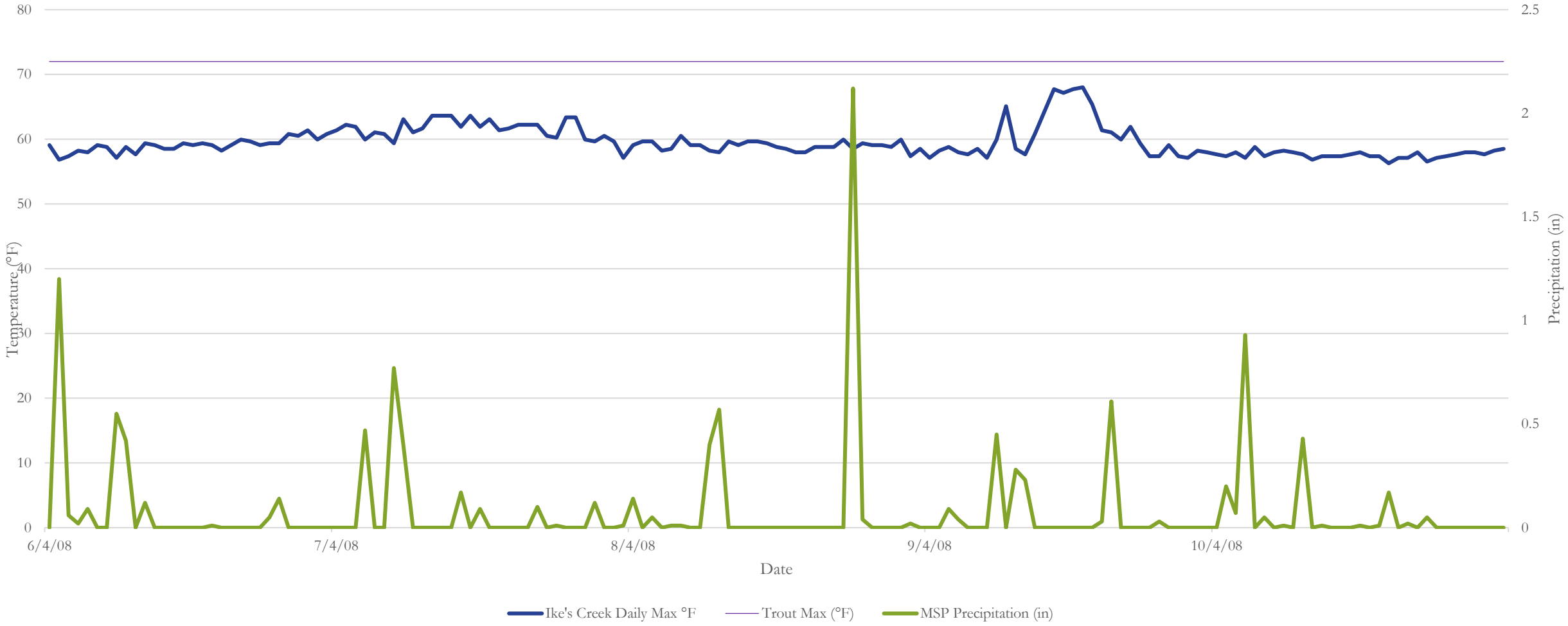
Ike's Creek-Minnesota Valley NWR

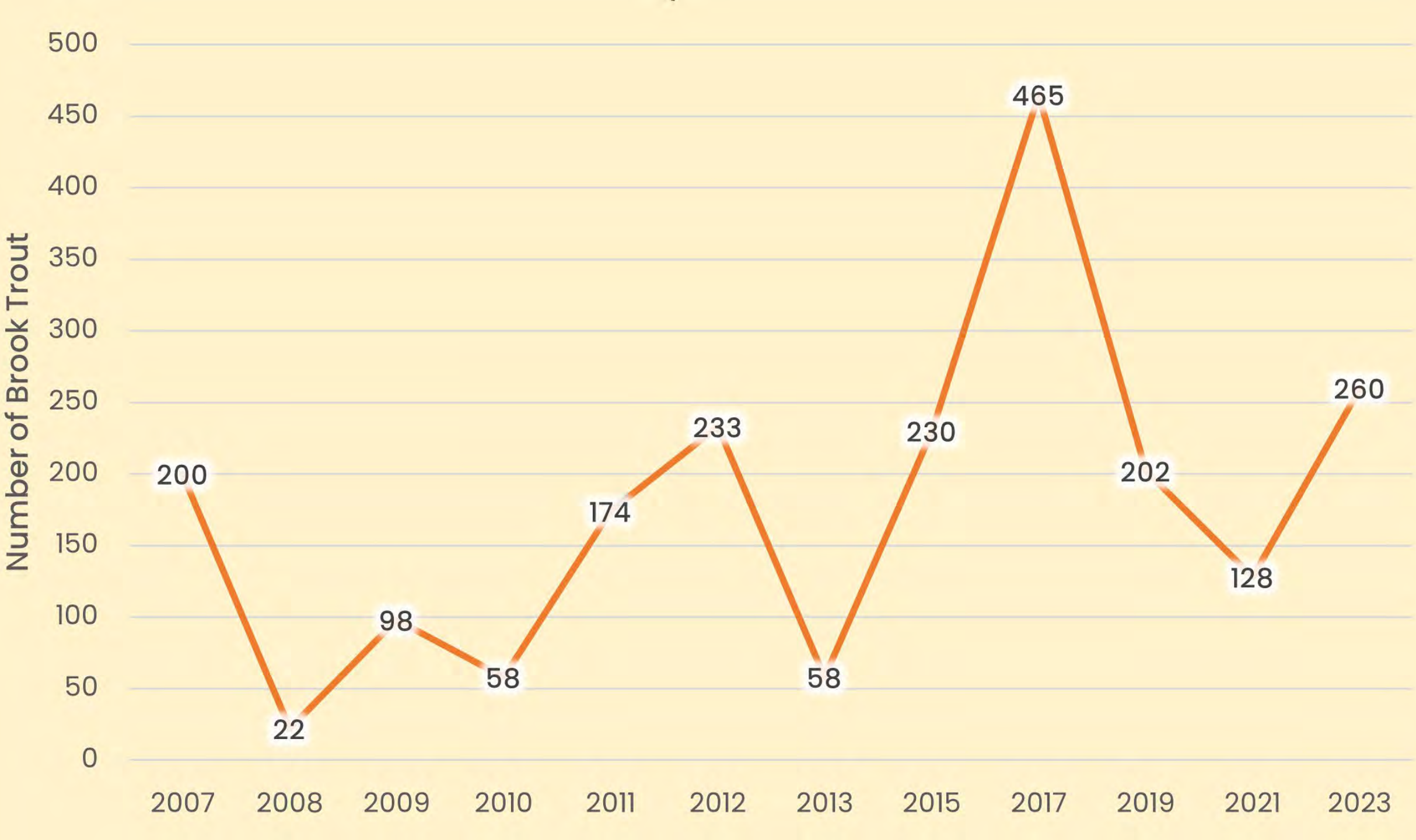
# Ike's Creek

Surrounding area of Ike's Creek within Minnesota Valley National Wildlife Refuge

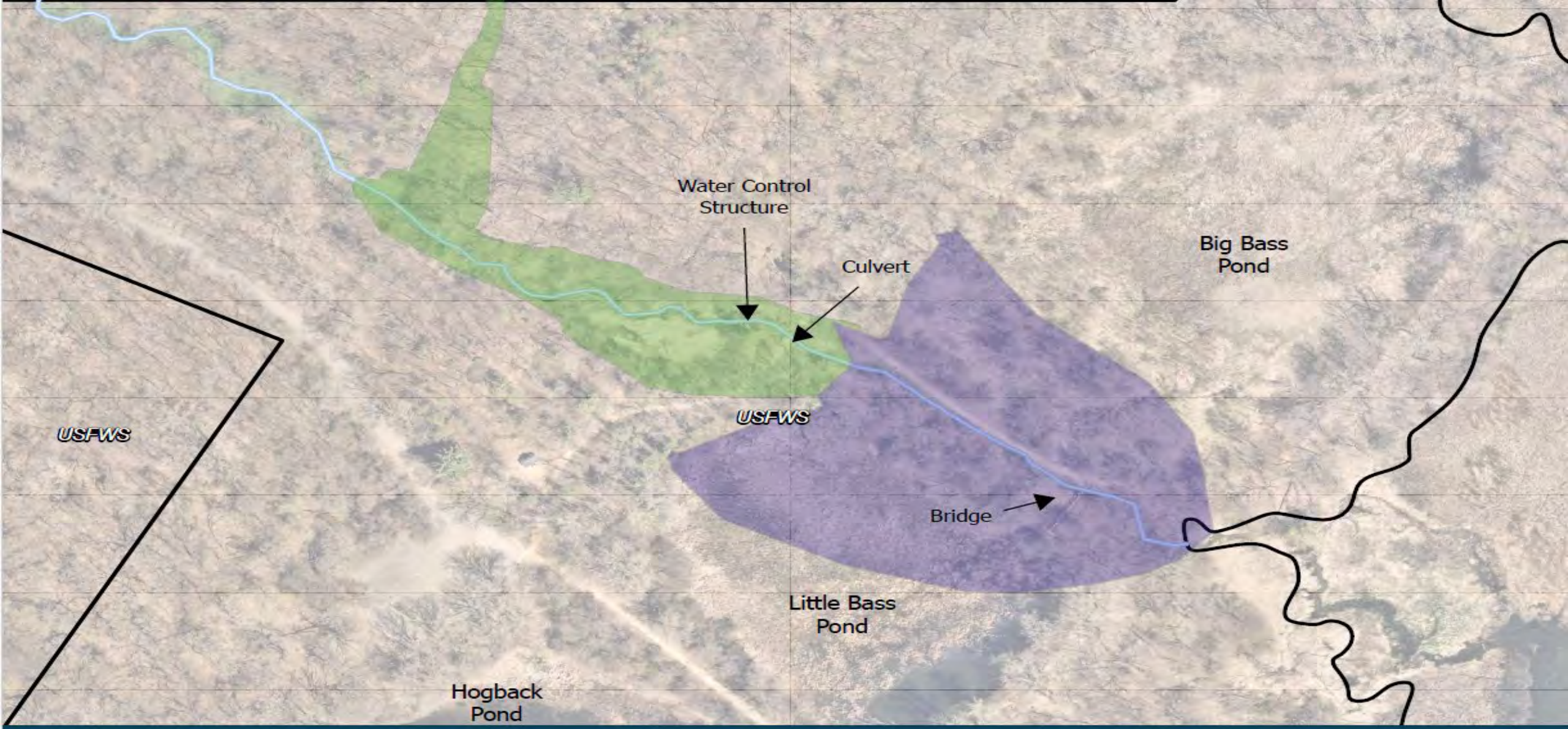


# Ike's Creek Daily Temperature Maximum June 4 - November 3




Number of Brook Trout
500
450
400
350
300
250
200
150
100
50
0
200
22
98
58
174
233
58
230
465
202
128
260
2007
2008
2009
2010
2011
2012
2013
2015
2017
2019
2021
2023

*Only known trout stream in Hennepin Co.
*One of only a few that support brook trout
*Numerous Partners

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Feet
0 100 200

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## Proposed Work Areas

- Work Area A
- Work Area B

**Ike's Creek Restoration**
**Proposed Work Areas A and B**
Bass Ponds
Minnesota Valley National Wildlife Refuge
U.S. Fish and Wildlife Service
Minnesota Valley Trust

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