



# Local Comprehensive Wetland Protection and Management Plans

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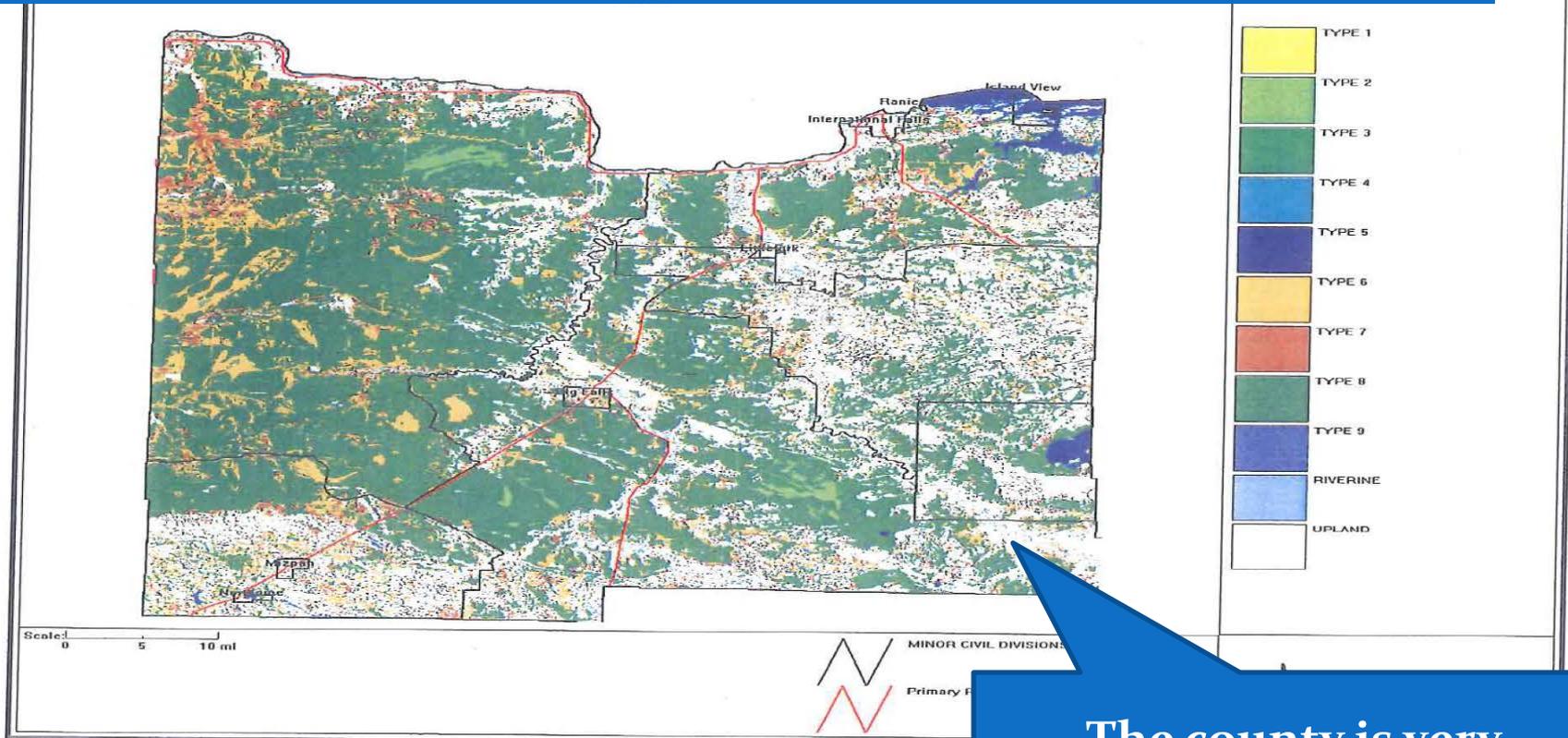
## BWSR Academy 2012

# History of Wetland Planning

- Original Statute and Rule did not have provisions for Local Wetland Plans
- Several wetland rich northern Minnesota Counties argued that the Wetland Conservation Act put undue burden on them
- Koochiching County and four others rescinded WCA about 1994



# Koochiching County Wanted Flexibility



The county is very wetland rich. (White represents upland, the rest of county is wetland)

Koochiching County contains 2,032,700 acres of wetlands (20% of the state's wetland resources)

Table 1  
9 Wetland Type

NUMBER OF	
96,320 acres	4.7%
1,007,269 acres	49.7%
43,360 acres	2.1%
643,106 acres	31.7%
<b>2,032,700 acres</b>	<b>100%</b>

# 1996 WCA Statute Changes:

- Local Government Unit (LGU) may **develop a plan as an alternative** to WCA rule
- **Notice must be made** in the beginning to: BWSR, Pollution Control Agency, DNR, LGUs, local citizens.
- The **Plan must be approved by BWSR**
- The plan (after BWSR approval) **must be implemented by ordinance** by the LGU

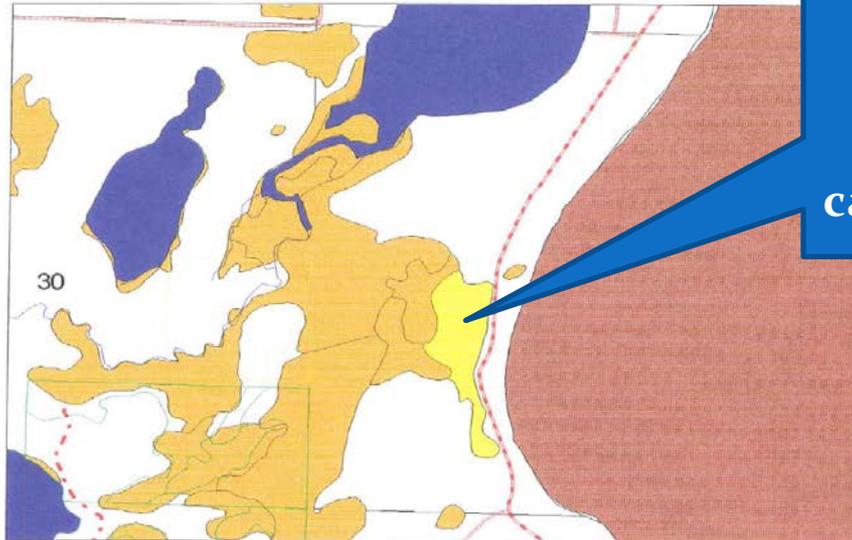
# History of Wetland Planning

- **Cass County became first county in Minnesota to develop and approve local wetland plan in 1997**
- **Numerous Metro LGUs developed plans**
- **Other counties soon followed:**
  - **Koochiching County**
  - **St. Louis County**
  - **Beltrami County**
  - **Lake County**
  - **Lake of the Woods Co.**
  - **Aitkin County**



# Cass County GIS Data Sheet

## CASS COUNTY ENVIRONMENTAL SERVICES Wetland Data Sheet



GIS based system allowed each “Wetland of Interest” to be evaluated - automatically calculated Wetland functional score

Based on MnRAM, 7 functions plus wetland uniqueness were considered by GIS to calculate functional score in Cass County

Wetland Location Section: 099 Twp: 135 Range: 029 Wetland Size in Acres: 015  
Wetland Types Circular 39: 006 NWI: PSS1C

FACTOR	SCORE	COMMENTS
Uniqueness :	1	Commonly Occuring Wetland
Fisheries Habitat:	1	Low Probability Fish Habitat Impact
Wildlife Habitat Protection:	2	May Provide Quality Wildlife Habitat
Rare and Endangered Species Protection:	1	Low Probability of Rare Species
Cultural Resource Protection:	1	Low Probability of Cult. Res. Site
Surface Water Quality Protection:	1	Low Surface Water Impact
Groundwater Sensitivity:	3	High Sensitivity for Ground Water
Flood Attenuation:	3	High Flood Attenuation Function
<b>TOTAL SCORE:</b>	<b>13</b>	

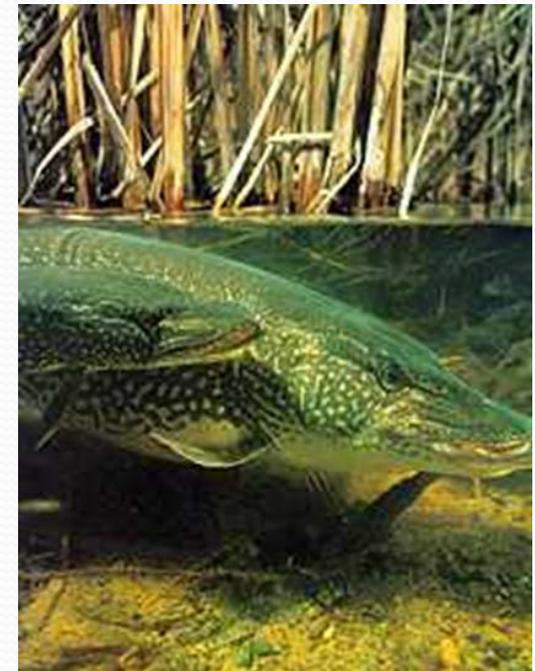
Replacement ratio was calculated based on score

REPLACEMENT RATIO

# Examples from Early Wetland Plans

Cass County Replacement Ratios:

Functional Score	Replacement Ratio
8 - 11	0.5 : 1
12 - 14	1 : 1
15 - 17	2 : 1
18 - 19	3 : 1
20 - 21	4 : 1
22 - 24	5 : 1

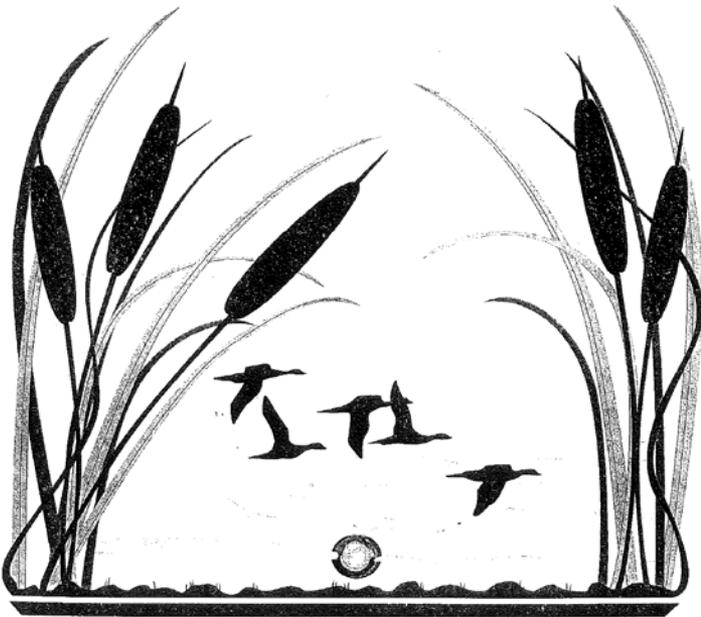


Cass plan “averaged” MnRAM functions – which resulted in reducing score of any individual function (*like fish spawning habitat*)

# Koochiching Plan

**Koochiching County's opportunity to develop a wetland plan became a turning point in northern LGU's buy-in to WCA during the 1990's**

Koochiching County  
Wetland Flexibility Plan  
& Ordinance



**Koochiching County developed a plan that allowed replacement ratios from 1/16<sup>th</sup>: 1 up to 1:1 depending on wetland function from low to medium to high**

**The Corps of Engineers failed to recognize the County plan resulting in frustration for elected officials and led to new approach in International Falls**

## Purpose (of wetland plan):

- 8420.0830, Subpart 1, Purpose and Eligibility:
- “As an alternative to the rules...a comprehensive wetland protection and management plan may be developed by a local government unit...”

*“This part provides minimum standards. LGUs may require equivalent or more stringent standards and procedures for wetland conservation, but not less stringent standards and procedures.”*



# Goal of Plan

*“the ultimate goal of a...plan is to maintain and improve the quantity, quality, and biological diversity of wetland resources...”*

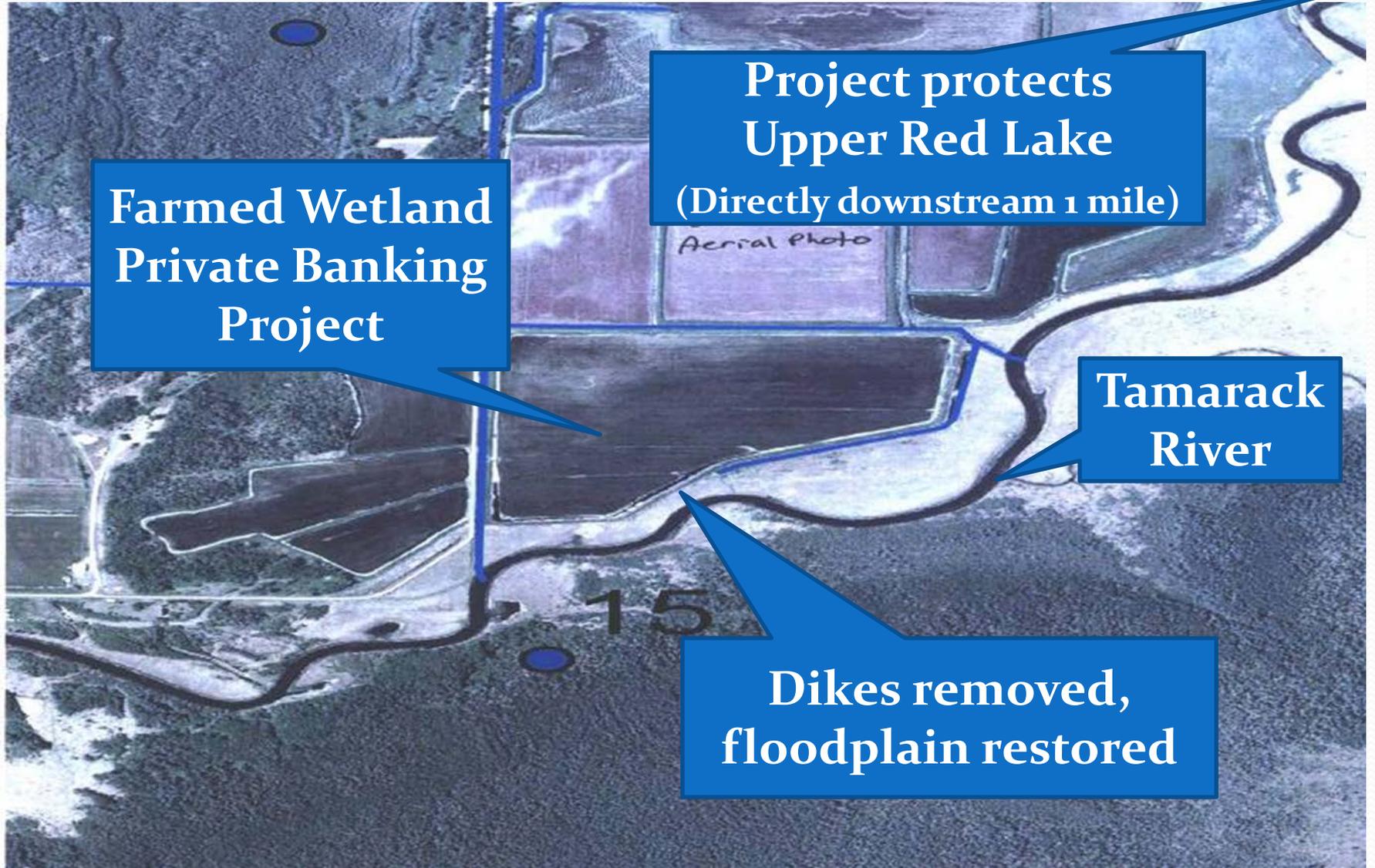
*“through the prioritization of existing wetlands and strategic selection of replacement sites.”*

*“...provide a watershed and ecosystem-based framework to make wetland impact and replacement decisions...”*



# Targeting Wetland Mitigation Sites

*(Beltrami County Wetland Management Plan)*



**Farmed Wetland  
Private Banking  
Project**

**Project protects  
Upper Red Lake  
(Directly downstream 1 mile)**

**Tamarack  
River**

**Dikes removed,  
floodplain restored**

Aerial Photo

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## Relationships to other Plans:

Subpart 2. *“To maximize effectiveness, the ...plan should be developed as part of, or in coordination with, other relevant local or regional plans and requirements.”*

*“The plan should provide a mechanism for integrating local land use decisions with ecosystem management goals at the watershed level.”*



# Flexibility Options:

- The plan may:

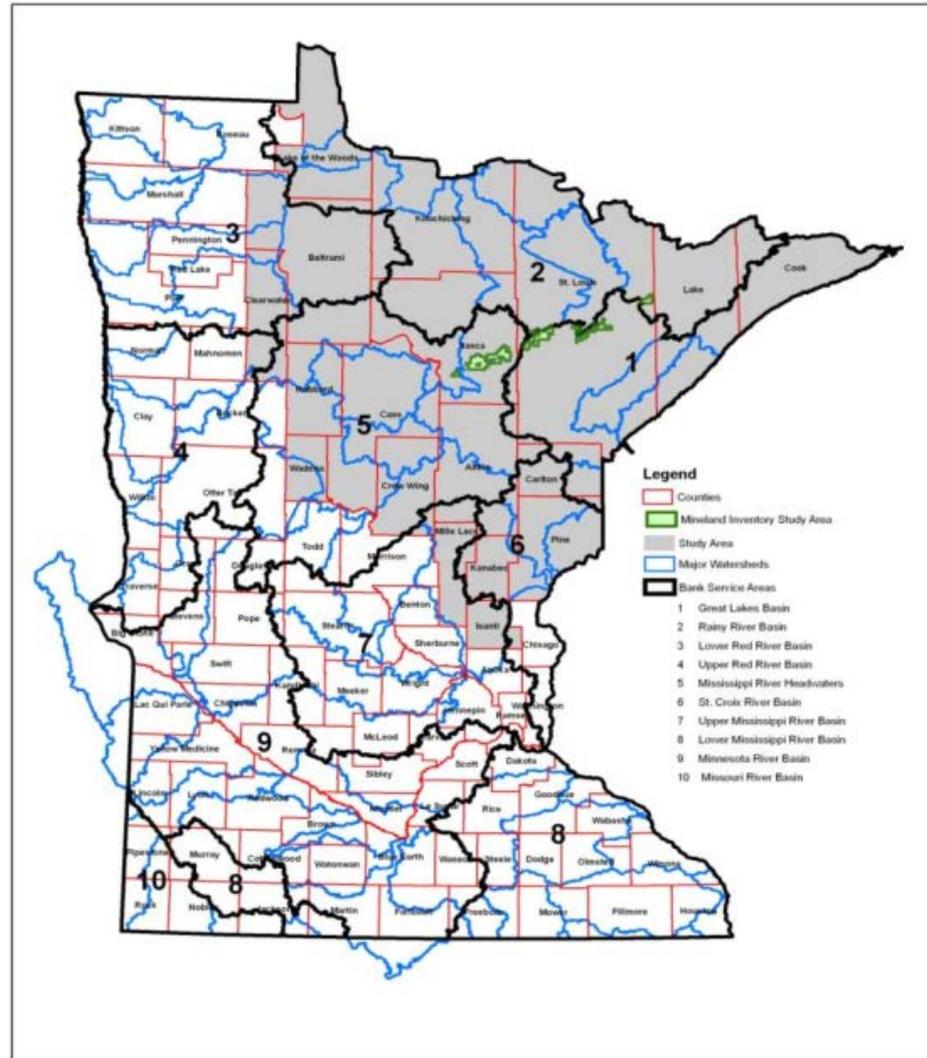
*Vary application of the sequencing standards ...and actions eligible for credit...based on the classification and criteria in the plan, so long as there is no net loss of public value within the plan area...so long as:*

- *In 50 – 80% area, minimum replacement ratio is 1:1*
- *In <50% area, minimum replacement ratio is 2:1*

# Flexibility Options

- In >80% areas *(based on classification and criteria in the plan)*:
  - **Prescribe standards** for size and location of replacement wetlands
  - **Establish type, size and ratio** requirements
  - Criteria for wetland mitigation **fee in lieu of direct replacement**
  - Must result in **no net loss** over the life of the plan
  - Allow **exemptions** based on ordinance or rule standards...that are **not less restrictive** than the (WCA) requirements ... based on **wetland classifications**.

# Siting Boundaries

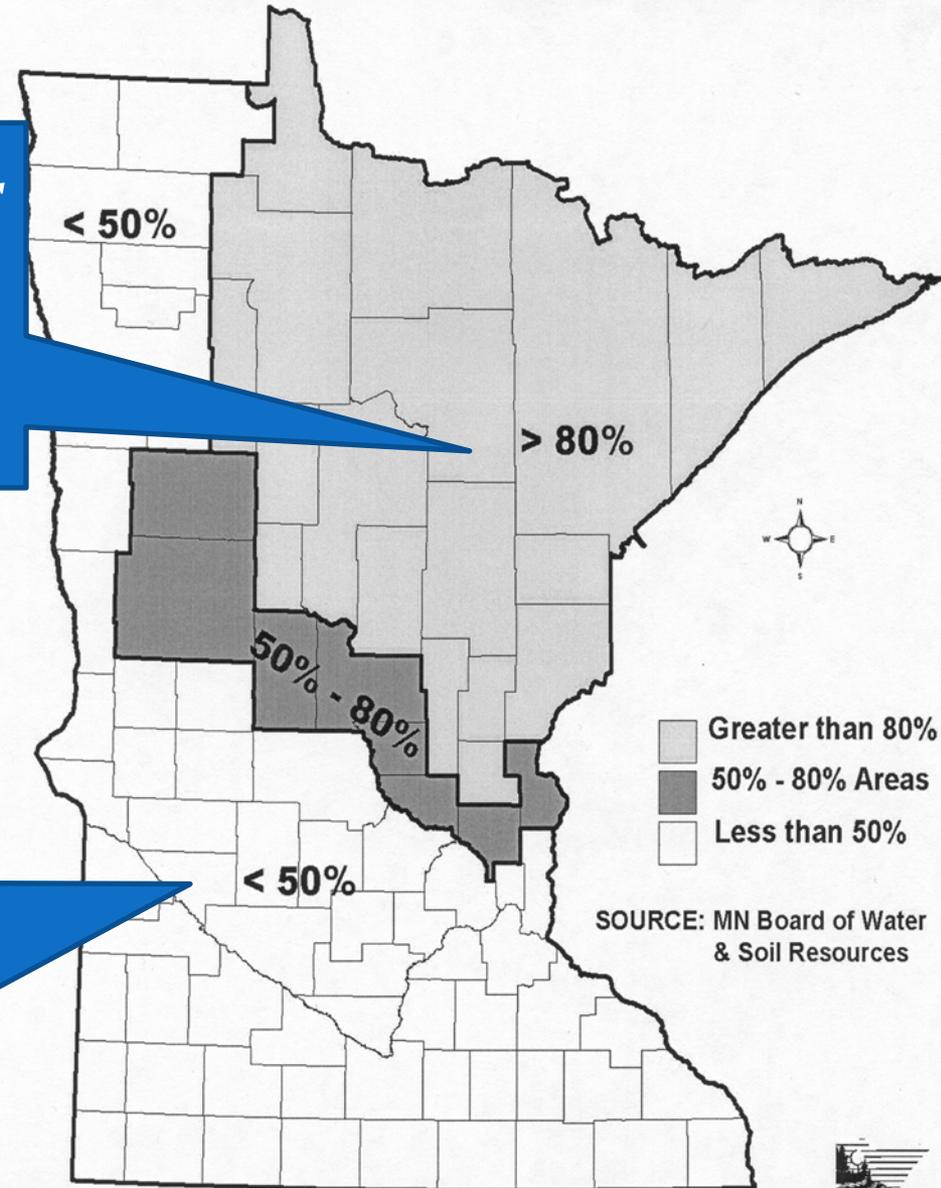


# Plan Flexibility

The maximum flexibility for wetland planning is allowed within >80% pre-settlement areas of the state

Limited flexibility for the rest of the state. Some LGUs have used wetland plans to strengthen wetland protection

Minnesota Wetland Conservation Act  
Amount of Pre - Statehood Wetland Area Remaining



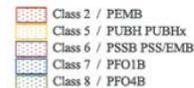
# Wetland Inventory

- Hermantown wetland inventory supplemented the National Wetland Inventory
- City hired a consultant to do inventory within city
- *Wetland delineations still needed for projects*

City of Hermantown, Minnesota  
Wetlands Inventory, 2003  
and  
National Wetlands Inventory



Circular 39 / Cowardin  
Wetland Classes



Scale: 1 inch = 3200 feet  
Flight: April 23, 2003



Pro-West & Associates, Inc.

National Wetlands Inventory Wetlands

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MAP 3 COMBINED HERMANTOWN/NWI

# Hermantown Mitigation Ratios vary based on MnRAM Functional Assessment

<u>Location</u>	<u>Type</u>	<u>Timing</u>	<u>Preserve</u>	<u>Manage 1</u>	<u>Manage 2</u>	<u>Manage 3</u>	
	IN-	IN-ADVANCE	2.5:1	2:1	1.5:1	1:1	
		NOT IN-ADVANCE	2.75:1			1.25:1	
		IN-ADVANCE	2.75:1			1.25:1	
	NOT-IN-PLACE	KIND	NOT IN-ADVANCE	3:1			1.5:1
			IN-ADVANCE	2.75:1			1.25:1
		OUT OF KIND	IN-ADVANCE	3:1	2.5:1	2:1	1.5:1
		NOT IN-ADVANCE	3:1	2.5:1	2:1	1.5:1	

Higher replacement ratios for higher functioning wetlands

Lower replacement ratios for higher functioning wetlands

# Notification of Intent to Plan

- **Notice must be made in the beginning to:**
  - BWSR
  - Pollution Control Agency
  - DNR
  - LGUs
  - local citizens
- **Local Citizen Participation Required:**

*Examples: Sportsmen's groups, SWCDs, environmental groups, development interests, agricultural groups, townships, watershed districts, etc.*

# Value Example

Lake of the Woods Water Plan Citizen Advisory Committee determined that shoreland protection and water quality were the top 2 wetland values for the local wetland plan.

**Table 2**  
Assigned Local Values to Lake of the Woods Wetland Functions

Wetland Function	1	2	3	4	5	Total	Model Value
Shoreland Protection	7	7	6	5	6	31	1.2
Water Quality	5	6	5	7	7	30	1.2
Flood Attenuation	1	1	1	1	1	5	.8
Commercial and Recreation Uses	6	3	3	4	3	19	1
Fisheries	4	4	7	3	5	23	1
Groundwater Interaction	2	2	2	2	2	10	.8
Wildlife Habitat	3	5	4	6	4	22	1

Shoreland protection, water quality, fisheries, and wildlife habitat were seen as the wetland functions of most value to local citizens. These were followed in descending order by the wetland functions of commercial and recreational uses, ground water interaction, and flood attenuation.

### *Creation of Wetland Categories*

After some discussion, it was agreed by the Policy Committee that the wetland policies ought to be devised for three distinct wetland categories. The process of determining which category each wetland falls into is described below.

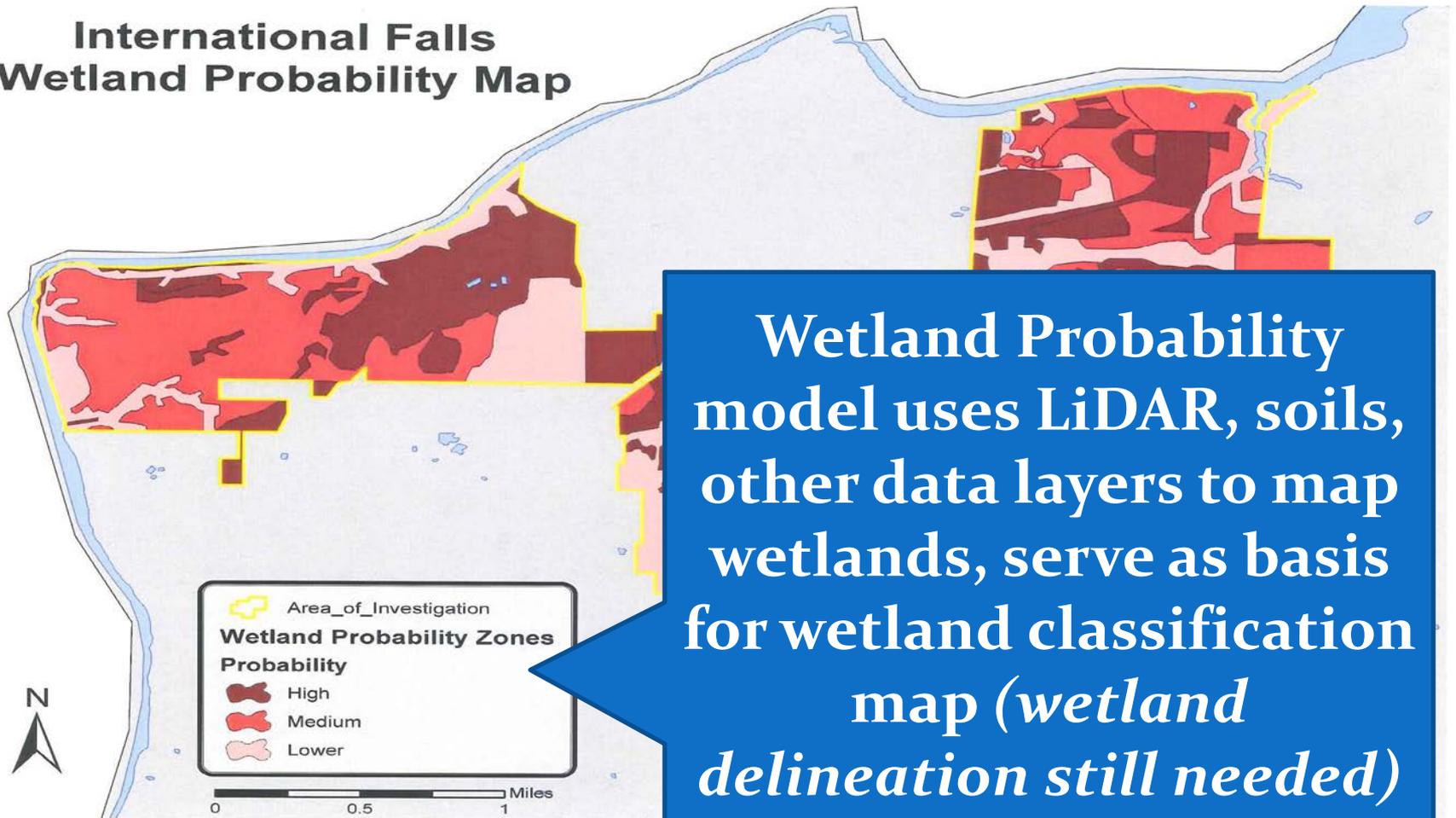
For a wetland under analysis, a score is derived for each function based on the functional assessment contained in this document. Then, that functional score is weighted by multiplying the model value that was identified in Table 2. Finally, the total score is derived by adding each of the weighted functional assessment numbers.

# Coordination with the Corps

- Prior to 2003, Corps was invited to participate, but were not very engaged in planning process
- WCA LGU's frustration grew that Corps did not recognize local plans, nothing changed for landowners
- With development of City of Hermantown's plan, Corps was more involved and they stated that plan, in general was consistent with Section 404 of Clean Water Act
- Today, LGUs (and BWSR) are diligent in getting federal buy-in to local wetland plans and Corps has been more cooperative

# Current Plan Development

International Falls  
Wetland Probability Map



Wetland Probability model uses LiDAR, soils, other data layers to map wetlands, serve as basis for wetland classification map (*wetland delineation still needed*)

# Roles - LGU:

- **LGU – Makes the decision to develop plan, plus:**
  1. *Notification to state agencies (plus Corps and local agencies)*
  2. *Assigns staff to develop plan (or contracts with qualified consultant)*
  3. *Sets up planning meetings*
  4. *Coordinates TEP involvement*
  5. *Oversees development of plan that meet rule requirements*
  6. *Develops ordinance to implement plan*
  7. *Submits plan for public review*
  8. *Seeks Corps buy-in*
  9. *Holds public hearing*
  10. *Presents plan to BWSR*
  11. *Adopts plan and ordinance*
  12. *After BWSR approval and LGU adoption of plan and ordinance, makes WCA decisions according to plan*

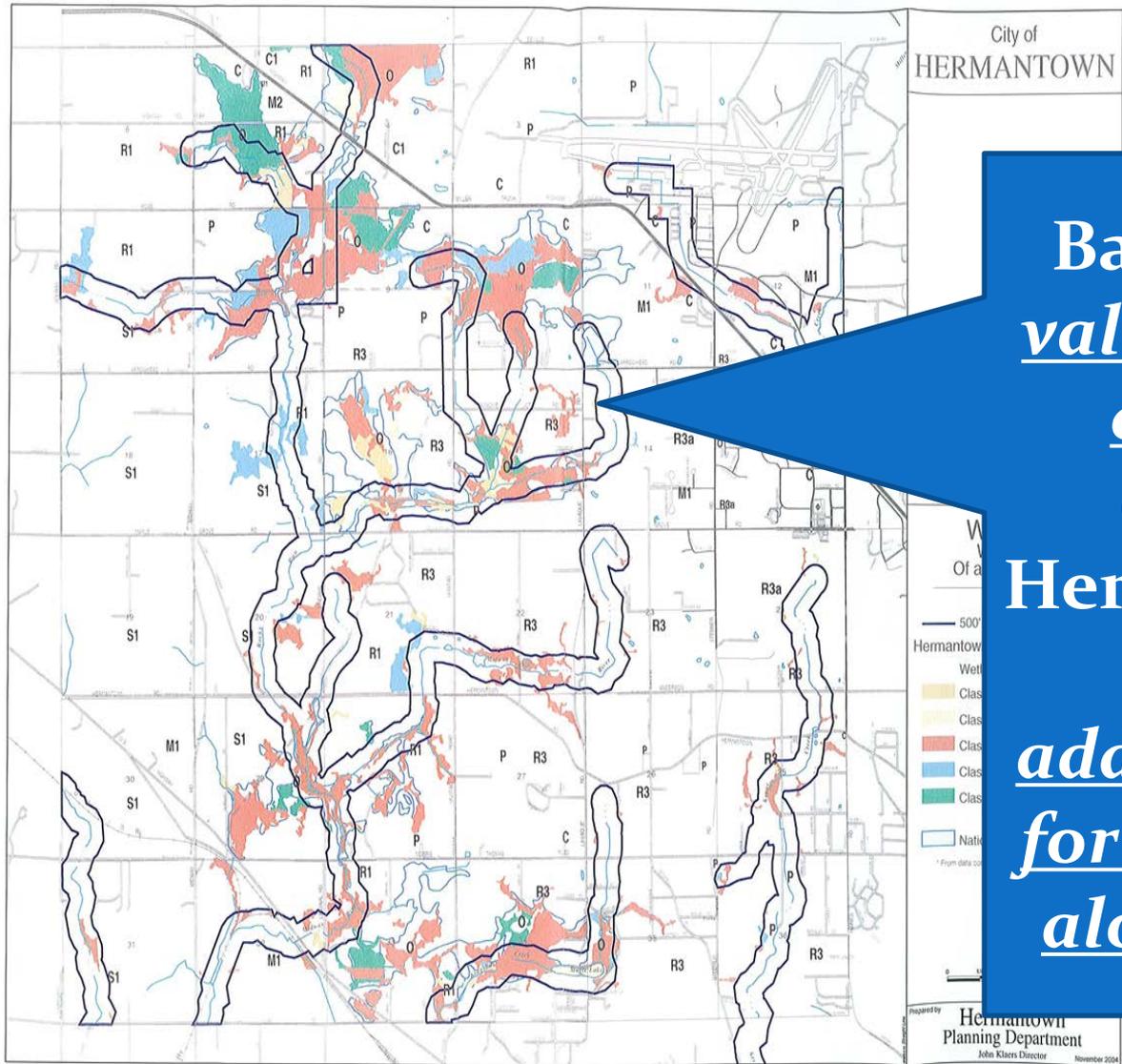
# Roles - TEP

- Technical Evaluation Panel's Role: (8420.0830 Subp. 6)
  1. *"The technical evaluation panel must be consulted in all components of plan and ordinance development, including...*
  2. *Conducting wetland functional assessments,*
  3. *Establishing wetland management classifications and standards,*
  4. *Prioritizing replacement sites, and*
  5. *Identifying local reference standard wetlands."*

# Roles – Local Citizens

- Rule Requirement –
- *“The LGU must implement a process for notifying and involving local citizens...*
- *in the development of the plan and*
- *Determination of local value.*
- *Local citizen involvement may include the formation of a citizen’s advisory committee or utilization of other existing citizen groups.”*

# The City of Hermantown Plan



Based on input and values determined by citizen advisory committee, the Hermantown Wetland plan provided additional protection for riparian wetlands along trout streams

# Roles - Agencies

- **BWSR Staff**– *Assistance, TEP, review of plan, coordination with other agencies, recommendation to board on approval*
- **DNR** – *staff involvement, state review, BWSR approval*
- **MPCA** - *staff involvement, state review, BWSR approval*
- **MDA** - *staff involvement, state review, BWSR approval*
- **SWCD** – *TEP responsibilities, staff involvement in plan*
- **Other LGUs** – *plan development, local values*
- **Corps of Engineers** – *participate in development of plan, technical advice, “endorsement” of plan*

# Submitting the Plan

- Upon the completion of the plan, **the LGU must submit the draft plan and ordinance** for 60 day review to:
- **state agencies, Corps, LGUs** in & adjacent to plan area
- **LGU must respond in writing** within 30 days to any comments
- LGU must conduct a **public hearing** 30 days after end of 60 day review
- After public hearing, but before adoption, **LGU submits plan, ordinance and comments to BWSR**

must be  
implemented by  
Local Ordinance

## LAKE OF THE WOODS COUNTY WETLAND CONSERVATION ORDINANCE OF 2002

### ARTICLE 1 TITLE AND PURPOSE

Section 1.1. Title

This Ordinance shall be known, cited and referred to as the Lake of the Woods County Wetland Conservation Ordinance of 2003. When referred to herein, it shall be known as "this Ordinance."

Section 1.2. Purpose.

This Ordinance is adopted for the purpose of:

- (A) Adopting, pursuant to the local wetland plan, certain alternative standards that shall apply to determinations by the governing body in its capacity as the local government unit for the state Wetland Conservation Act program;
- (B) Adopting the state wetland conservation act program by reference as part of the governing body's official controls to provide an additional means for enforcement of the requirements of the state wetland conservation act program;
- (C) Adopting administrative procedures for performance of the governing body's responsibilities as the local government unit for the state wetland conservation act program that shall apply in addition to the administrative procedures set forth in the Wetland Conservation Act and Wetland Conservation Act Rules; and
- (D) Adopting as part of the governing body's official controls additional local requirements for the conservation of wetlands that provide more flexibility than the requirements of the state wetland conservation act program.

The wetland ordinance is submitted to BWSR for review along with the wetland plan.

After approval of the plan and adoption of the local ordinance, all WCA decisions are subsequently made according to the ordinance.

# Comprehensive Wetland Protection and Management Plan

City of Sauk Rapids

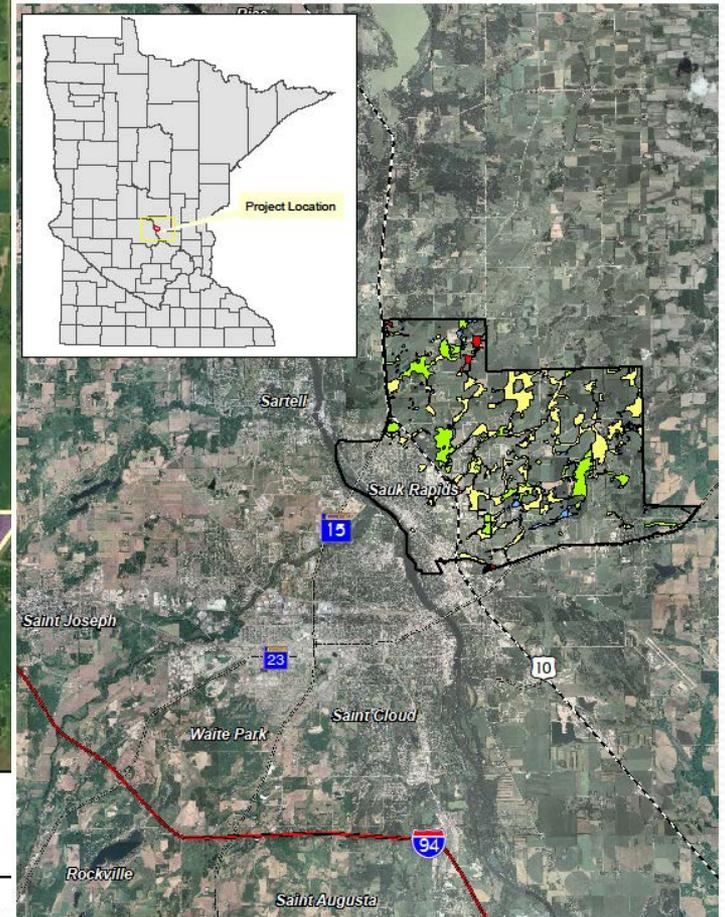
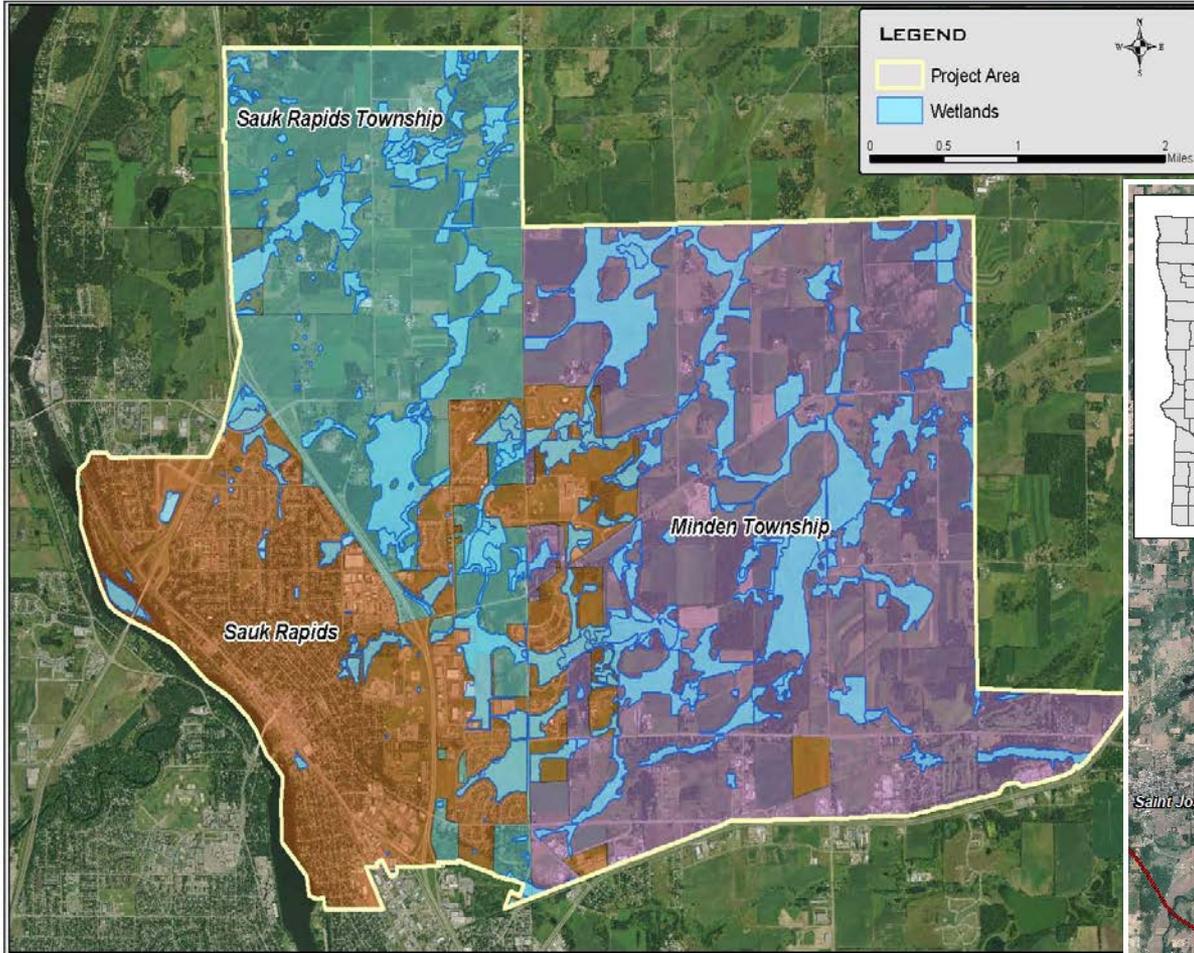


06.24.2010

# Project Introduction and Overview

- History & Purpose
- Administrative Process & Plan
- Wetland Assessment and Methods
- Results of Assessments
- Wetland Management Strategies
- Watershed Perspective
- Implementation

# Project Area



**Comprehensive Wetland Protection  
and Management Plan**  
City of Sauk Rapids



# Why a CWPMP?

- Proactively manage wetlands through official controls
- Identify, assess, classify and create an inventory of wetlands incorporating the city's existing NRI.
- Identify the importance of wetlands through a functional assessment and their value to the community.
- Identify a management strategy which seeks a balance between wetland protection and management and future growth and development.
- Establish replacement ratio based on management categories and strategies which achieves no-net-loss.
- Coordination with other local & regional plans

# Why a CWPMP – Cont.

- Identify areas of mitigation & restoration/creation which:
  - Reduces flooding and flood damage
  - Improves water quality by maintaining or reducing nutrient and sediment loads downstream
  - Enhances wildlife habitat and ecological integrity



# Administrative Process



- Agency/Public Coordination and Input

Notice of Intent to plan – all agencies



- 3 Agency meetings (1 field review)
- 2 Public meetings, 1 City Council Presentation & 1 Planning Commission Presentation (open to public)
- Draft plan submitted to BWSR/Agencies/LGUs (60 day)
- Public Hearing (30+ days after 60 day comment period)
- Final draft plan & all documentation to BWSR
- North Region Water Plan Committee/ Full Board (60 day)



US Army Corps  
of Engineers®



# Methods

- Wetland Functions Assessment
- Wetland Management Classification



# Wetland Assessment Methods

- Identification of wetland locations (Natural Resource Inventory & Local wetland Inventory)
- Photo
- Soils Information
- DNR-PWI
- MnRAM
- Field verification



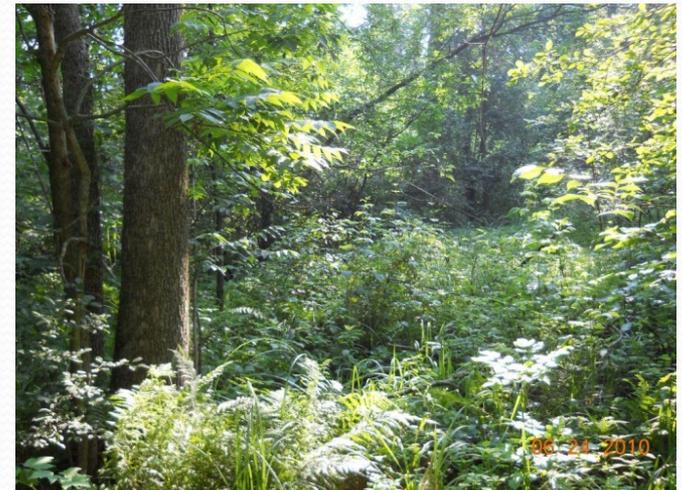
# Wetland Assessment Results

- 160 wetlands visited in the field and assessed using MnRAM
- General observations:
  - Native species abundant in majority of wetlands
  - Many large wetland complexes
  - Diversity of wetland types



# Wetland Management Classification

- Wetland Management Classes
- Preserve (P)
  - Manage 1 (M1)
  - Manage 2 (M2)
  - Manage 3 (M3)

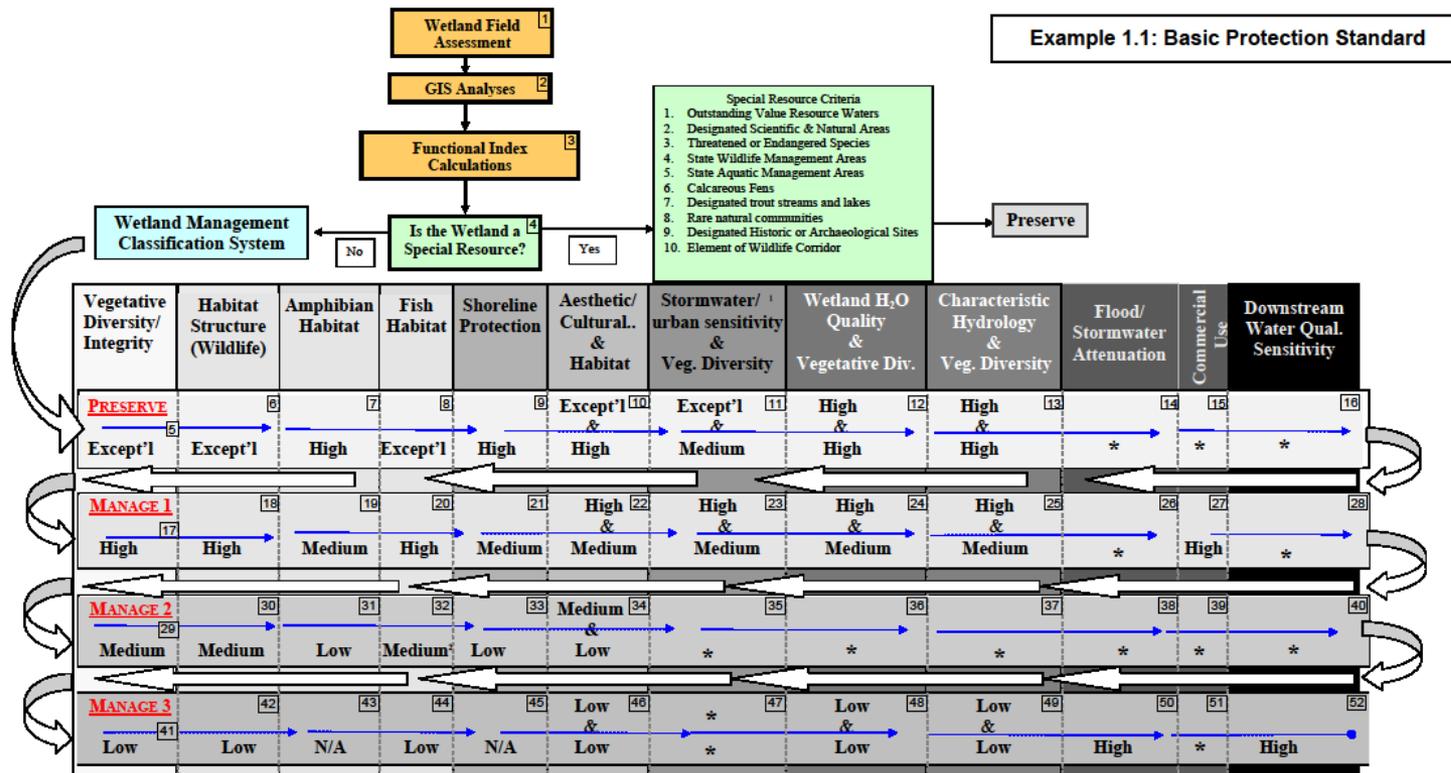


# Wetland Management Classification

- Wetland Management Classes – Per BWSR’s Guidance Document

Figure 1.1  
Wetland Management Classification Process Flowchart for Basic Wetland Protection

Each wetland will be ranked into a Wetland Management group by the highest rated function for the wetland. Follow the arrows through numbered boxes in progression through the tables; classify wetlands into the first group that applies.



<sup>1</sup> For types as shown in Table L.2.

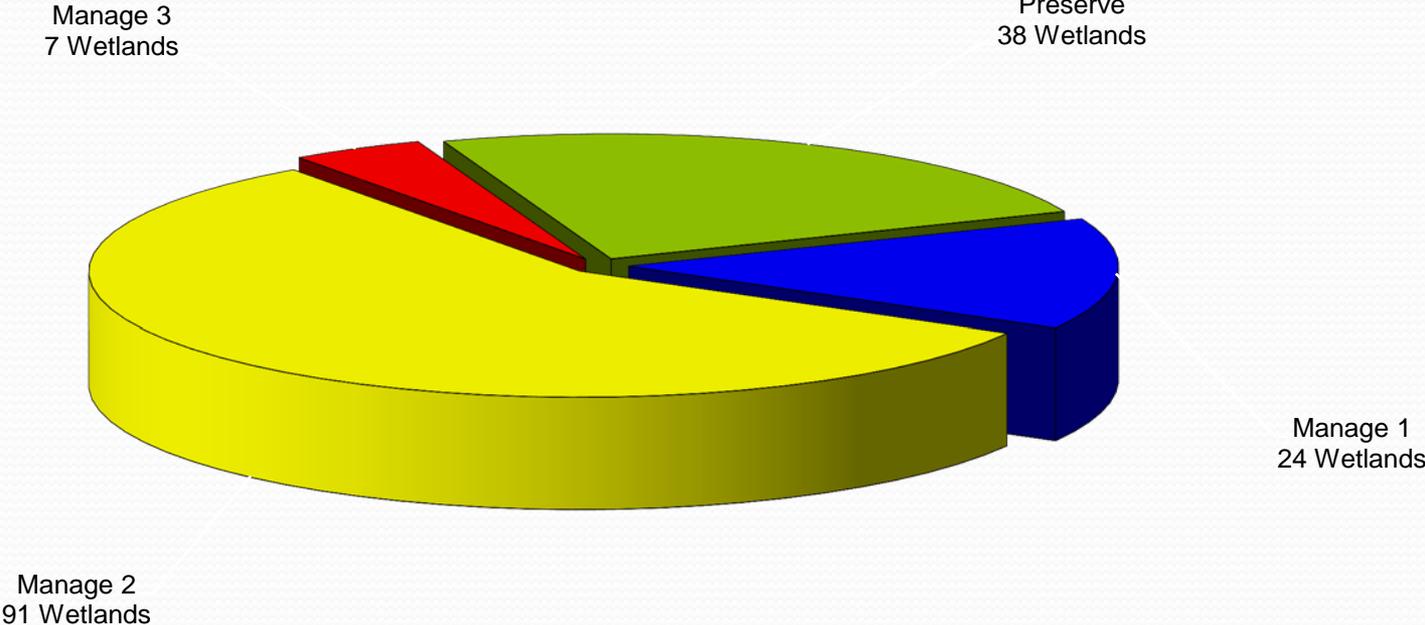
\* This rating does not apply here.

# Wetland Management Classification

- **Customized Classification Process for Basic Wetland Protection (flowchart)**
  - Removed Amphibian Habitat Function
    - Review per Replacement Plan Application
  - Removed Aesthetics/Cultural Function
    - Large part of Project Area is rural
  - Removed Stormwater/Urban Sensitivity
    - Bias to Preserve due to vegetative community
    - Current land use is Agriculture in large portion of project area
    - Future stormwater inputs addressed through separate policy and regulation

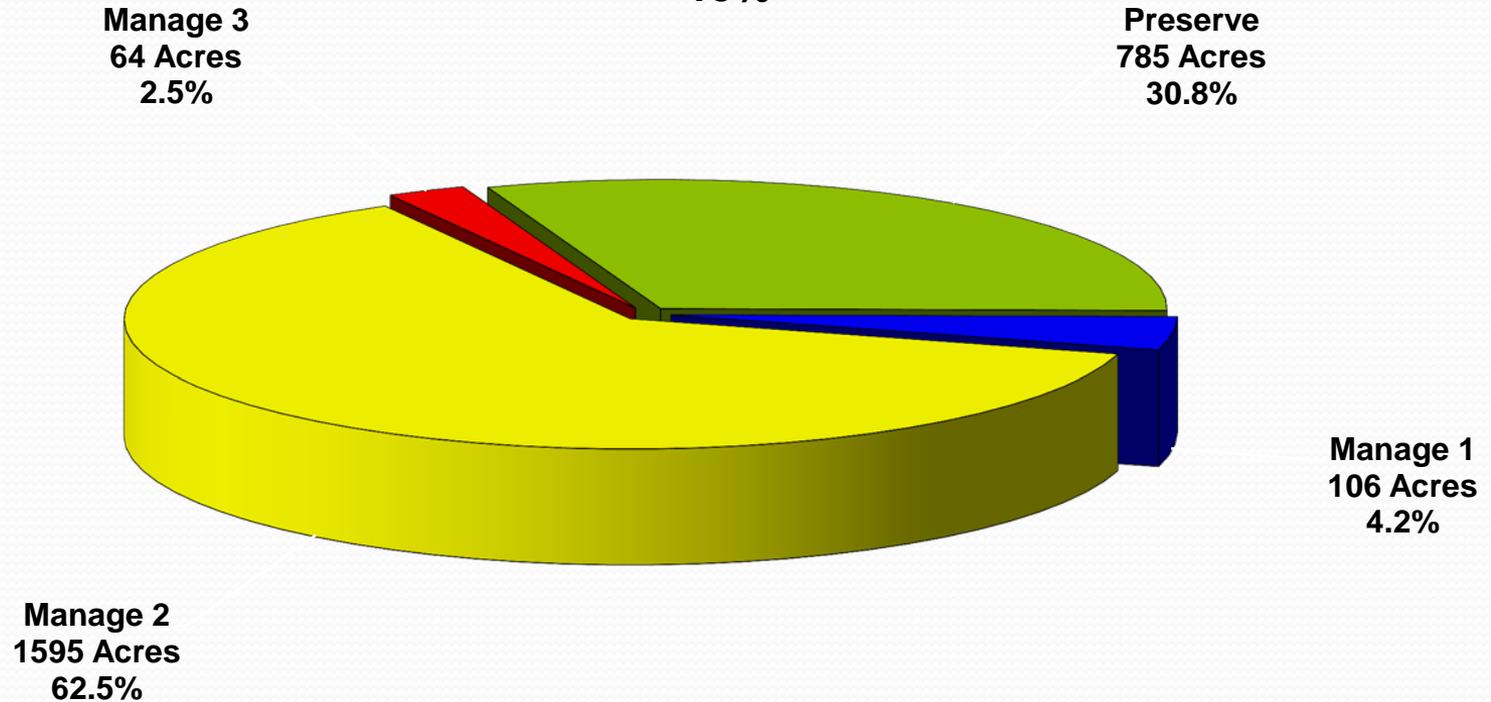
# Wetland Assessment Results

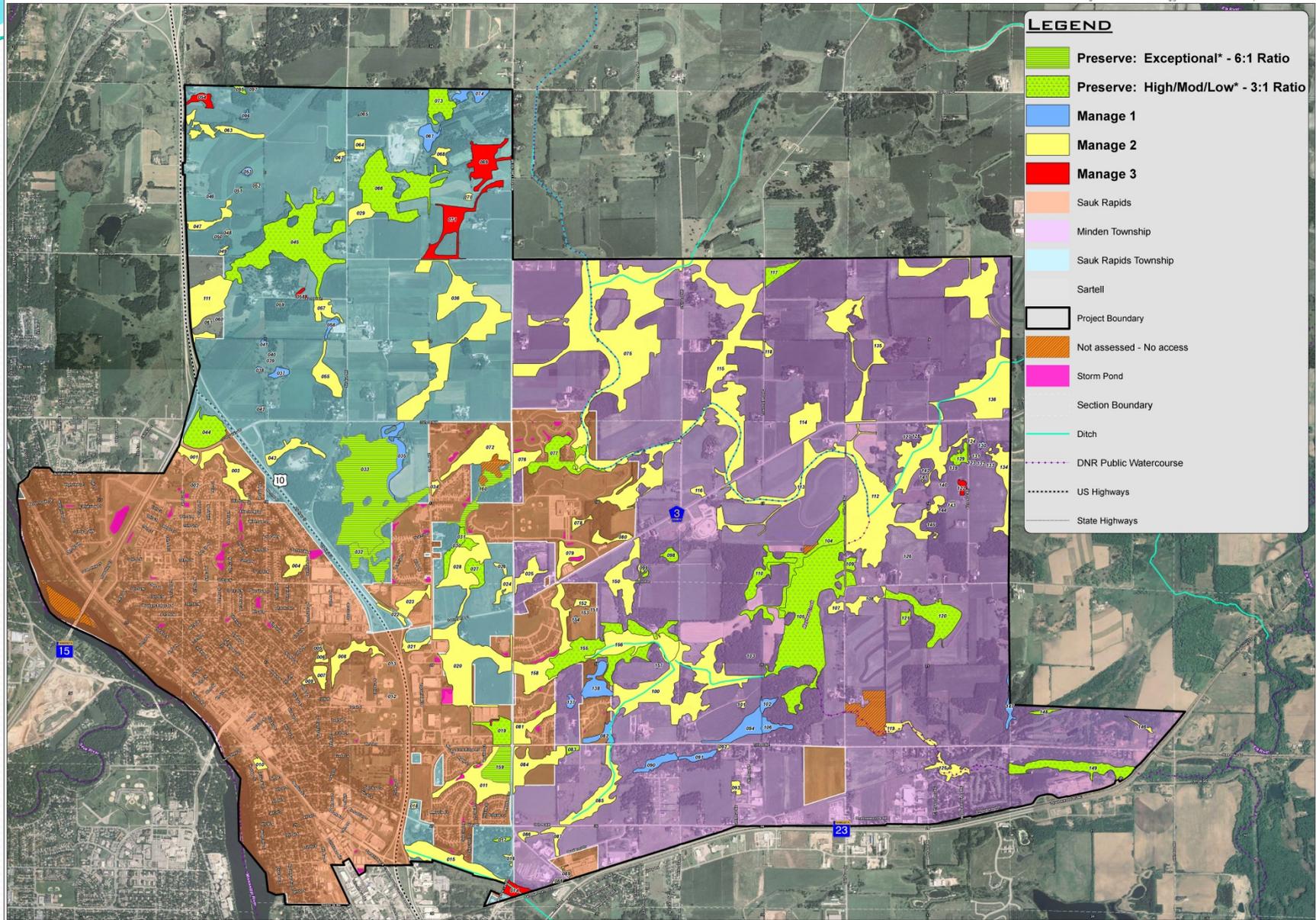
**Quantity of Wetlands**  
**160 Assessed Wetlands**



# Wetland Assessment Results

**Project Area = 14,151 Acres**  
**Wetland Area = 2550 acres**  
**≈ 18%**





# Management Plan Strategies and Standards

- Customize Mitigation Requirements and Ratios
- Streamlined process for implementation
- Allow flexibility for lower quality wetlands
- Increases protection for higher quality, high value wetlands



# Management Plan Strategies and Standards

<b>Classification</b>	<b>Mitigation Requirements</b>	<b>Sequencing</b>	<b>Management Strategy</b>
<b>Preserve</b>	Replacement ratios vary as described above: Exceptional* = 6:1 High/Mod/Low* = 3:1	Impacts allowed only under extreme hardship. Sequencing in conformance with WCA.	Actively protect and preserve functions and values of wetlands to the maximum extent feasible. Avoid impacts and changes to hydrology to greatest extent feasible.
<b>Manage 1</b>	Replacement at a 2.5:1 ratio	Sequencing in conformance with WCA.	Maintain existing functions and values.
<b>Manage 2</b>	Replacement at a 2:1 ratio	Sequencing in conformance with WCA.	Maintain existing functions and values, restore where applicable.
<b>Manage 3</b>	Replacement at a 1:1 ratio	Sequencing flexibility may be applied to proposed impacts to Manage 3 wetlands. Sequencing information is outlined in <b>Appendix E</b> .	Use for stormwater management, restore where applicable.

# Watershed Perspective

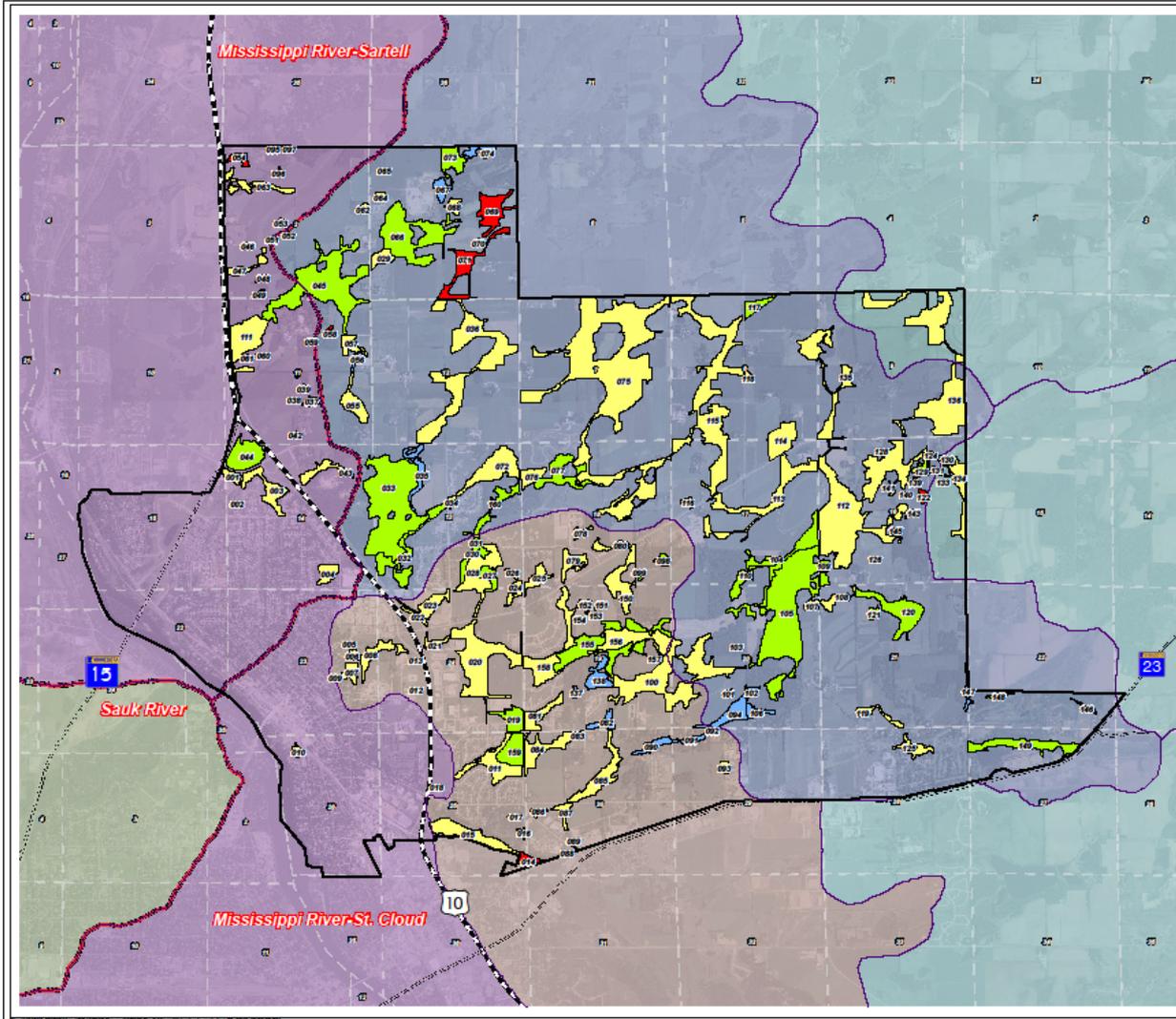
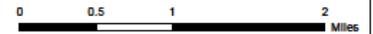
- Project Area is within 2 Major Watersheds
  - Mississippi River – Sartell (16%)
  - Mississippi River – St. Cloud (84%)
- 5 Minor Watersheds
- Within PCA's Major Watershed Restoration and Protection Project Area
  - CWPMP Management strategies include restoration opportunities within this area
- Future Collaboration Opportunities



# City of Sauk Rapids

## WETLAND PROTECTION AND MANAGEMENT PLAN

### FIGURE 7 WATERSHEDS MAP



#### LEGEND

- |                          |                   |
|--------------------------|-------------------|
| Project Boundary         | Minor Watersheds  |
| Management Class         | Elk River         |
| Manage 1                 | Mayhew Creek      |
| Manage 2                 | Mississippi River |
| Manage 3                 | Sauk River        |
| Section Boundary         | Unknown Name      |
| Major Watershed Boundary |                   |





## City of Sauk Rapids

### WETLAND PROTECTION AND MANAGEMENT PLAN

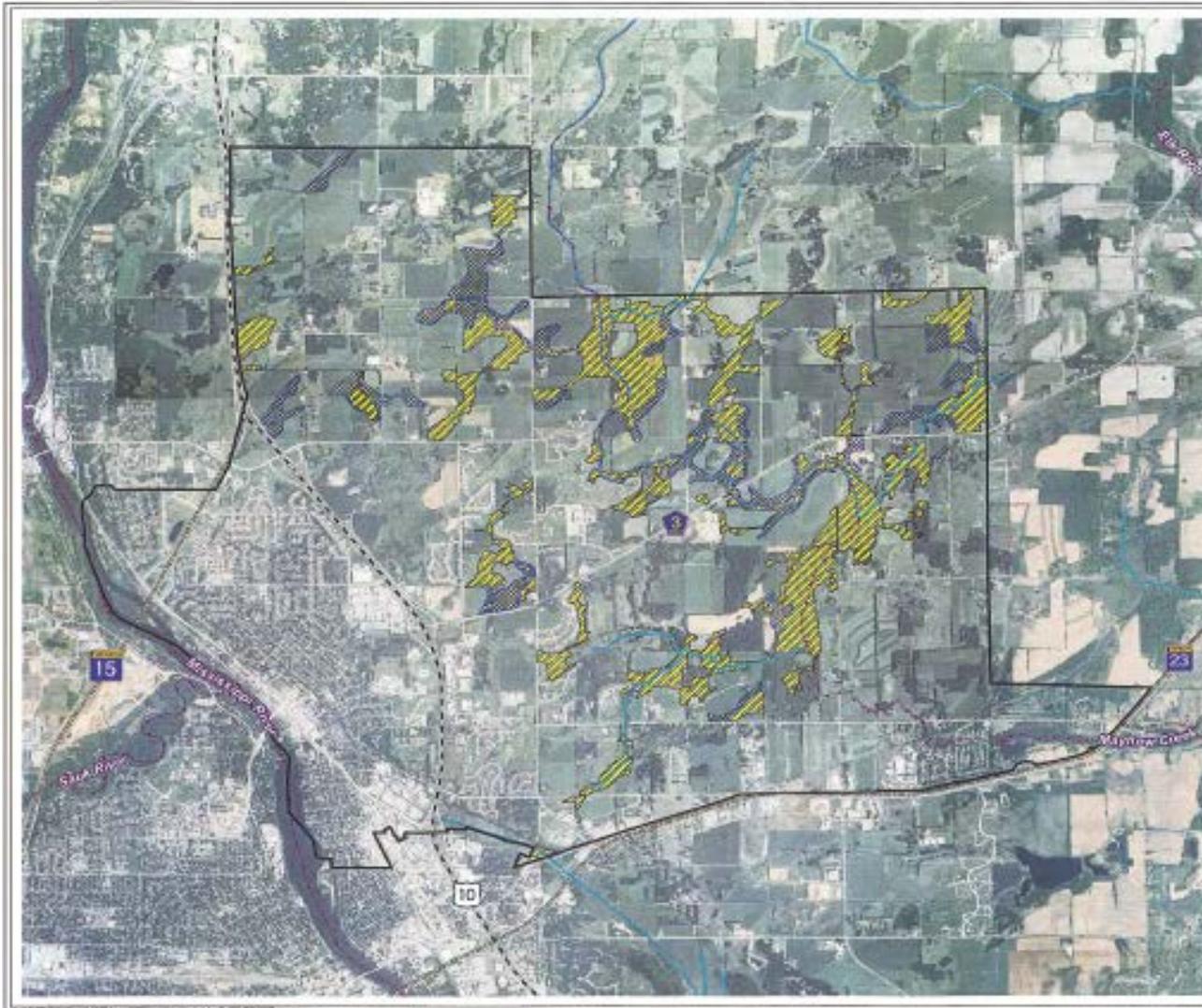
#### FIGURE 6 RESTORATION AND MITIGATION AREA MAP



0 0.5 1 2 Miles

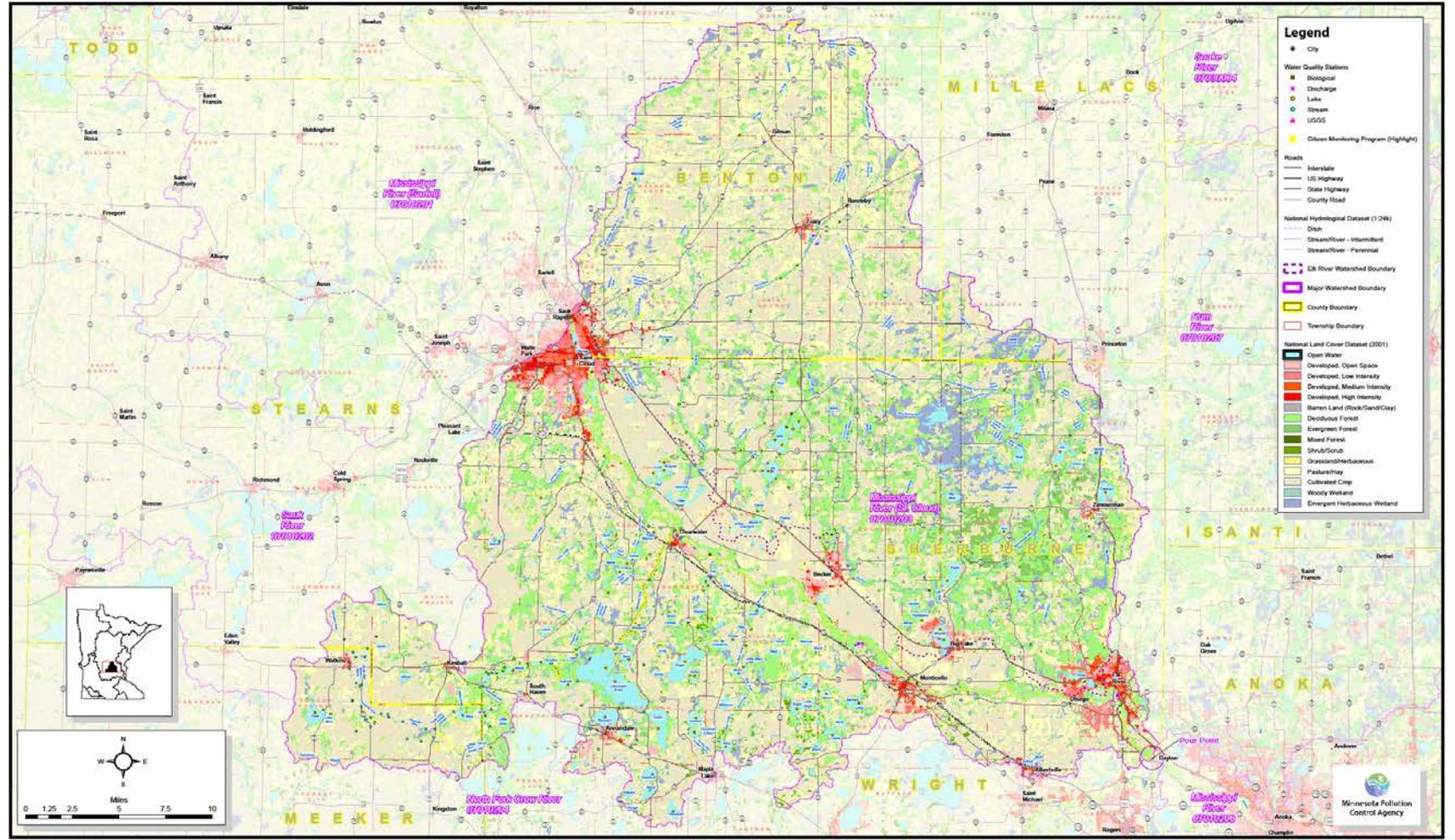
#### LEGEND

-  Project Boundary
-  MHRAM Identified Restorable
-  Restoration/Mitigation
-  County Ditch
-  DNR Public Watercourse



# Mississippi River (St. Cloud) Watershed

Upper Mississippi River Basin



# Implement CWPMP

- Adopt through Local ordinance
- City Staff be trained and address day-to-day WCA items
- City will use consultant for less routine WCA items
- Proactively manage wetland resource at a local level
- Allows for flexibility in development based on local values of resources
- Wetland mitigation ratio review every 3 years to ensure maintenance of 2:1
- Applicable only to areas within City limits
- The city may allow in-lieu fees above 2:1