Northeast Minnesota Wetland Mitigation Strategy

7/10/2008

Agenda

Background

Project Examples

Project Update

Breakout Sessions

Background

NE Wetland Mitigation Strategy

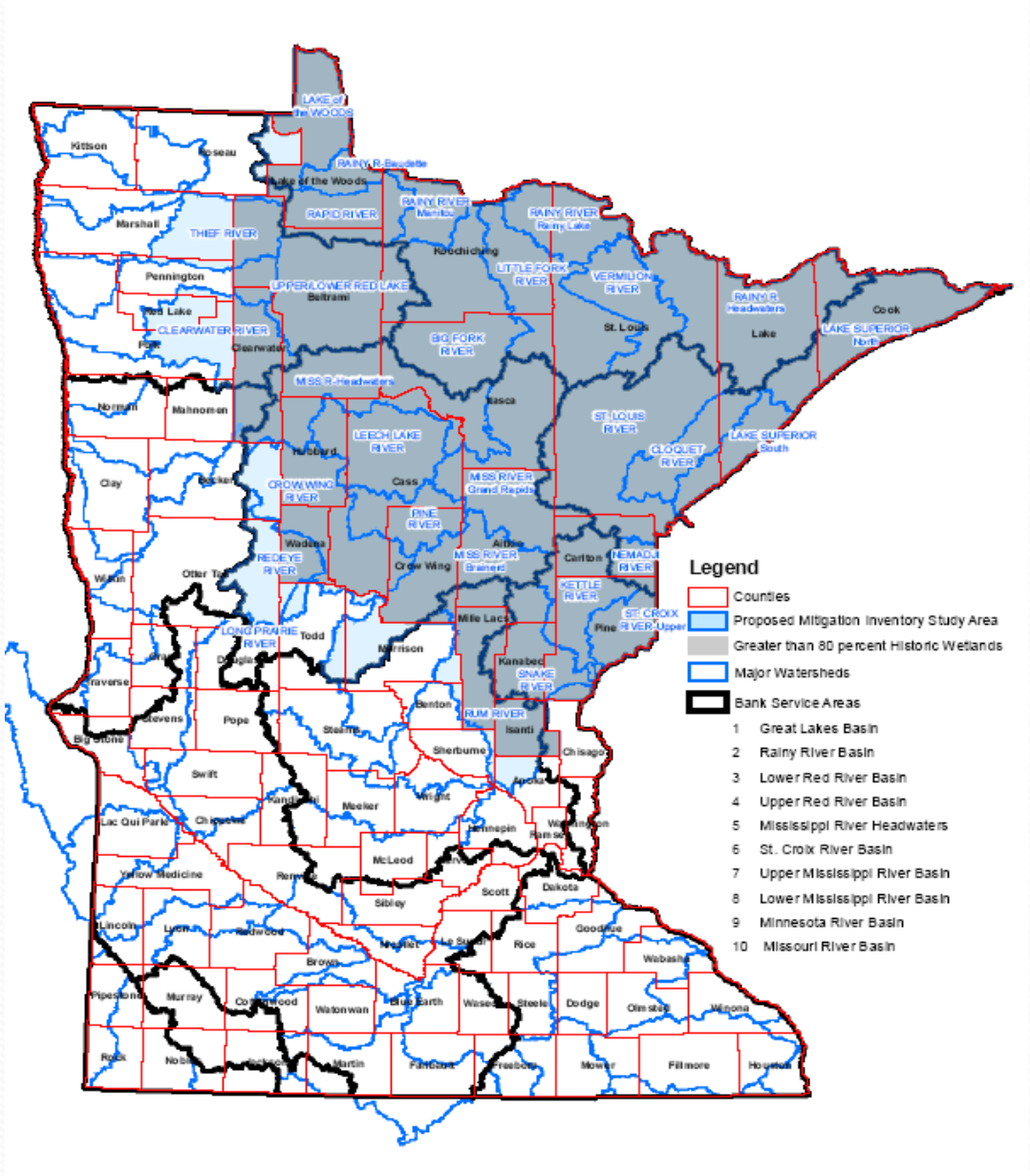
- Proposed change to federal replacement ratios spurred discussions
- BWSR convened meetings in 2005 (agencies, private sector participated)
- Projected impacts in region – 600 acres/year
- Few traditional wetland mitigation opportunities

The Northeast Wetland Mitigation Strategy:

- Does <u>not</u> propose altering or weakening wetland protection under Wetland Conservation Act (WCA) or Section 404 of the Clean Water Act
- The sequencing standards (avoid, minimize and replace) of WCA <u>remain unchanged</u>
- The strategy <u>*does*</u> make recommendations that would improve the ecological quality and efficiency of wetland mitigation for projects in Northeast and North central Minnesota

Study Area

- 18 Counties with >80% pre-settlement wetlands
- Strategy also emphasizes watershed management approach

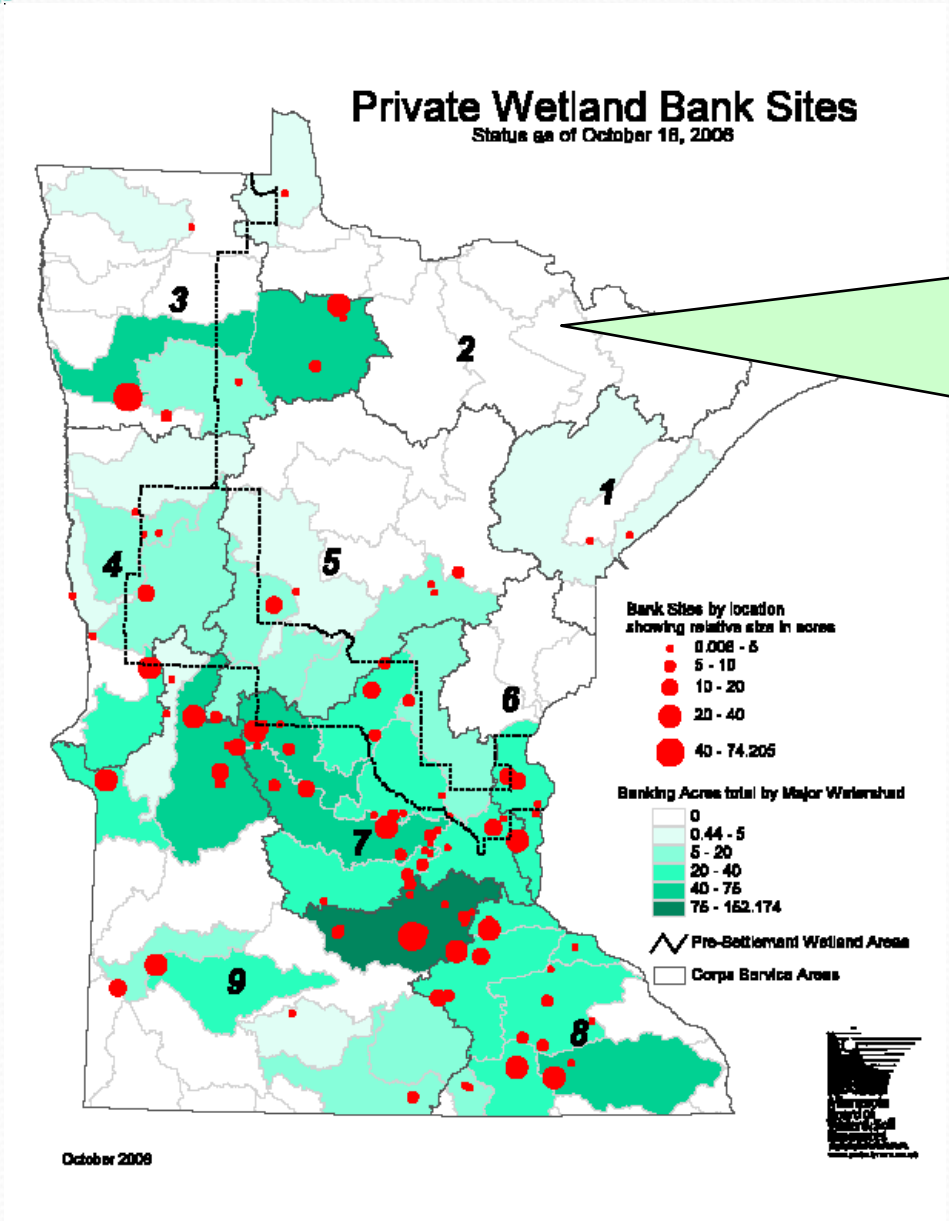


Partners in NE Strategy:

- BWSR
- Barr Engineering
- Minnesota Power
- Corps of Engineers
- DNR
- MPCA
- US F&WS
- Arrowhead Regional Development Commission
- Lake County, St. Louis County, Pine County & others
- Itasca SWCD, Aitkin SWCD, South St. Louis SWCD
- Fond du Lac Reservation
- Cleveland Cliffs
- Cliffs Erie
- Northshore Mining
- CCI-United Mining

What are the mitigation needs in NE Minnesota?

Residential/Commercial	100 acres/year	
BWSR Public Road Program	85 acres/year	
MnDOT Roads (250 ac./5 years)	50 acres/year	250 acres/5 years
Mining (one mining project may impact 1,000 acres)	300 acres/ year	3,000 acres?/10 years
Total Demand for Mitigation	500 to 600 acres/Year	



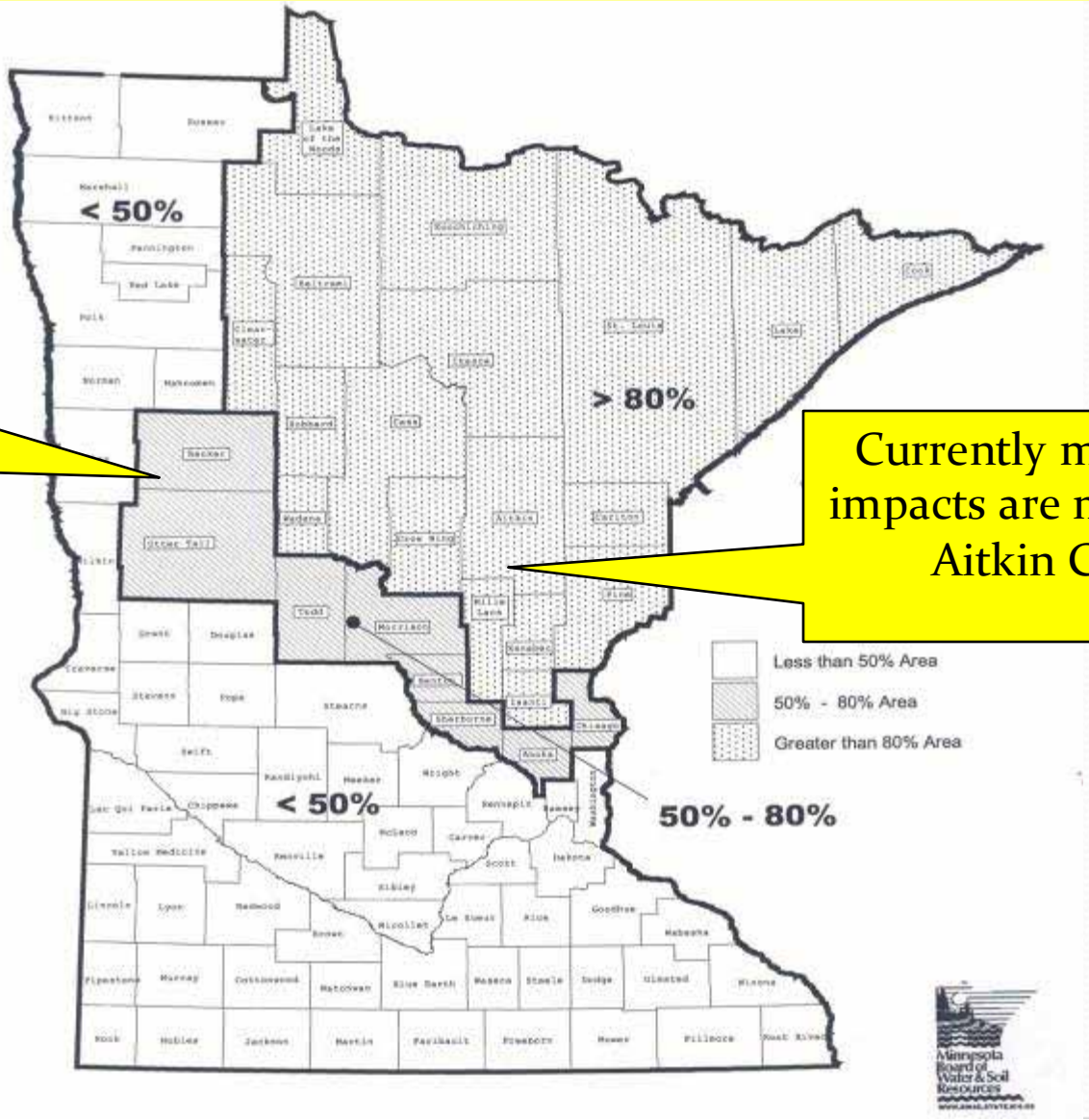
Approximately 129 acres of Wetland bank credit available in NE

Annual Demand = 550 acres

<u>Annual Deficit = 421 acres</u>

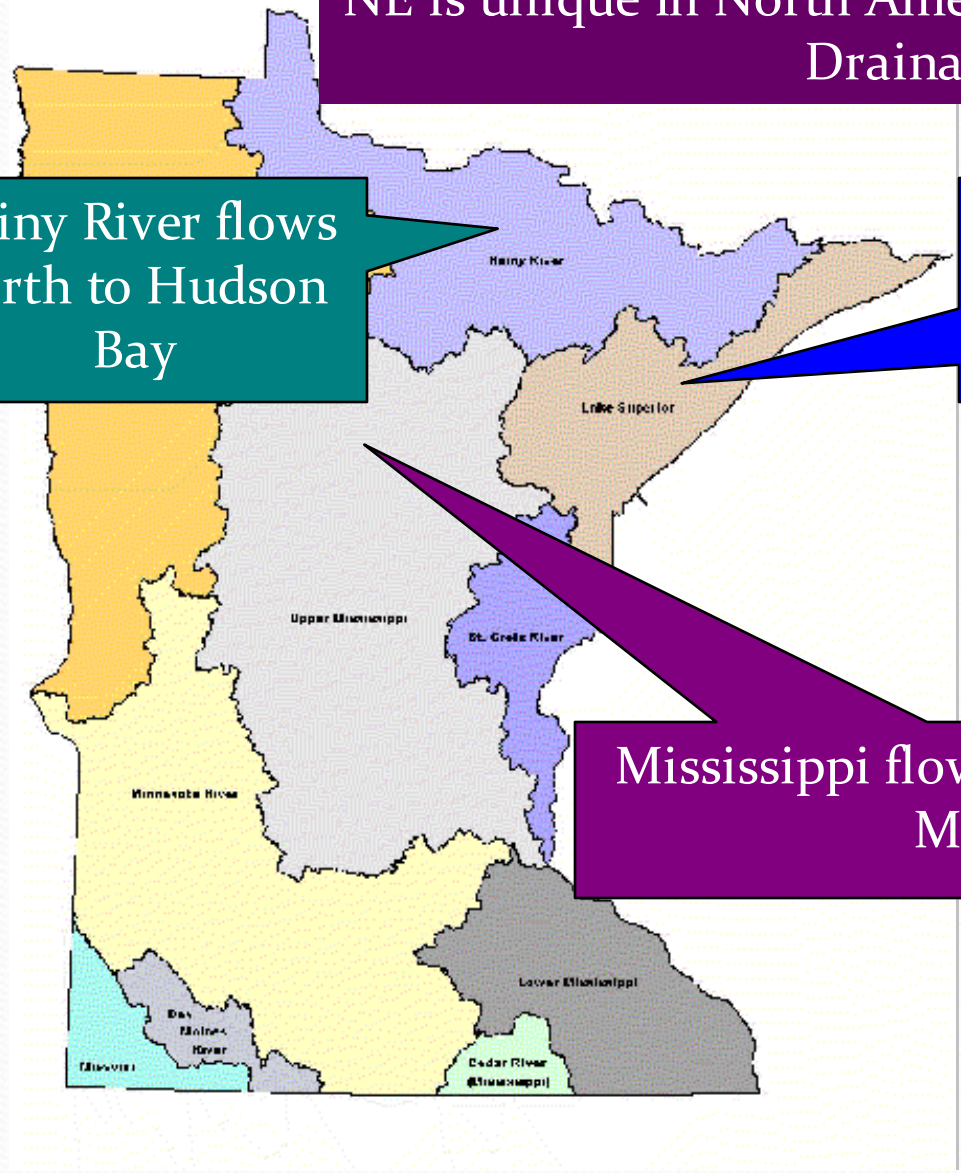
Common Mitigation Scenarios Currently for NE Impacts

Or in Becker County



Currently many of NE impacts are mitigated in Aitkin County

NE is unique in North America – Features 3 Continental Drainage Basins



Rainy River flows north to Hudson Bay

Lake Superior flows east to St. Lawrence Seaway

Mississippi flows south to Gulf of Mexico

NE Options For Mitigation

Options	Private Land	Public Land
A. Restoration	Marg Farmland/Rice Paddy Availability: Very Limited Credits: 100% Cost: $4,000-$15,000/ac.	County Ditches Availability: Moderate Credits: 25%/Lat effect Cost: $4,000-10,000/ac
B. Creation	Gravel Pits & Mine Pits**** Availability: Limited/High-Mines Credits: 100% Cost: $20,000 - $100,000/ac	Gravel Pits Availability: Limited Credits: Up to 100% Cost: $20,000-100,000/ac
C. Enhancement	Invasive Vegetation Control Availability: Limited Credits: 25% Cost: Moderate	Invasive Veg.Control Availability: Limited Credits: 25% Cost: Moderate
D. Preservation	Riparian Wetland/Trout Str. Availability: Moderate Credits: 12.5% Cost: $5,000-20,000/ac.	White Cedar Availability: Limited Credits: 50%? Cost: $15,000-25,000/ac

Strategy Development

- Group developed 5 recommendations in December, 2006
- Met with Corps of Engineers and MPCA to seek input and support
- BWSR agreed to manage project
- 2007 Legislature appropriated $375,000 to complete inventory and mitigation siting analysis

Strategy Recommendations

- 1) Regional wetland mitigation cooperative
- *2) Conduct a regional wetland mitigation inventory*
- *3) Conduct a regional mitigation siting study*
- 4) Conduct research on non-traditional wetland mitigation methods
- 5) Update National Wetland Inventory

Funding

- Legislature appropriated $375,000 for 2 components (inventory & siting analysis)
- BWSR developed request for proposals
- Twelve proposals were received
- Interagency team of BWSR, DNR & MPCA evaluated proposals
- Top 3 proposals selected for interviews
- Barr Engineering and Community GIS (Duluth) were awarded contract

Inventory Partners:

- **Board of Water and Soil Resources** *(project oversight)*
- **SWCDs & LGUs** *(ground truthing-inventory)*
- **Technical Committee (Corps, DNR, MPCA, USF&WS, LGUs, NRRI)**
- **Barr & Community GIS** *(project implementation)*

•***COST ESTIMATE:*** **$225,000**

•***COMPLETION DATE*** **: February, 2009**

Mitigation Siting Analysis Partners

- **Board of Water and Soil Resources** *(project oversight)*
- **Barr & Community GIS** *(project implementation).*
- **Advisory Committee** *(provide policy input)*
- **Staff of LGUs, SWCDs, and County Land Departments** *(assist with regional plans).*
- **Wetland Mitigation Technical Review Team – BWSR, Corps, MPCA, DNR, NRRI, USFWS, LGUs** *(provide technical guidance in targeting mitigation sites)*

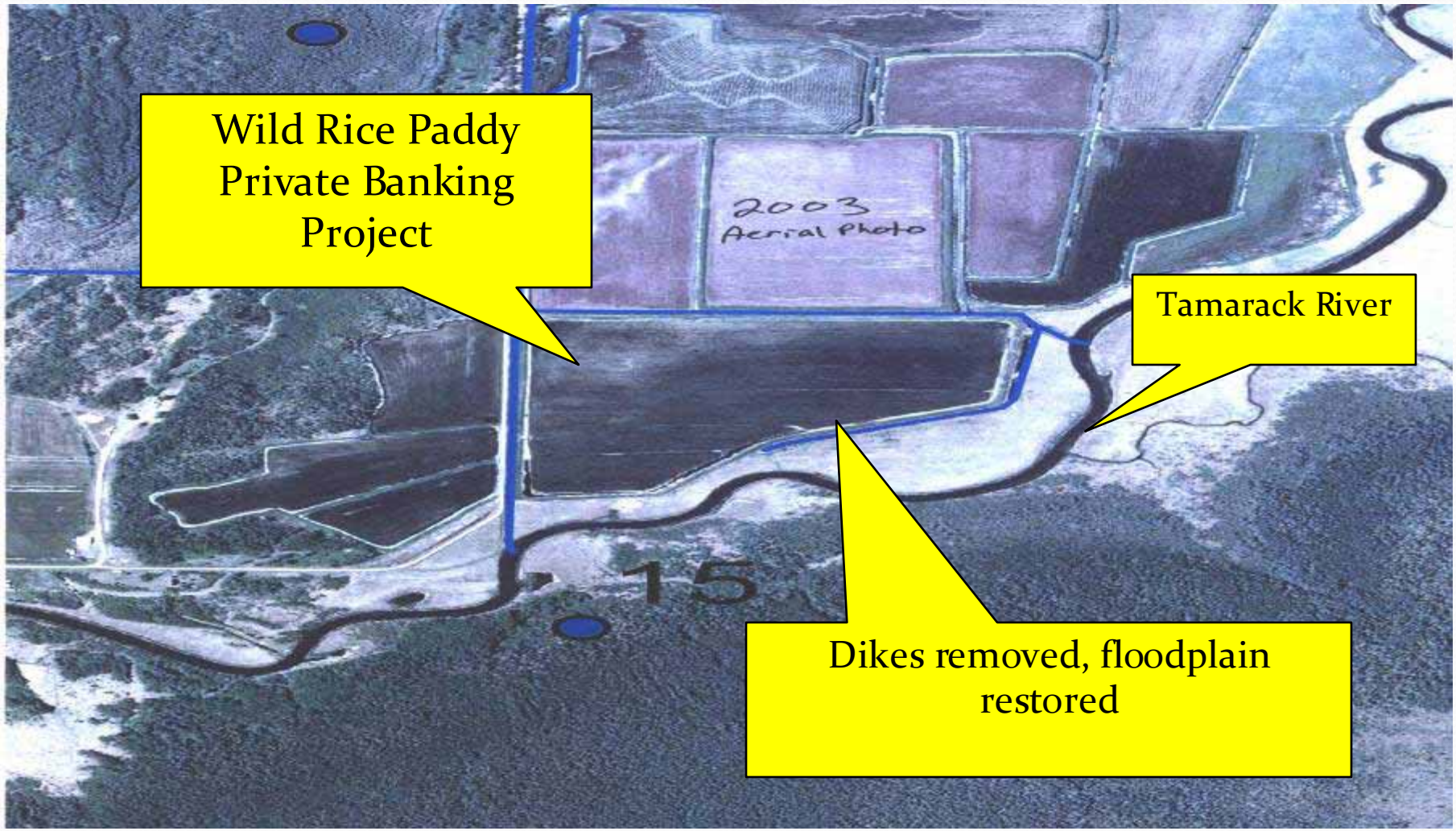
•**COST ESTIMATE: $175,000**

•**PROJECT COMPLETION DATE November, 2009**

Project Examples

Example #1:

Beltrami County Rice Paddy Restoration



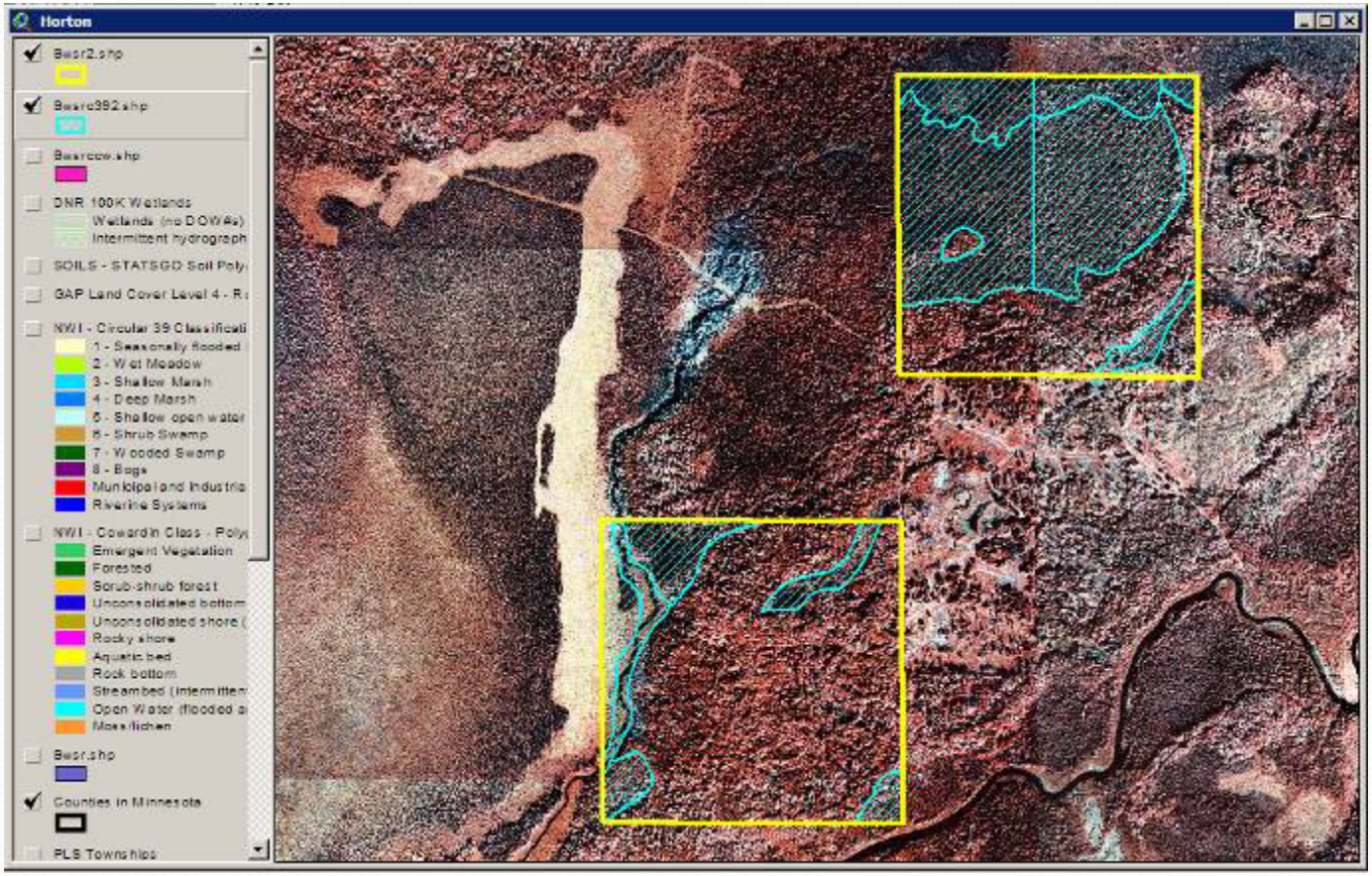
Example #2:

White Cedar Restoration and Preservation

- Northern St. Louis Co.
- Borders the Lost River – designated trout stream/cold water fishery
- Headwaters and boundary of unnamed tributary to the Lost River

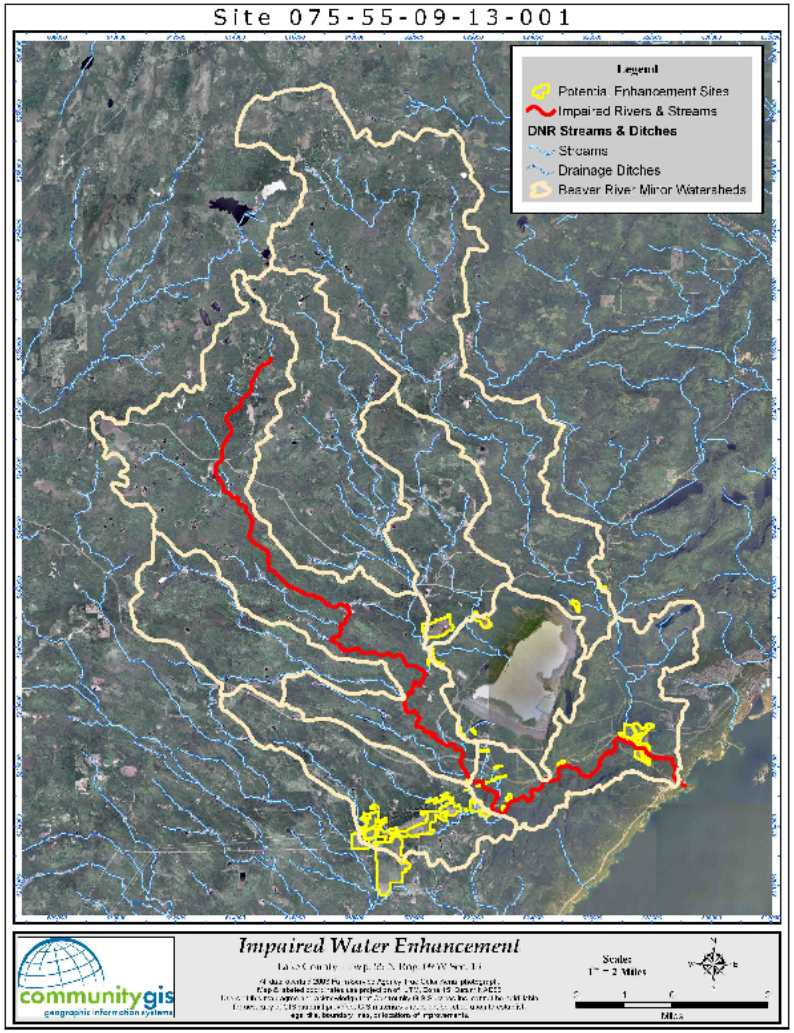
White Cedar Wetlands Restored & Preserved

Inventory shows 142.69 acres of forested wetland on both tracts



Example #3:

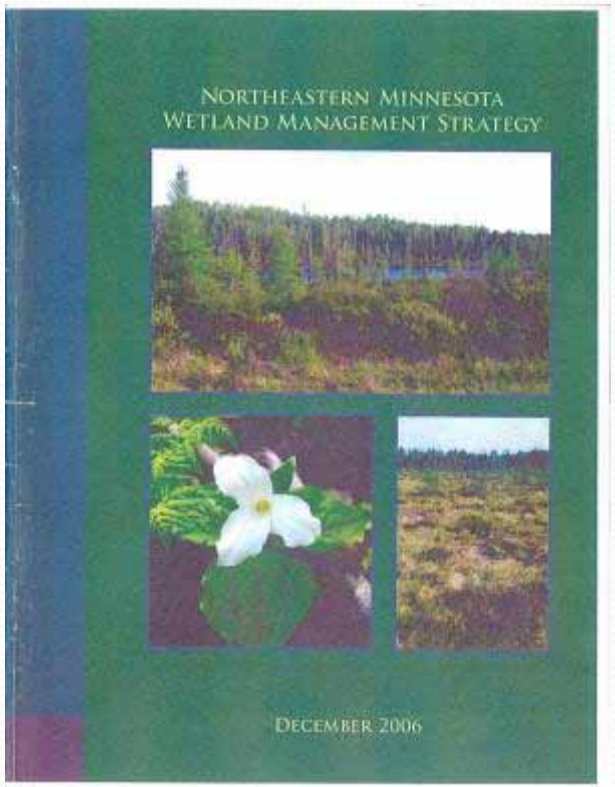
ACTIONS ELIGIBLE FOR CREDIT: **PROPOSED, NEW – Water Quality and Wildlife Habitat Enhancement**



- Proposed new rule language for >80% areas
- Credit for enhancing wetland functions by improving surrounding upland
- Credit limited to 12.5% of area restored

Summary

- Inventory is underway
- Field truthing complete by October 2008
- Siting Analysis will be initiated in 2009
- Report to be submitted to Legislature in 2009 (interim) and 2010
- Project benefits already evident



Project Update

Overview
Project Work Plan

- Phase I
  - Wetland Mitigation Inventory
    - Technical Committee
    - Completion February 2009
- Phase II
  - Wetland Mitigation Siting Analysis
    - Advisory Committee
    - Completion November 2009

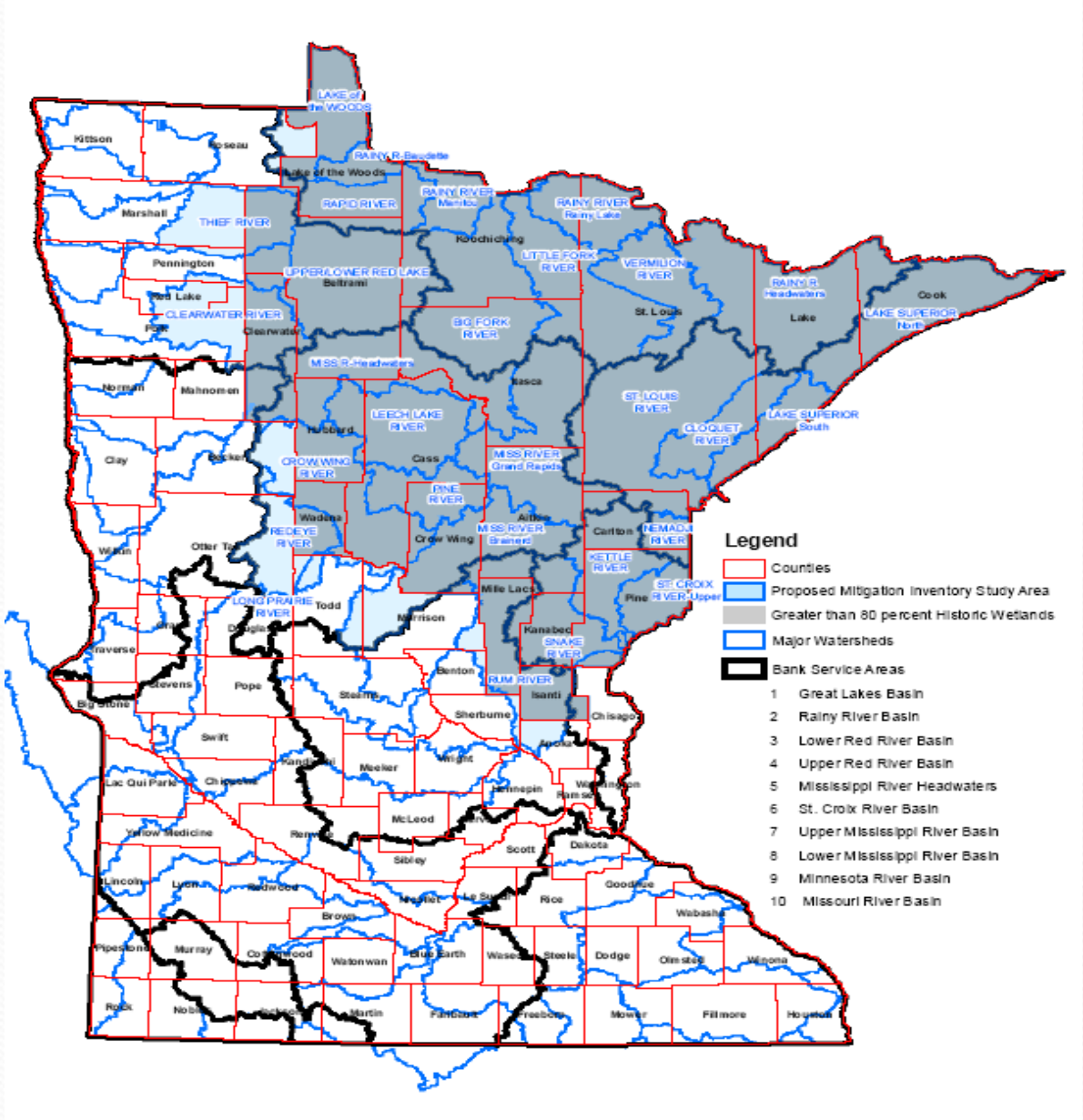
Phase I
Work Plan Summary

- Define study area, mitigation opportunities & prioritization goals
- Gather existing data
- Develop & conduct GIS analysis
- Develop field truthing protocols
- Conduct field truthing
- Conduct mine-land inventory & functional analysis

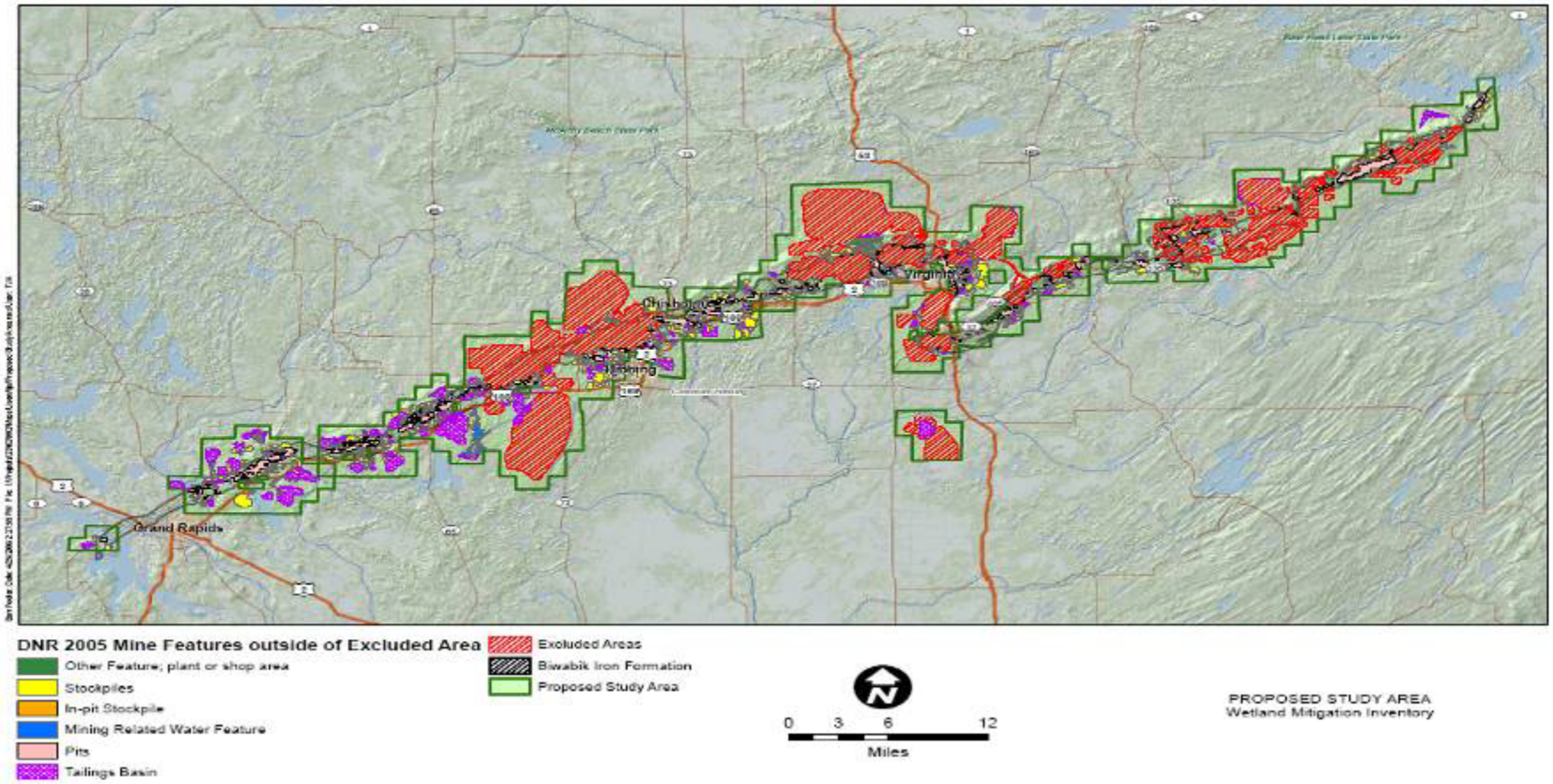
Phase I
Key Deliverables

Technical Report	July 2008
Field truthing complete	October 2008
Draft inventory report	November 2008
Draft mine-land report	November 2008
Final inventory report	February 2009
Present results	February 2009

Phase I Mitigation Inventory Study Area



Phase I
Mine-land Inventory & Functional Assessment Study Area



Phase I
GIS Methodologies

- Base layer data sources
  - USGS 30-Meter Digital Elevation Model
  - MN DNR GAP Land Cover
  - USDA NRCS Soil Survey or Geomorphology of MN
  - USGS 2001 National Land Cover Database
  - NWI (Palustrine and Riverine wetlands)
  - FEMA Floodways (100-yr floodplains)

Phase I
Mitigation Strategies

- Mitigation Strategies
  - Restoration
  - Enhancements
  - Creation
  - Preservation – ENRV's
  - Miscellaneous

Phase II
Work Plan Summary

- Advisory Committee
- Public outreach on siting goals & priorities
- Evaluate inventory results
- GIS based goal setting
- Mitigation planning
- Project results

Phase II
Key Deliverables

Establish Advisory Committee	July/August 2008
Siting goals & priorities	February 2009
Establish search criteria	March 2009
Draft siting analysis report	July 2009
Present study results	November 2009

Phase II
Prioritization Categories

- Mitigation types
- Mitigation site size
- Mitigation methods
- Land ownership
- Water quality improvement needs
- Impaired waters & watersheds
- Historic wetland losses

Phase II
GIS Based Goals

- Interested stakeholder input
- Minor & major watersheds
- Bank service areas

Phase II
Mitigation Planning

- Watershed & ecologically based
- Mitigation needs
  - Regional
  - Minor & major watersheds
  - Bank service areas
  - Geographical unique areas
- Sector based

Phase II
Project Results

- Present results
  - Stakeholders
  - Mitigation inventory & planning process
  - Mitigation siting analysis process & work products

Breakout Sessions

Purpose of Breakout Sessions

The breakout sessions are intended to:

- Assist project managers with your insight and knowledge;
- Discuss/learn how you can help this project be successful;
- Provide you with more information about the project; and
- Discuss wetland mitigation issues in NE Minnesota.

3 Breakout Sessions

1. SWCD and LGU Field Truthing and GIS Data Collection.
2. Wetland Mitigation and Siting Analysis.
3. Mining Issues.

Breakout Session #1

SWCD and LGU Field Truthing and GIS Data Collection. **(Blandin Room A/B)**

- SWCD's and LGU's are key to the successful collection of data on potential mitigation sites.
- This session will discuss the process and plans for field truthing and data collection.

Breakout Session #2

Wetland Mitigation and Siting Analysis.
(Saw 1, 2 and 3)

- This breakout session will provide additional detail on the project phases and regulatory issues under development.

Breakout Session #3

Mining Issues. **(Sawmain Room)**

- Existing and proposed mining projects are estimated to generate significant wetland mitigation needs.
- This session will discuss these mining projects, and how this project will proceed in relation to mining lands.

Breakout Sessions

1. SWCD and LGU Field Truthing and GIS Data Collection.

(Blandin Room A/B)

2. Wetland Mitigation and Siting Analysis.

(Saw 1, 2 and 3)

3. Mining Issues.

(Sawmain Room)