WETLAND & DITCHING TOPIC MEETING DATA

Introduction

The Upper Mississippi - Grand Rapids Watershed flows from Laurentian Continental divide to where it empties into the Mississippi River near Palisade. It drains over 1.3 million acres and contains almost 2,000 miles of streams and 625 lakes greater than 10 acres. It includes the cities of Grand Rapids, Nashwauk, Coleraine, Hill City, McGregor, Remer and Cromwell. This watershed has an abundance of beautiful lakes that make it an important recreational destination. It is also home to unique plant and animal species such as wild rice and trout, along with an abundance of healthy forests.

The Upper Mississippi – Grand Rapids One Watershed, One Plan (1W1P) is a planning partnership between Aitkin County, Aitkin SWCD, Carlton County, Carlton SWCD, Cass SWCD, Itasca County, Itasca SWCD, Logan Township, Mille Lacs Band of Ojibwe and Salo Township. The goal of this partnership is to prioritize restoration and protection opportunities and target valuable resources. The result will be the development of a comprehensive watershed management plan with actions that make progress towards measurable goals.

The general 1W1P process is outlined in Figure 1. For the first step, which is to gather and prioritize opportunities/issues in the watershed, a series of five topic meetings will be held. The meeting topics include: 1) lakes, 2) forests, 3) wetlands & ditching 4) rivers & streams 5) stormwater and 5) farms & groundwater.

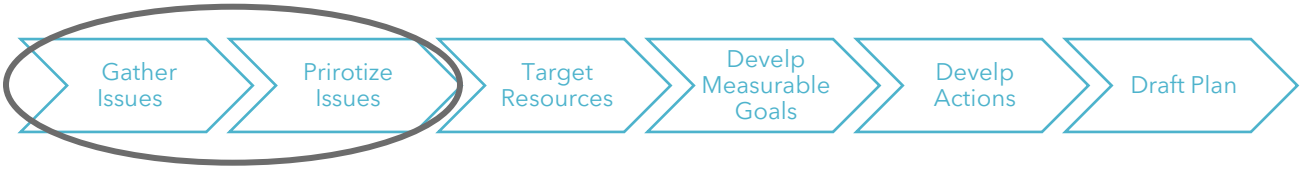


Figure 1. The 1W1P process is divided into six main steps. The topic meetings are the first step in the process (circled).

The 1W1P process is driven by local units of government, guided by an Advisory Committee made up of local stakeholders and state agencies. The decision-making body for the plan is a Policy Committee made up of elected officials from each County, SWCD, Tribal Government, or Township.

Upper Mississippi – Grand Rapids Watershed Wetlands & Ditching

Wetlands are an important resource for the Upper Mississippi – Grand Rapids Watershed. This watershed has emergent (open water), peatlands and forested wetlands. Many wetlands in the watershed are healthy, providing a variety of benefits such as habitat, protection from floods, groundwater recharge and water quality protection. The watershed has abundant peatlands. In addition to peatland's unique biodiversity, they also hold large amounts of carbon when they are healthy and functioning.

Figure 2. Peatlands are one type of wetland found in the Upper Mississippi Grand Rapids Watershed.

The Watershed Restoration and Protection Strategy explains that ditched wetlands and peatlands are likely a major contributor of water quality issues to downstream streams, impacting aquatic life. Ditching increases the speed of water flowing off the land, which results in streambank erosion, leading to poor habitat. Lakes downstream of ditched wetlands may also be impacted by releases of phosphorus, contributing to declining lake water quality. This watershed has high amounts of ditching, especially in the central and southern portions of the watershed. Trenching of wetlands occurred in the early 1900s where no stream channel existed. These ditching efforts were to facilitate farming and logging. In many cases, the ditching efforts failed to produce soil dry enough for agriculture.

Upper Mississippi Grand Rapids Watershed Wetland & Ditching Issues

To help us understand what issues and opportunities surround wetlands and ditching in the watershed, issues listed in previous plans, reports, state agency comment letters and public input were gathered and compiled into common themes, becoming the basis of creating the priority wetland and ditching issues for the Upper Mississippi Grand Rapids Watershed.

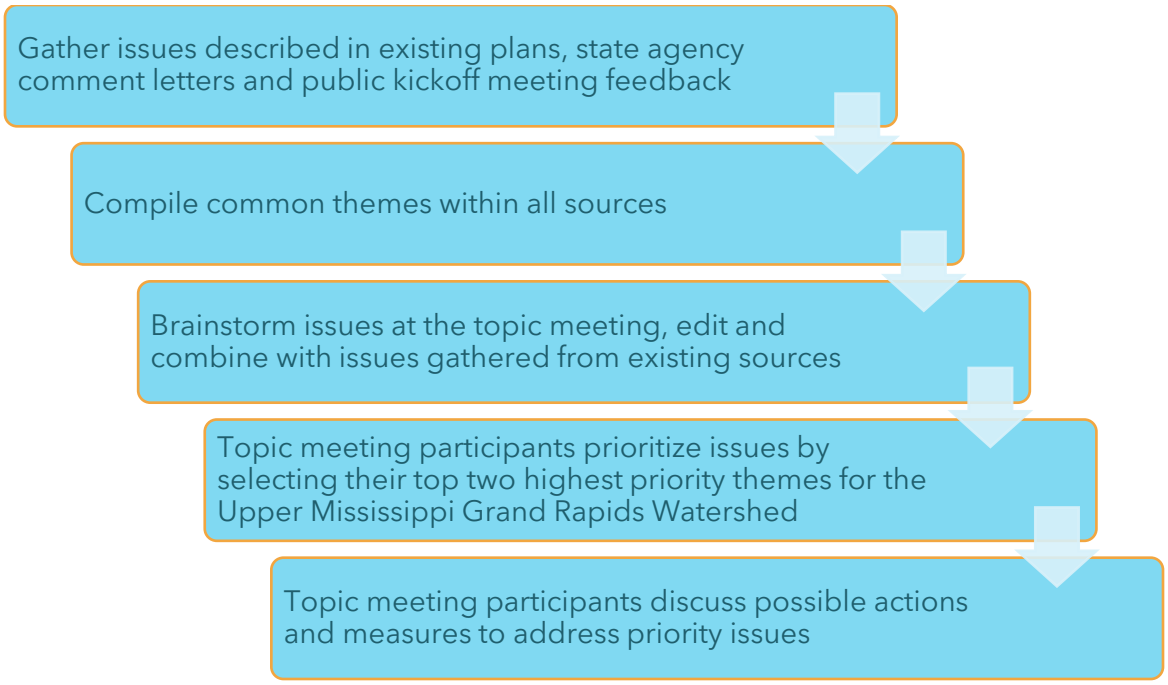


Figure 3. Issue statement development process

A diverse group of wetland & ditching experts plus the Upper Mississippi Grand Rapids Watershed Advisory Committee gathered to brainstorm issues for wetlands and ditching in the watershed. The brainstormed list was either grouped with the compiled themes of new themes were created, The group then agreed on a final list of four themes (Table 1).

Table 1. Wetland & ditching issue statements developed at the Wetland & Ditching Topic Meeting

#	Draft Issue Statement	References
1	**Wetland loss** due to development and land use change can increase flooding and impact infrastructure.	Carlton, Cass, Itasca, St. Louis, Public
2	**Wetland health and function** is impacted by invasive species, ditching, recreation, and beavers.	Aitkin, Public
3	**Protection** of critical wetland and peatland habitats is needed to maintain biodiversity, and store water and carbon.	Carlton, Cass, Itasca, St. Louis, Public
4	Historic straightening of natural watercourses impacts **water quality** and aquatic life.	WRAPS, Public, MPCA, BWSR, DNR
5	**Inadequate drainage** of lands impacts crop productivity and flooding.	AC Meeting

Each participant ranked their top two issues for wetlands, and the top two priorities overall were:

- **Wetland health and function** is impacted by invasive species, ditching, recreation, and beavers. (17)
- Historic straightening of natural watercourses impacts **water quality** and aquatic life. (13)

A closely ranked third issue was identified as **Maintain Drainage** (11) and will be also be included as a top priority.

The group brainstormed a list of possible actions to address the priority issues along with ways success might be measured.

Wetland & Ditching Actions and Measures

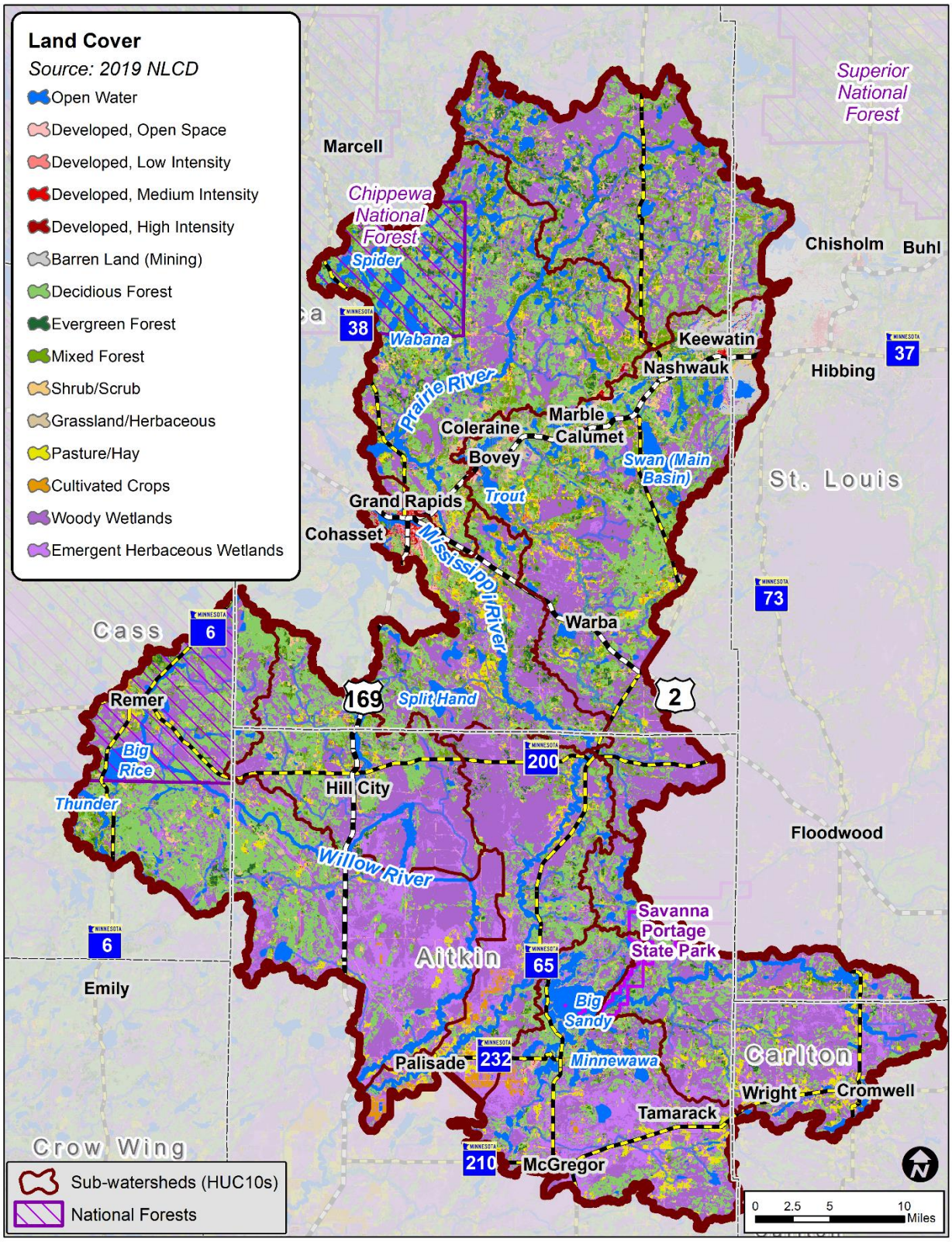
- Re-meander ditches where appropriate
    - Feet or miles of ditches re-meandered
- Implement rural best management practices where applicable
    - Best management practices implemented
- Invasive species management
    - Acres of invasive species treated
- Establishing wetland banks
    - Number of wetland banks established
- Education regarding current regulations
    - Number of people attended
- Evaluate options for dissolved oxygen and Bio communities
    - Number of options identified
- Restoring wetlands where appropriate
    - Acres of wetlands restored
- Water connectivity restoration
    - Miles of connected waterways restored
- Culvert inventory
    - Number of culverts inventoried
- Remove ditching where there's no land benefit
    - Miles of ditches removed
- Continued enforcement of local ordinances to protect wetlands

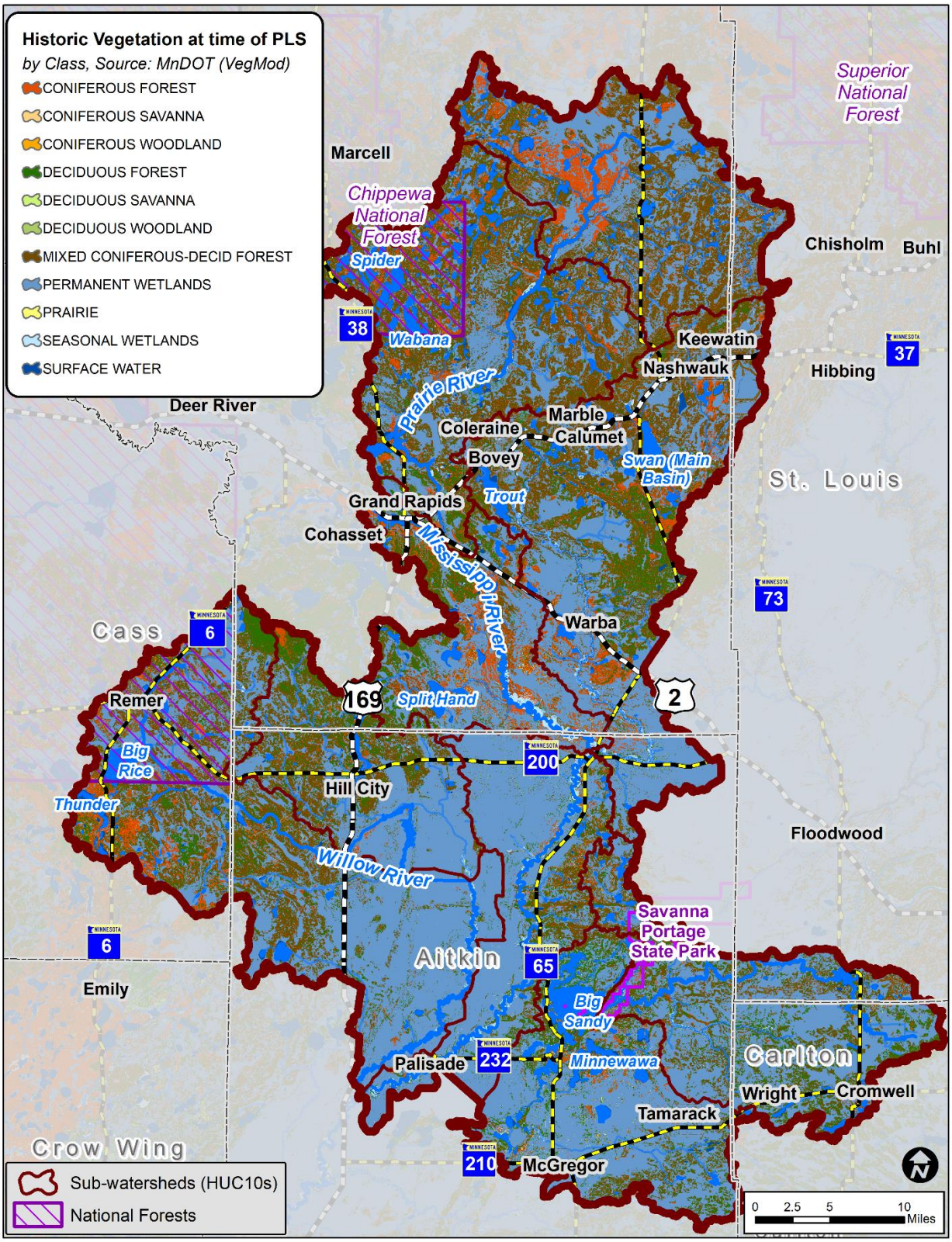
- Historical analysis of grayling wetland
- Wetland restoration for multiple purposes
    - Acres of wetlands restored
- Increase water storage where appropriate
    - Acres and volume of water storage
- Study where to have water storage
    - Locations and acres of water storage
- Reconnecting floodplain
    - Acres of reconnected floodplain
- Regenerate lowland forests
    - Acres of forests regenerated
- Protecting current wetlands into easements
    - Number of easements

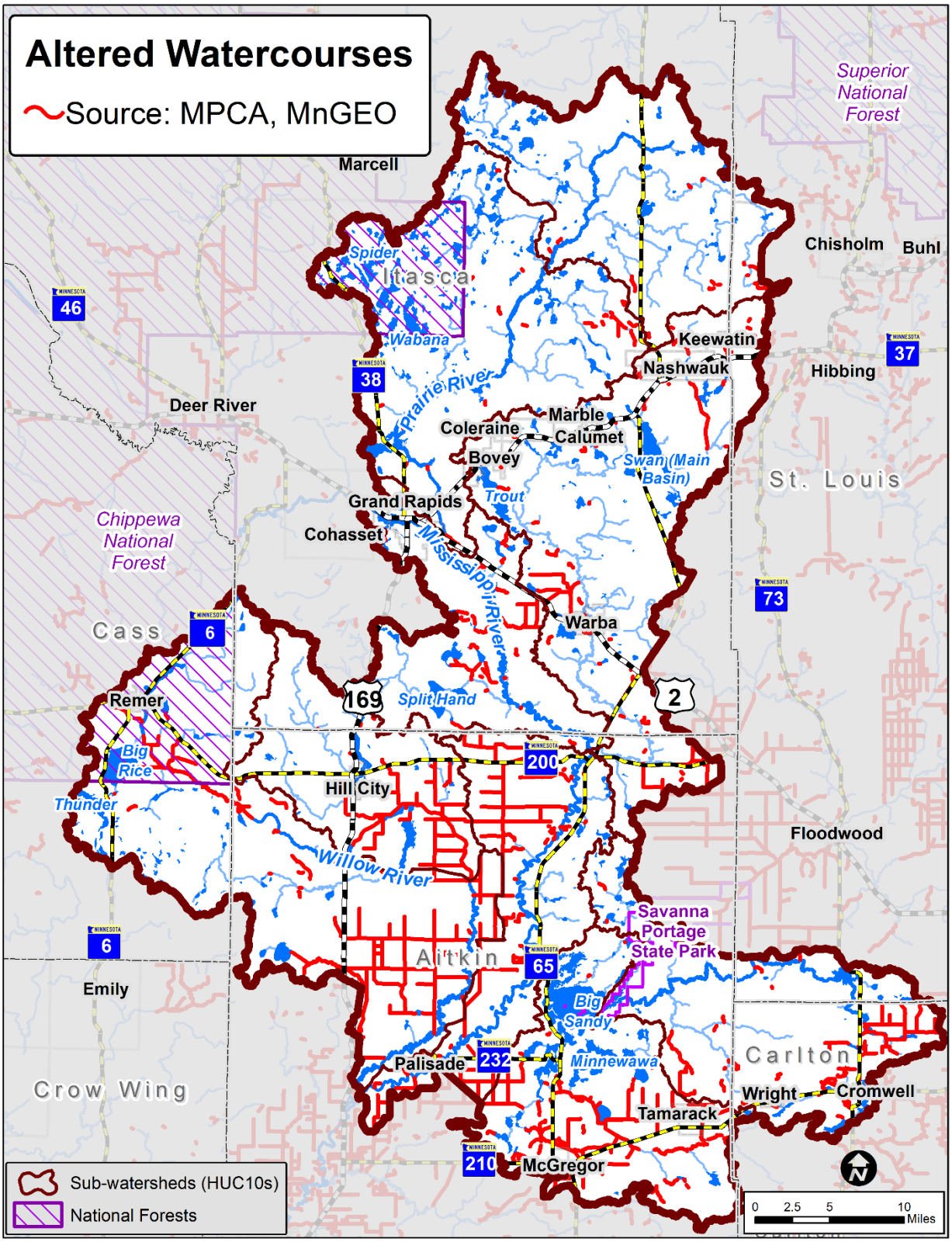
Meeting Attendees

- Brent Amundson, McGregor Township
- Richard Beatty, Big Sandy Lake Association
- Mitch Brinks, Technical Service Area 8
- Perry Bunting, Mille Lacs Band of Ojibwe
- Karola Dalen, Carlton County
- Henry Egland, Aitkin County
- Tom Fasteland, Aitkin SWCD
- Mark Felice, The Nature Conservancy
- Waylon Glienke, Itasca SWCD
- Bonnie Goshey, MPCA
- Matt Gutzmann, Itasca SWCD
- Mike Hoffman, Salo Township
- John C. Hooper, McGregor Township/Big Sandy Lake Association
- Ramona Hooper, McGregor Township
- Jeff Hrubes, BWSR
- Matt Johnson, BWSR
- Michael Kearney, Aitkin County Commissioner
- Tom Maijala, McGregor Township
- Tom Nelson, Itasca SWCD
- Dave Peterson, Cass SWCD
- Russ Reisz, MN DNR
- Moriya Rufer, HEI (facilitator)
- Cal Saari, Itasca SWCD

- Sam Seybold, Aitkin SWCD
- Janet Smude, Aitkin SWCD
- Austin Steere, Itasca SWCD
- Kevin Stroom, MPCA
- Tim Terrill, Mississippi Headwaters Board


Land Cover
Source: 2019 NLCD
Open Water
Developed, Open Space
Developed, Low Intensity
Developed, Medium Intensity
Developed, High Intensity
Barren Land (Mining)
Decidious Forest
Evergreen Forest
Mixed Forest
Shrub/Scrub
Grassland/Herbaceous
Pasture/Hay
Cultivated Crops
Woody Wetlands
Emergent Herbaceous Wetlands
Sub-watersheds (HUC10s)
National Forests
Superior National Forest
Chippewa National Forest
Spider
Wabana
Marcell
Chisholm
Buhl
Keewatin
Nashwauk
Hibbing
Prairie River
Marble
Coleraine
Calumet
Bovey
Swan (Main Basin)
Trout
Grand Rapids
Cohasset
Mississippi River
St. Louis
Warba
Cass
Remer
Big Rice
Thunder
Split Hand
Hill City
Willow River
Floodwood
Savanna Portage State Park
Aitkin
Emily
Big Sandy
Palisade
Minnewawa
Carlton
Wright
Cromwell
Tamarack
McGregor
Crow Wing
0 2.5 5 10 Miles


Historic Vegetation at time of PLS
by Class, Source: MnDOT (VegMod)
CONIFEROUS FOREST
CONIFEROUS SAVANNA
CONIFEROUS WOODLAND
DECIDUOUS FOREST
DECIDUOUS SAVANNA
DECIDUOUS WOODLAND
MIXED CONIFEROUS-DECID FOREST
PERMANENT WETLANDS
PRAIRIE
SEASONAL WETLANDS
SURFACE WATER
Sub-watersheds (HUC10s)
National Forests
Superior National Forest
Chippewa National Forest
Spider
Marcell
Deer River
Wabana
Prairie River
Keewatin
Nashwauk
Chisholm
Buhl
Hibbing
Marble
Coleraine
Calumet
Bovey
Swan (Main Basin)
Grand Rapids
Trout
Cohasset
Mississippi River
St. Louis
Warba
Cass
Remer
Big Rice
Thunder
Split Hand
Hill City
Willow River
Floodwood
Savanna Portage State Park
Aitkin
Emily
Big Sandy
Palisade
Minnewawa
Carlton
Wright
Cromwell
Tamarack
Crow Wing
McGregor
0 2.5 5 10 Miles


Altered Watercourses
Source: MPCA, MnGEO
Superior National Forest
Marcell
Spider
Itasca
Wabana
Chisholm
Buhl
Keewatin
Nashwauk
Hibbing
Prairie River
Deer River
Coleraine
Marble
Calumet
Bovey
Swan (Main Basin)
St. Louis
Grand Rapids
Trout
Cohasset
Chippewa National Forest
Mississippi River
Warba
Cass
Remer
Big Rice
Thunder
169
Split Hand
Hill City
Willow River
Floodwood
Savanna Portage State Park
Aitkin
Emily
Big Sandy
Palisade
Minnewawa
Carlton
Wright
Cromwell
Tamarack
Crow Wing
McGregor
Sub-watersheds (HUC10s)
National Forests
0 2.5 5 10 Miles