



# Lakes & Streams Topic Meeting Summary

## Introduction

Situated in Northern Minnesota, the Big Fork River Watershed (BFRW; HUC 8 – 09030003) is a pristine watershed with picturesque landscapes and water resources. The southern portion of the watershed is dotted with lakes and covered by forest, while the northern portion of the watershed is dominated by woody wetlands and peatlands. The BFRW is in the Rainy River Basin and drains into the Rainy River at the Canadian border approximately 15 miles west of International Falls. The BFRW drains over 1.3 million acres and is divided almost evenly between Koochiching County (51%) and Itasca County (49%). The BFRW has a low population density; the biggest areas of development are the cities of Big Fork (Itasca County) and Big Falls (Koochiching County), although neither city has a population above 500 people (United States Census Bureau, 2020a, 2020b).

The BFRW One Watershed, One Plan (1W1P) is a planning partnership between Koochiching County, Itasca County, Koochiching SWCD, Itasca SWCD and Leech Lake Band of Ojibwe. Over the next year, the planning partners, with guidance from local experts and stakeholders, will develop a comprehensive watershed management plan that identifies key issues in the watershed, creates measurable goals to help address those issues, and develop targeted implementation actions that help work towards achieving those goals.

The 1W1P process is outlined in the figure below in Figure 1. The first steps of the 1W1P process are a series of topic meetings that will be held to gather local input and kick-off the planning process by gathering issues, prioritizing issues, and targeting resources. These meetings will bring together the stakeholders and local experts to provide a strong background in each topic to ensure that the 1W1P adequately addresses the most important local concerns. The resources that will be covered in these meetings are Lakes & Streams, Forests & Wetlands/Peatlands, Urban Stormwater & Drainage, and Farms & Groundwater. For this meeting, topic experts for lakes and streams were invited to attend. This included staff members from local SWCD offices, state agencies, and county staff who provided their unique expertise to the planning process for lakes and streams.



Figure 1 Planning process for the BFRW 1W1P.

The planning process for the Big Fork River 1W1P is driven by local units of government, guided by an Advisory Committee containing local stakeholders, experts, and members of state and federal agencies. The Policy Committee (the decision making group for the plan) contains elected officials from Koochiching County and SWCD, Itasca County and SWCD, and Leech Lake Band of Ojibwe.

## Big Fork River Lakes & Streams Overview

The surface waters of the BFRW are defined by two regions. In the south, several large lakes and many smaller lakes cover the landscape. In the north, the Big Fork River is the major backbone flowing north from its origin, Dora Lake. It stretches 165 miles through Koochiching County to the Rainy River and drains 2,063 miles (Big Fork River Board, 2005).



The southern portion of the watershed has 44 lakes of biological significance. Of these 44 lakes, 36 are classified as outstanding (DNR). There are also 13 Cisco Refuge Lakes in the BFRW primarily in the southeast, as well as 25 designated trout streams, primarily in the northern portion. A few designated trout lakes are located in the southeast portion of the watershed.

Water quality in the watershed is generally good with few pollutants due to low development and large amounts of protected lands. All assessed lakes support aquatic life, and 82% support aquatic recreation (MPCA, 2024). There are a few impairments in the watershed that require monitoring and implementation of programs and actions to reverse degradation trends. The most widespread impairment in both lakes and rivers is high mercury levels. Other impairments include low dissolved oxygen (DO), fish and macroinvertebrate, and nutrient impairments (MPCA, 2013). However, many of these impairments are results of natural conditions.

Most lakes and streams meet water quality standards for aquatic recreation, important for the BFRW, as aquatic tourism is a large economic force in the watershed. The BFRW is used for fishing, hunting, and trapping (Big Fork River Board, 2005). A variety of fish such as Muskellunge, and walleye are sought after specifically. Wild rice harvesting and waterfowl hunting are also popular in the northern portion of the watershed.

### Major Lakes in the BFRW:

Bowstring	Deer
Sand	Jessie
Island	Turtle
Round	

### Major Streams in the LFRW:

Big Fork River  
Pople River  
Sturgeon River  
Bowstring River

On the next pages, there are maps that display various water quality metrics. These include lakes of biological significance (page 8), outstanding resources (page 9), impairments (page 10), and water quality trends (page 11).

## Water Quality Issues

The Lakes and Streams Advisory Committee Topic Meeting was held August 6, 2025, in Marcell, MN. To gather the diverse viewpoints about water quality of stakeholders and experts in the watershed, we began the meeting by asking each member of the Advisory Committee to describe what comes to mind when they think about the watershed's lakes and streams. Their responses are shown below (Figure 2) in a word cloud.



Figure 2. Word cloud about lakes and streams in the Big Fork River Watershed.

Prior to the meeting, previous plans, reports, and public input were reviewed and gathered to better understand the issues and opportunities in the watershed (Figure 3). These were compiled into common themes, which were then used at the lakes and streams topic meeting for facilitation.

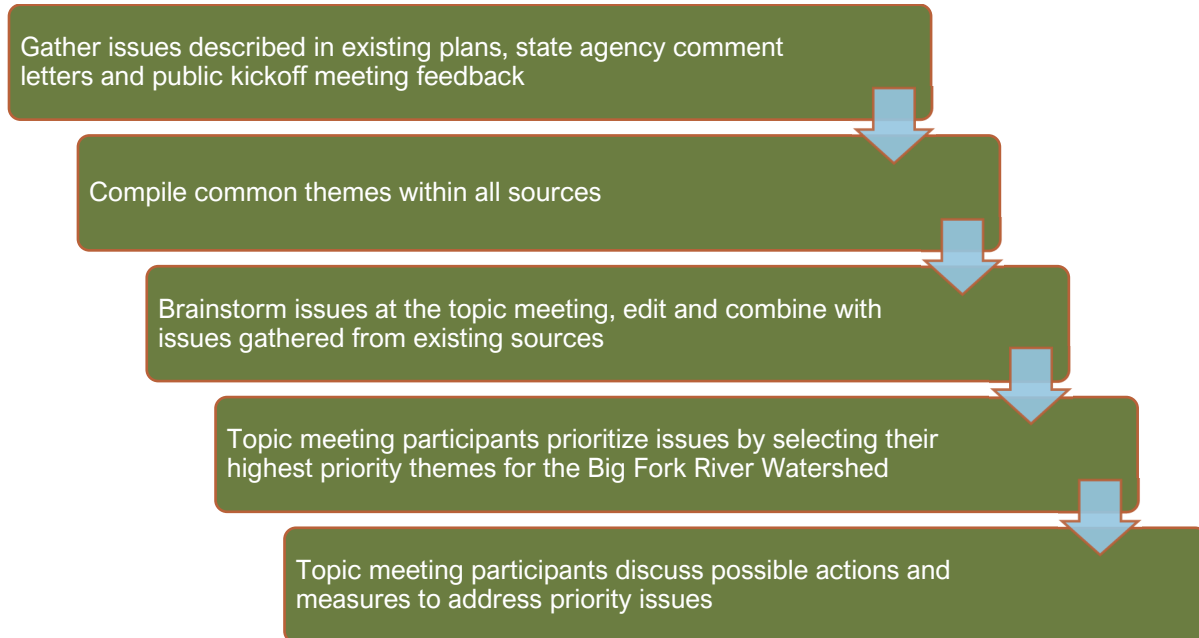


Figure 3. Issues statement development for the Big Fork River 1W1P.

At the meeting attendees were asked to write issues and opportunities related to lakes and stream on sticky notes (Figure 4). These notes were then clustered into themes to determine if the Advisory Committee priorities align with the themes gathered from the plans, reports comment letters, and public input. Themes were then adjusted, regrouped, or new themes were created based on feedback and advice from the committee. The group then finalized a list of themes related to water quality (

Table 1). Themes that fit under other categories (e.g., groundwater and stormwater) were tabled until the appropriate upcoming meeting. Additionally, themes that were not selected as issues were identified as local concerns or planning lenses.

Each participant was asked to vote for their top three issues for lakes and streams using sticky dots. The number of priority votes is noted in Table 1.

BRAINSTORMED ISSUES							
Protect cold water trout streams and natural springs	Prevention of zebra mussels moving further up the watershed	Connect with and encourage real estate professionals to modify their conversations with clients about lakeshore and lawn management to encourage native plants and explain shoreline regulations.	Work with landowners to maintain or improve natural shoreline buffers by planting perennials, and instead of mowing all the way to the lake, let the vegetation grow	Install rain gardens to filter pollutants before entering lake	Promote native shoreline buffers	Promote a grant and funding opportunity such as the Lawns to Legumes program.	Where to focus would be a good outcome of the 1w1p. What Lakes/streams etc.
Once areas selected, preference should be to focus on the shoreline of the stream or lake but can be beneficial anywhere in the catchment area. SFIA likely main tool but can be perm easements too	Address failing septic systems around shorelines	Seal all unused wells	Better buffers on new and existing developments	Voluntary Septic Sweeps on Lakes	Focus on TMDL's that can show measurable improvement with implementation on BMP's otherwise consider natural background and try to maintain conditions.	Protecting Water Quality is paramount when setting up timber sales	Larger buffer zones without use of fertilizers, pesticides, herbicides
Larger no-mow buffer	Nutrient level reductions on lake productivity	How to address natural background impairments	Different standards for connected waters?	We need to change the perception of what a good lawn looks like	Septic system compliance	Quantify impact on forest cover on water temps in Northern MN	Shortage of contractors for septic work - coordinate schools and business to engage people to get into the business.
Road washouts near lakes	Historical ditching - drainage of wetlands and peatlands	Increased nutrient and sediment loading into lakes and rivers	Restore developed shorelines	How do we make landowner involvement for improvements easier? Less restrictive cost share regulations?	Data collection and trend analysis relies on sharing and standardized procedures between partners (local, state, sovereign nations)	SFIA Funding (no cuts)	How logging operations are conducted within the watershed - specifically in wet forest areas along streams and rivers
Wild rice protection	Non-compliant/failing/leaking septic systems	Distance of streams and lakeshore with small parcels <20 acres vs large parcels <20 acres	Not all public land is protected - state and county shoreland can be sold	Inventory culverts - reduce scouring bank erosion	Easily accessible funding for septic upgrades and replacements	Protect water and watershed from fertilizers and pesticides	How do we measure improvements for small parcel impacts
Encourage natural shorelines	Forest management - Harvest that is friendly to wildlife	Mowed lawns to lakes, lack of vegetation and ground cover	Consistent water levels (beaver dam management)	Larger no mow buffers	Larger buffer zones without use of fertilizers, pesticides, herbicides	Testing and mitigation of nutrients	Outreach and education to landowners on shoreline buffers
Lots of hidden gems (small high quality lakes) E/SE of Marcell	Big recreational lakes support tax base/local economy	This area has a more up-north feel than Brainerd/Walker area lakes	Road crossings - including forest roads	Looking to under plant wet forests that are ash dominated with assisted migration (EAB) - important to help with flooding and keep other invasives out	Better inform and educate water and stream landowners and users about the connections of land and water use by PSAs and community groups	Staff the DNR	Get elected officials better informed and accountable for watershed management
Shoreline impacts on oligotrophic lakes	Monitor Water quality to maintain wild rice production	Grass/forest buffers for rivers and lakes, shoreline improvements	Change septic inspection laws to be more effective. Current laws discourage inspections.				

Figure 4. Brainstormed issues during the meeting (both in-person and virtual attendees).

Table 1. Draft issue statements related to lakes and streams.

# of Priority Votes	DRAFT ISSUE THEMES	DRAFT ISSUE STATEMENT	REFERENCES
19	<b>Lakeshore Management</b>	<b>Lakeshore alteration</b> impacts water quality and shoreland habitat.	Itasca County Water Plan, Koochiching Local Water Plan, Topic Meeting, BWSR Comment Letter, MPCA Comment Letter
18	<b>Forest Protection</b>	<b>Sufficient protection</b> is needed for outstanding resources and sensitive species (i.e., trout, cisco, wild rice) to maintain water and habitat quality.	Itasca County Water Plan, Koochiching Local Water Plan, Big Fork River Plan, MPCA WRAPS, 2024 MPCA Trends Report, Topic Meeting, MN DNR Comment Letter, BWSR Comment Letter, MPCA Comment Letter
14	<b>Nutrients</b> (includes septic systems)	<b>Nutrients</b> have the potential to decrease water quality and impact aquatic recreation and aquatic life.	MPCA WRAPS, 2024 MPCA Trends Report, MPCA Monitoring Summary, Topic Meeting, MN DNR Comment Letter, BWSR Comment Letter, MPCA Comment Letter
11	<b>Wild Rice Health</b>	<b>Wild Rice health</b> is at risk from development, climatic changes, contaminants, and invasive species.	Itasca County Water Plan, Topic Meeting, MN DNR Comment Letter
8	<b>Eroding Streambanks</b>	<b>Eroding gulleys and streambanks</b> contribute to turbidity impairments and reduced habitat quality.	Topic Meeting, MN DNR Comment Letter, BWSR Comment Letter, MPCA Comment Letter
3	<b>Altered Hydrology</b>	<b>Historical ditching and connectivity barriers</b> alter the natural flow of water, increasing flashiness and erosion, and degrading habitat.	Topic Meeting, BWSR Comment Letter, MPCA Comment Letter
Not included in voting	<b>Aquatic Invasive Species</b>	<b>Aquatic Invasive species (AIS)</b> impact lake health, water quality, and recreation.	Itasca County Water Plan, Koochiching Local Water Plan, DNR Comment Letter, BWSR Comment Letter

## Lake & Stream Actions and Measures

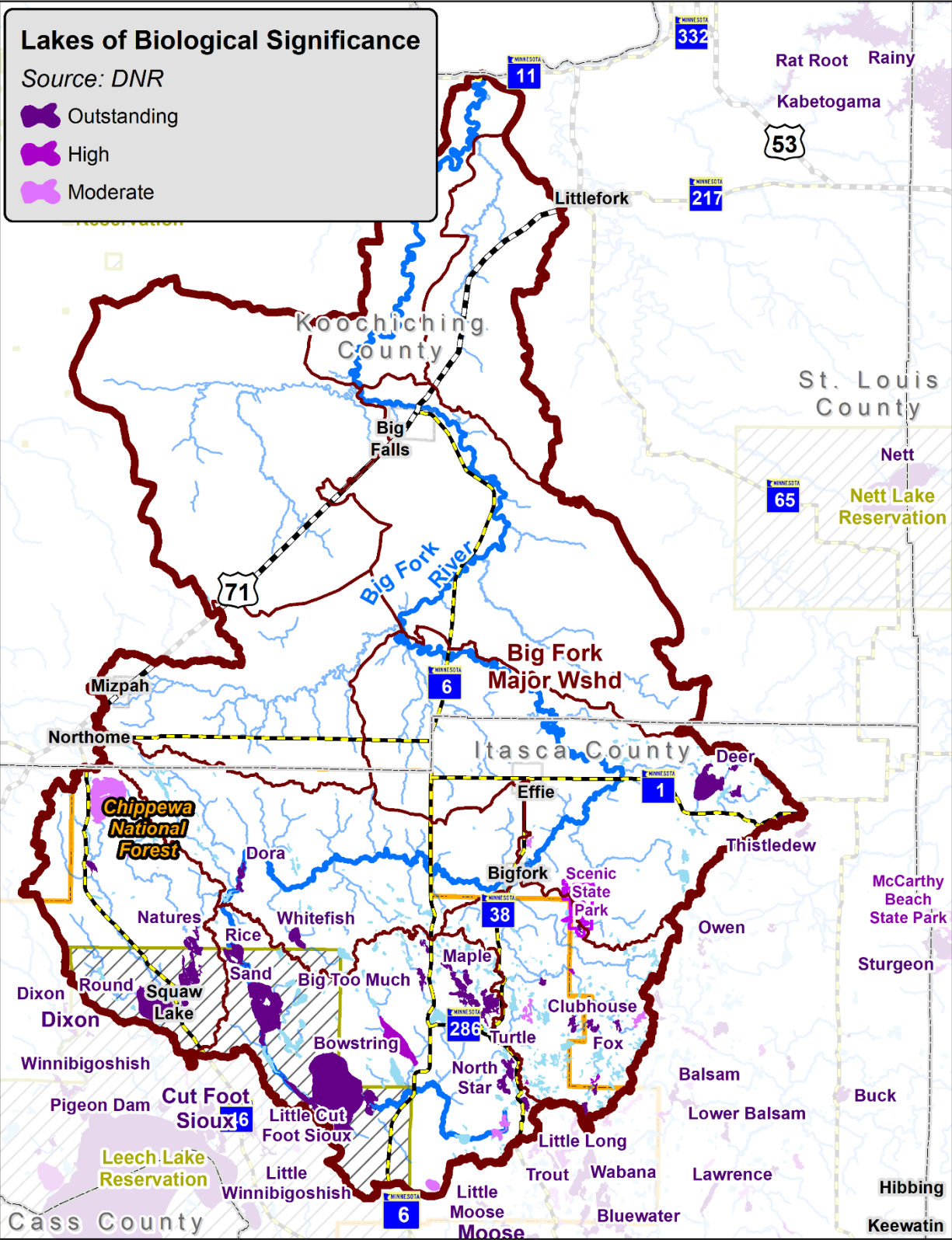
Participants ended the meeting with brainstorming actions and measures. All ideas listed below will be used to formulate actions and measures, but the actions and measures are not restricted to the list below.

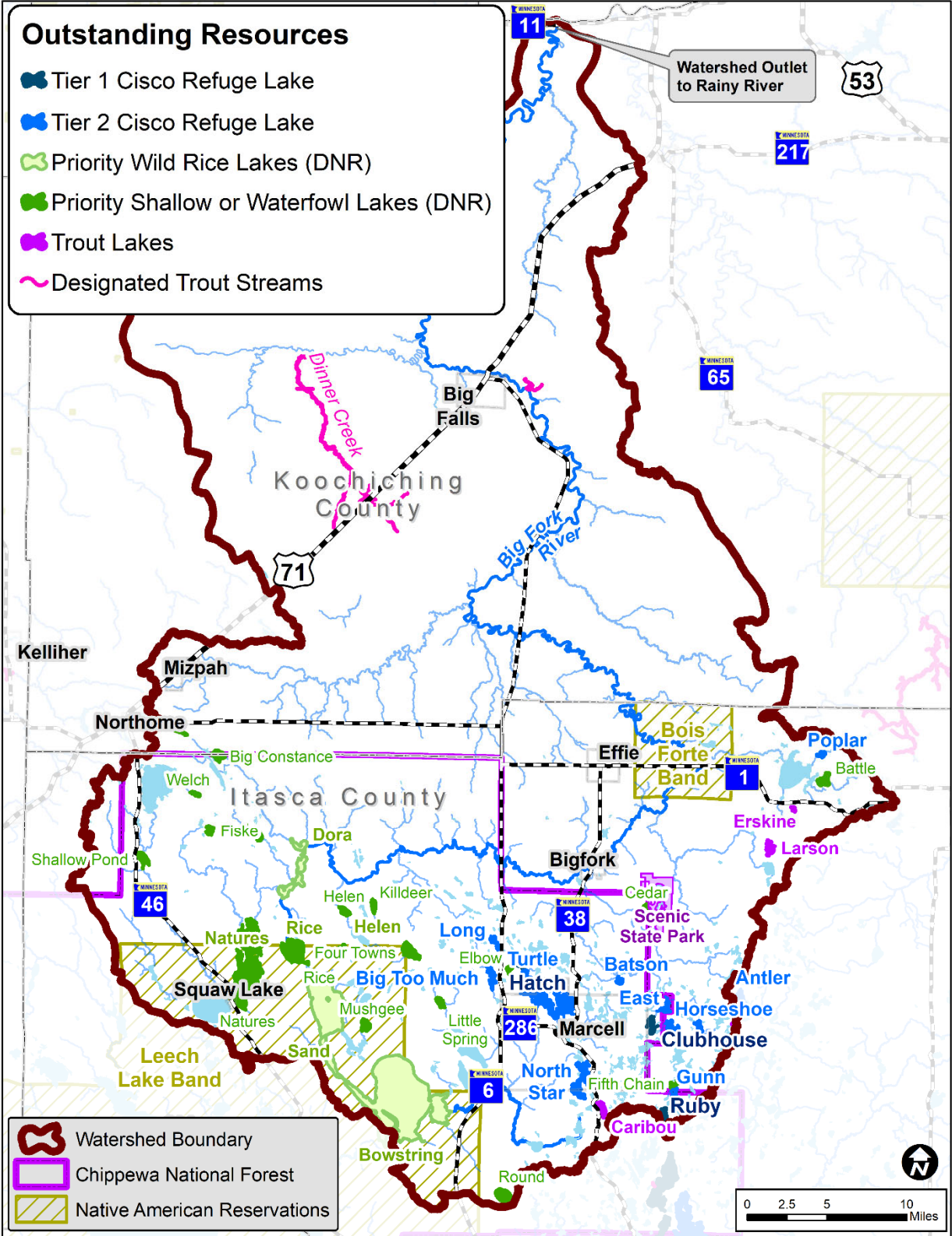
- Protect cold water trout streams and natural springs.
- Prevention of zebra mussels moving further up the watershed.
- Connect with and encourage real estate professionals to modify their conversations with clients about lakeshore and lawn management to encourage native plants and explain shoreline regulations.
- Work with landowners to maintain or improve natural shoreline buffers by planting perennials, and instead of mowing all the way to the lakes, let the vegetation grow.
- Install rain gardens to filter pollutants before entering lakes.
- Promote native shoreline buffers.
- Promote a grant and funding opportunity such as the Lawns to Legumes program.
- Where to focus would be a good outcome of the 1W1P, what lakes/streams etc.
- Once areas are selected, preferences should be to focus on the shoreline of the stream or lake but can be beneficial anywhere in the catchment area. SFIA is likely the main tool but can be permanent easements too.
- Address failing septic systems around shorelines.
- Seal all unused wells.
- Better buffers on new and existing developments.
- Voluntary Septic Sweeps on Lakes.
- Focus on TMDL's that can show measurable improvement with implementation on BMP's otherwise consider natural background and try to maintain conditions.
- Protecting water quality is paramount when setting up timber sales.
- Larger buffer zones without use of fertilizers, pesticides, herbicides.
- Larger no mow buffer.
- Nutrient level reductions on lake productivity.
- How to address natural background impairments.
- Different standards for connected waters.
- Change the perception of what a good lawn looks like.
- Septic system compliance.
- Quantify impact on forest cover on water temps in Northern MN.
- Shortage of contractors for septic work – coordinate schools and business to engage people to get into the business.
- Road washouts near lakes.
- Historical ditching and drainage of wetlands and peatlands.
- Increased nutrient and sediment loading into lakes and rivers.
- Restore developed shorelines.
- Encourage landowner involvement by less restrictive cost share regulations.
- Data collection and trend analysis relies on sharing and standardized procedures between partners (local, state, sovereign nations).

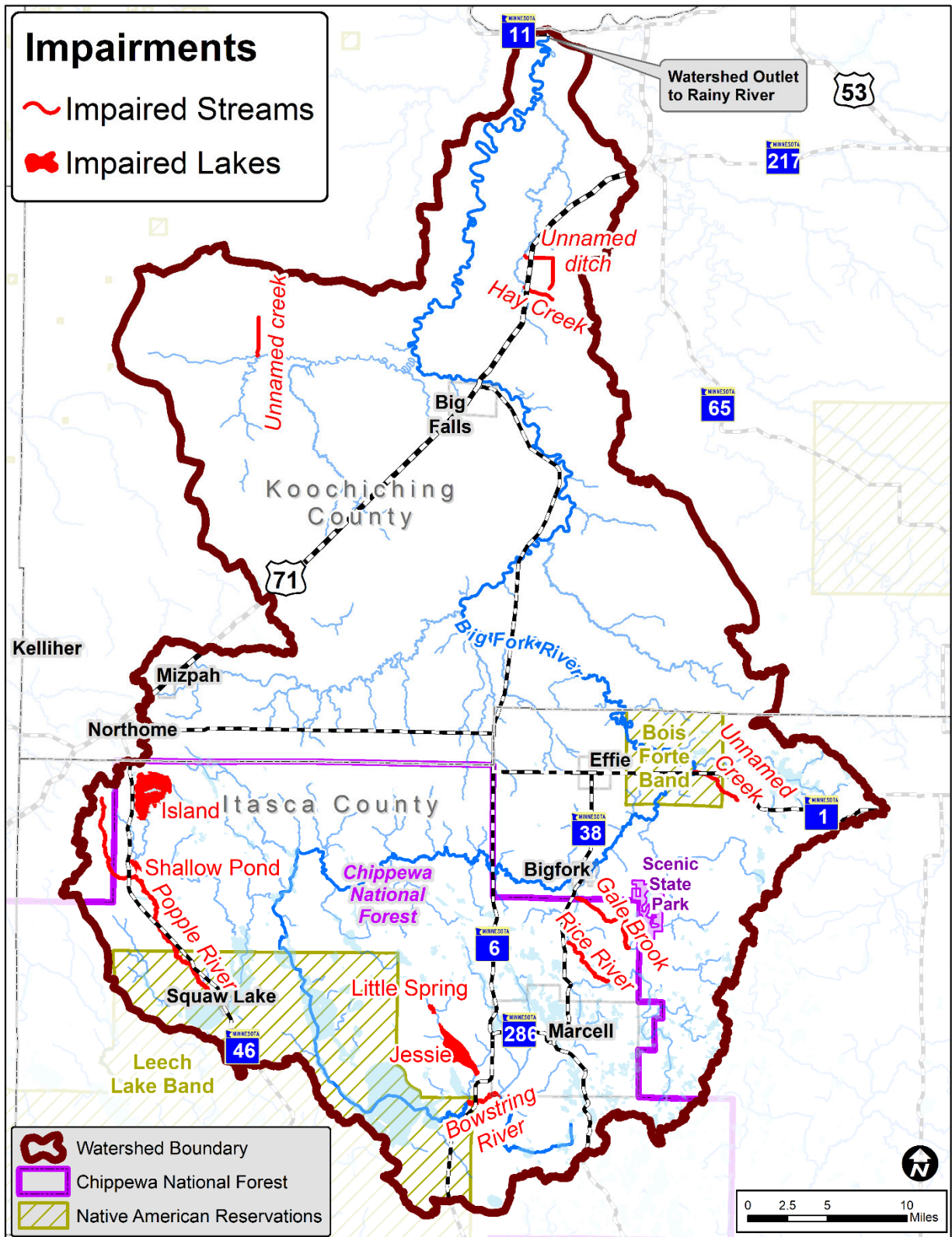
- SFIA Fundings (no cuts).
- How logging operations are conducted within the watershed specifically in wet forest areas along streams and rivers.
- Wild rice protection.
- Non-compliant/failing/septic systems.
- Distance of streams and lakeshore with small parcels <20 acres vs large parcels <20 acres.
- Not all public land is protected- state and county shoreline can be sold.
- Inventory culverts, reduce scouring bank erosion.
- Easily accessible funding for septic upgrades and replacements.
- Protect water and watershed from fertilizers and pesticides.
- Determine how to measure improvements for small parcel impacts.
- Encourage natural shorelines.
- Forest management, harvest that is friendly to wildlife.
- Mowed lawns to lakes, lack of vegetation and ground cover.
- Consistent water levels (beaver dam management).
- Larger no mow buffers.
- Larger buffer zones without use of fertilizers, pesticides, and herbicides.
- Testing and mitigation of nutrients.
- Outreach and education to landowners on shoreline buffers.
- Lots of hidden gems (small high quality lakes) E/SE of Marcell.
- Big recreational lakes support tax base/local economy.
- This area has a more up-north feel than Brainerd/Walker area lakes.
- Road crossings including forest roads.
- Looking to under plant wet forests that are ash dominated with assisted migration (EAB). Important to help with flooding and keep other invasives out.
- Better inform and educate water and stream landowners and users about the connections of land and water use by PSAs and community groups.
- Staff the DNR.
- Get elected officials better informed and accountable for watershed management.
- Shoreline impacts on oligotrophic lakes.
- Monitor water quality to maintain wild rice production.
- Grass/forest buffers for rivers and lakes, shoreline improvements.
- Change septic inspection laws to be more effective, current laws discourage inspections.

## Meeting Attendees

- Matt Gutzmann (Itasca SWCD)
- Chad Severts (BWSR)
- Matt Picklo (Itasca SWCD)
- Cal Saari (Itasca SWCD)
- Dale Erikson (Koochiching County)
- Dan Disrud (MDH)
- Mitch Brinks (TSA8)
- Jake Sorenson (LLBO)
- Mitch Neitge (NRCS)
- Austin Fischer (DNR Wildlife)
- Perry Loegerins (Ikes, Itasca Waters)
- George Atchison (Koochiching SWCD)
- Paul Ryan (Suomi Ara Lakes Association)
- Mark Tripp (Turtle Lake Association)
- Teresa Kittridge (Marcell resident)
- Kurt Findorft (Marcell resident)
- Terry and Dave Magnuson (Turtle Lake Association)
- Jon Hanson (Turtle Lake Association)
- Tim Goserud (Turtle Lake Association)
- Austin Steere (Itasca SWCD)
- Jeff Hrubes (BWSR)
- Kelly Condiff (DNR)
- Whitney Sims (Koochiching County)
- Lindsey Krumrie (MPCA)
- Austin Steere (Itasca SWCD)
- Reid Christianson (MDA)
- Rian Reed (DNR)
- Austin Wallin (Koochiching SWCD)
- Jolen Simon (Koochiching SWCD)
- Pam Tomevi (Koochiching SWCD)
- Moriya Rufer (HEI)
- Christina Traner (HEI)







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