Lakes & Streams Topic Meeting Summary

Introduction

Located in remote northern Minnesota is the wild Little Fork River Watershed (LFRW). The LFRW is a large watershed covering 1,872 square miles. The confluence with the Rainy River is about 160 miles from the headwaters, 11 miles west of International Falls. The Little Fork River begins in the north-central portion of St. Louis County near the town of Cook (MPCA, 2017). The watershed consists of three counties: Koochiching County (39%), St. Louis County (48%), and Itasca County (12%; DNR, 2015). There are no large cities within LFRW: the largest towns are Little Falls (population of 674) and Cook (population of 667; Koochiching County, 2018).

The LFRW One Watershed, One Plan (1W1P) is a planning partnership between Koochiching County, Koochiching County, Itasca County, Itasca SWCD, St. Louis County, North St. Louis SWCD, and the City of Littlefork. Over the next year, this planning partnership will create a plan that will help maintain the high quality of the natural resources in the LFRW as well as restore valuable resources. Through this process, 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 **Figure 1** below. 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 Rivers & Lakes, Forests & Wetlands/Peatlands, Urban Stormwater & Drainage, and Farms & Groundwater.

Figure 1 Planning process for the LFRW 1W1P.

Little Fork River Lakes & Streams Overview

The Little Fork River begins in the lowlands near Lost Lake and travels 160 miles to the north. The Little Fork River flows through an area known as the "big bog" in northern Minnesota before the confluence with the Rainy River (MPCA, 2006). While most of the water courses are natural, 11.0% of the water courses within the LFRW have been altered (DNR, 2017).


Little Fork River

Major Lakes in the LFRW:

Big Rice
Sturgeon
Sand
Lost
Nett

Major Streams in the LFRW:

Little Fork River
Sturgeon River
Rice River

Water quality in the watershed is generally good with few pollutants due to low development and agricultural use. All 12 assessed stream reaches and 15 assessed lakes support aquatic recreation use (MPCA, 2017b). While a majority of locations support aquatic life use, six are impaired. One impairment is an aquatic life biological impairment and five impaired for high turbidity. Historical logging has continued to current erosion of riverbanks and excessive stream turbidity (MPCA, 2006). Deforestation and land use changes during and following periods of logging resulted in loss of flow attenuation on the landscape (MPCA, 2017a).

An increasing trend in nitrates and a decreasing trend in phosphorus concentrations is expected within the watershed, corresponding to the expected changes in nutrient export from forested watersheds during the reforestation following logging events (MPCA, 2017b). Studies have shown that water quality directly corresponds to the cycle of logging. The decrease in long-term stream flow is the results of land cover changes related to logging and reforestation and not precipitation changes (MPCA, 2006).

Waters in the LFRW are important for recreation such as canoeing and swimming. But they are also important for sustaining life with fishing, hunting, and wild rice harvesting. The Boise Forte Reservation is located within the watershed and contains Nett Lake, the world's largest wild rice lake (MPCA, 2021). Many of the shallow wild rice lakes throughout the watershed are known for their lower transparencies due to natural bog staining originating from the wetland dominated watershed (MPCA, 2010). Wild rice lakes and streams are particularly vulnerable to sulfate. The Sturgeon River and Dark Lake both have sulfate impairments for wild rice production.

Habitat in lakes and streams is also important to consider. There are many sites of outstanding, high and moderate biodiversity significance exist throughout the watershed. There are seven designated trout streams and four designated trout lakes located in the southern portion of the watershed.

In this packet, there are figures identifying important streams and lakes in the watershed: impaired, trout, and wild rice streams (Page 7), trout, wild rice, impaired (non- mercury or wild rice impairment), and outstanding significance lakes (Page 8).

Issues

The general process of planning and convening the topic meetings are shown in the graphic below. The process begins with gathering issues from existing studies and documents before the meeting. At the meeting, participants brainstorm issues, discuss these issues in greater depth, prioritize them, and brainstorm possible actions to address these issues (**Figure 2**).

Figure 2 Issue development for the BFRW 1W1P during topic meetings.

The Lakes and Streams Topic meeting for the LFRW planning effort was held on August 7, 2025 in Cook, 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 the lakes and streams in the BFRW in a few words. Their responses are shown below in a word cloud (**Figure 3**).

Figure 3 Word cloud when participants were asked about lake and streams in the BFRW.

At the meeting, attendees were asked to write issues and opportunities related to lakes and streams 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 7 themes related to lakes and streams (**Table 1**).

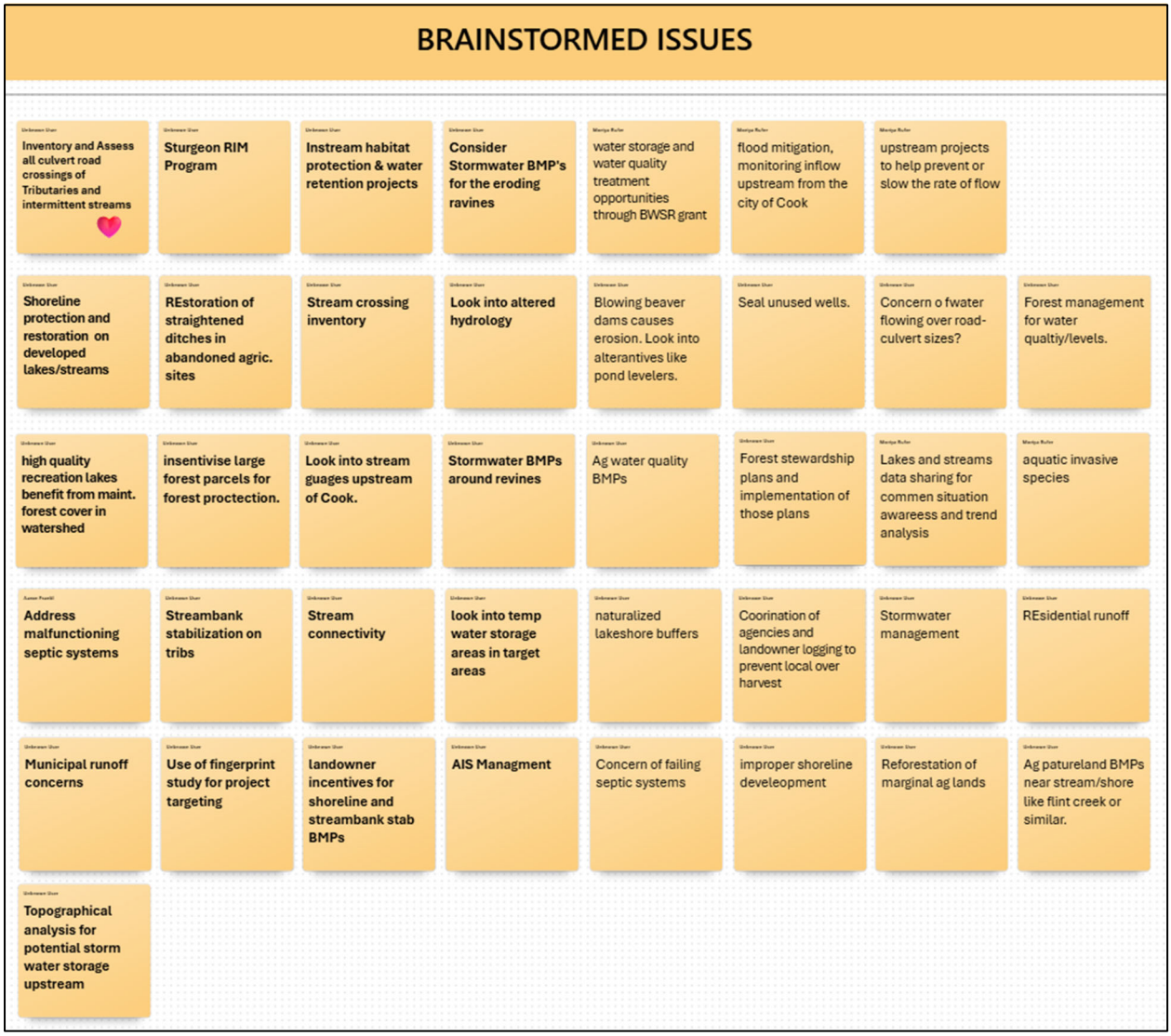


Figure 4. Brainstorming results for issues and opportunities about lakes and streams in the LFRW.

Table 1 Draft issue statements for lakes and streams in the BFRW.

Draft Issue	Draft Issues Statement	Sources (see key below)
Land Protection	**Sufficient protection** is needed for outstanding resources and sensitive species (i.e., trout, cisco, wild rice) to maintain water and habitat quality.	WRAPS, TMDL, Monitoring, MPCA Letter, DNR Letter, BWSR Letter
Eroding Gullys and Streambanks	**Eroding gulleys and streambanks** contribute to turbidity impairments and reduced habitat quality.	WRAPS, EPA TMDL, Logging, MPCA Monitoring, Select Lakes, Trends, Itasca County, MPCA Letter, DNR Letter, BWSR Letter
Altered Hydrology	**Historical ditching and connectivity barriers** alter the natural flow of water, increasing flashiness and erosion, and degrading habitat.	EPA TMDL, Monitoring, Select Lakes, Koochiching County Water Plan, MPCA Letter, DNR Letter, BWSR Letter
Stormwater Runoff	**Stormwater runoff** in developed areas increases peak flows and contributes pollutants to streams and lakes.	Itasca County, Koochiching County, St. Louis County
Nutrients	**Nutrients** have the potential to decrease water quality and impact aquatic recreation and aquatic life.	Itasca County, Koochiching County, St. Louis County, MPCA Letter, DNR Letter, BWSR Letter, MDH Letter
Lakeshore Management	**Lakeshore alteration** impacts water quality and shoreland habitat.	Itasca County, Koochiching County, St. Louis County, DNR Letter, BWSR Letter
Flooding	**Flooding** along rivers can threaten economic and natural resources.	WRAPS, Logging, Itasca County, Koochiching County, DNR Letter, BWSR Letter

BWSR Letter – BWSR 60 Day Letter | **DNR Letter –** DNR 60 Day Letter | **EPA TMDL –** EPA Total Maximum Daily Loads Support Letter | **Itasca County –** Itasca County Local Water Management Plan | **Koochicing County –** Koochiching County Comprehensive Local Water Management Plan | **Logging –** MPCA Effect of Historical Logging Report | **MDH Letter –** MPCA 60 Day Letter | **Monitoring –** MPCA Monitoring and Assessment Report | **MPCA Letter –** MPCA 60 Day Letter | **Select Lakes –** MPCA Water Quality Assessment of Select Lakes | **St. Louis County –** St. Louis County Comprehensive Water Management Plan | **TMDL –** MPCA Sediment Reduction Project Total (Total Maximum Daily Load) | **Trends –** MPCA Watershed Assessment and Trends Update| **WRAPS –** Little Fork River Watershed Restoration and Protection Strategy Report |

Next, each participant was asked to use sticky dots to identify their top three issues for streams and lakes. An image of this process can be found below (**Figure 5**). The highest priority items were eroding gullies and streambanks (15 votes), forest protection (11), and altered hydrology (9). Nutrients (8) and flooding (8) received less votes, and stormwater runoff (6) and lakeshore management (3) received the least. Although some received higher priority, all issues will be addressed in the plan.

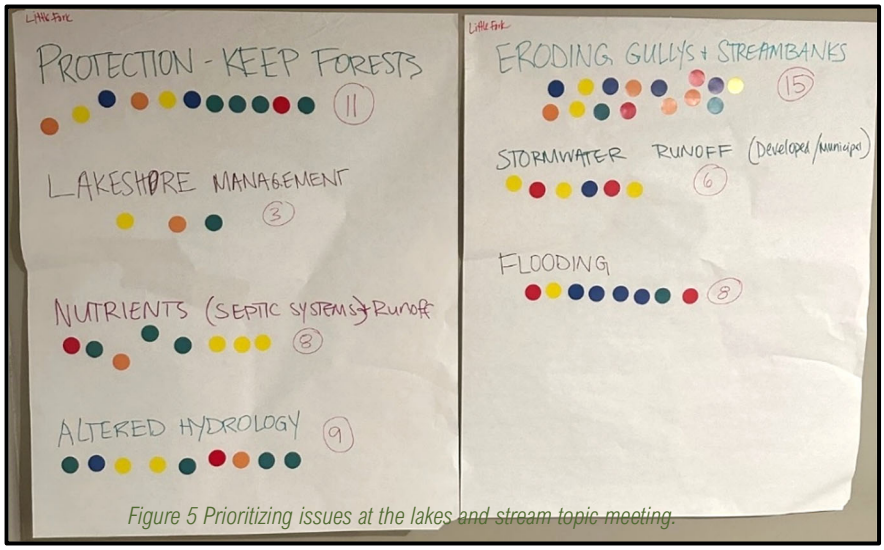


Figure 5 Prioritizing issues at the lakes and stream topic meeting.

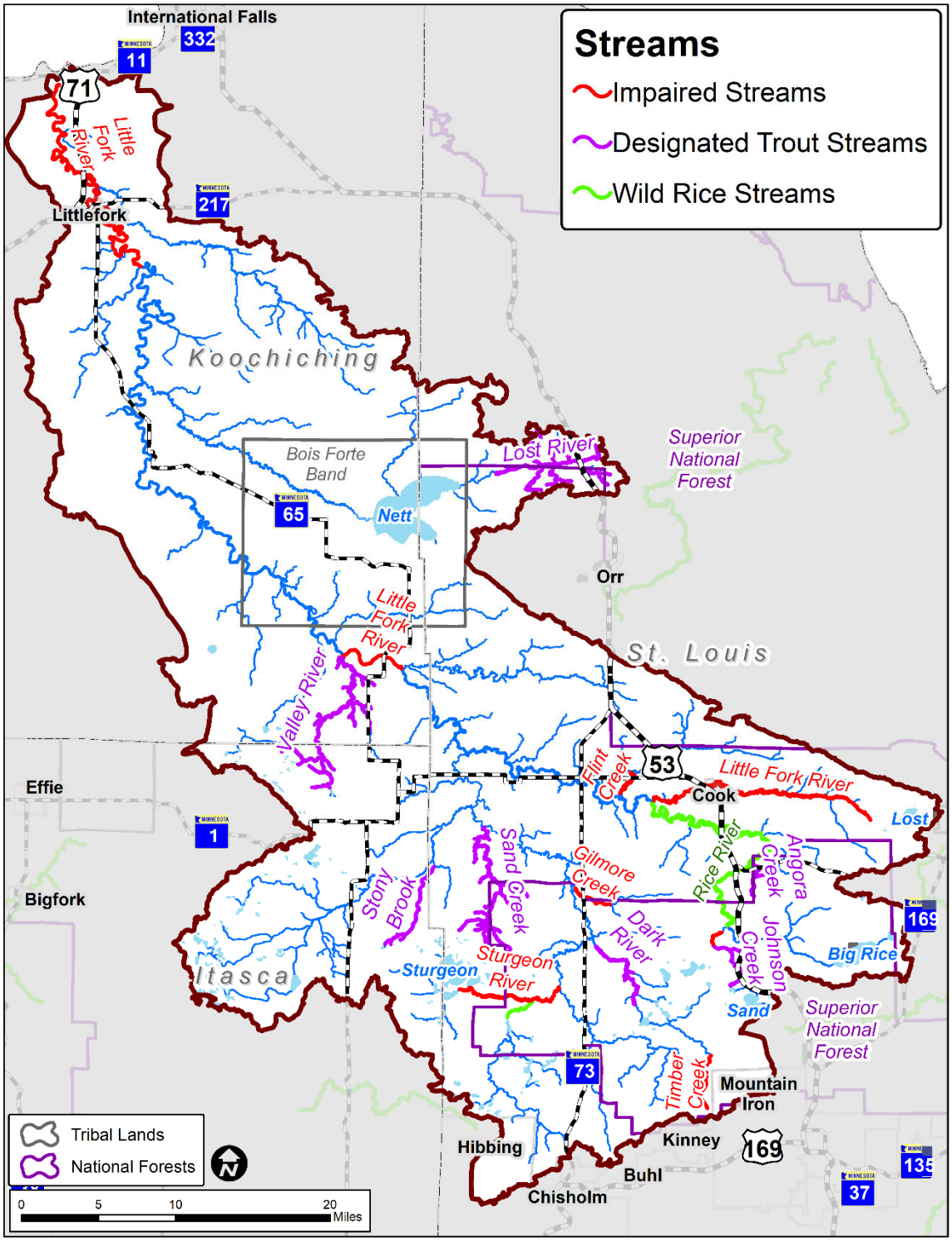
Lakes and Streams Actions

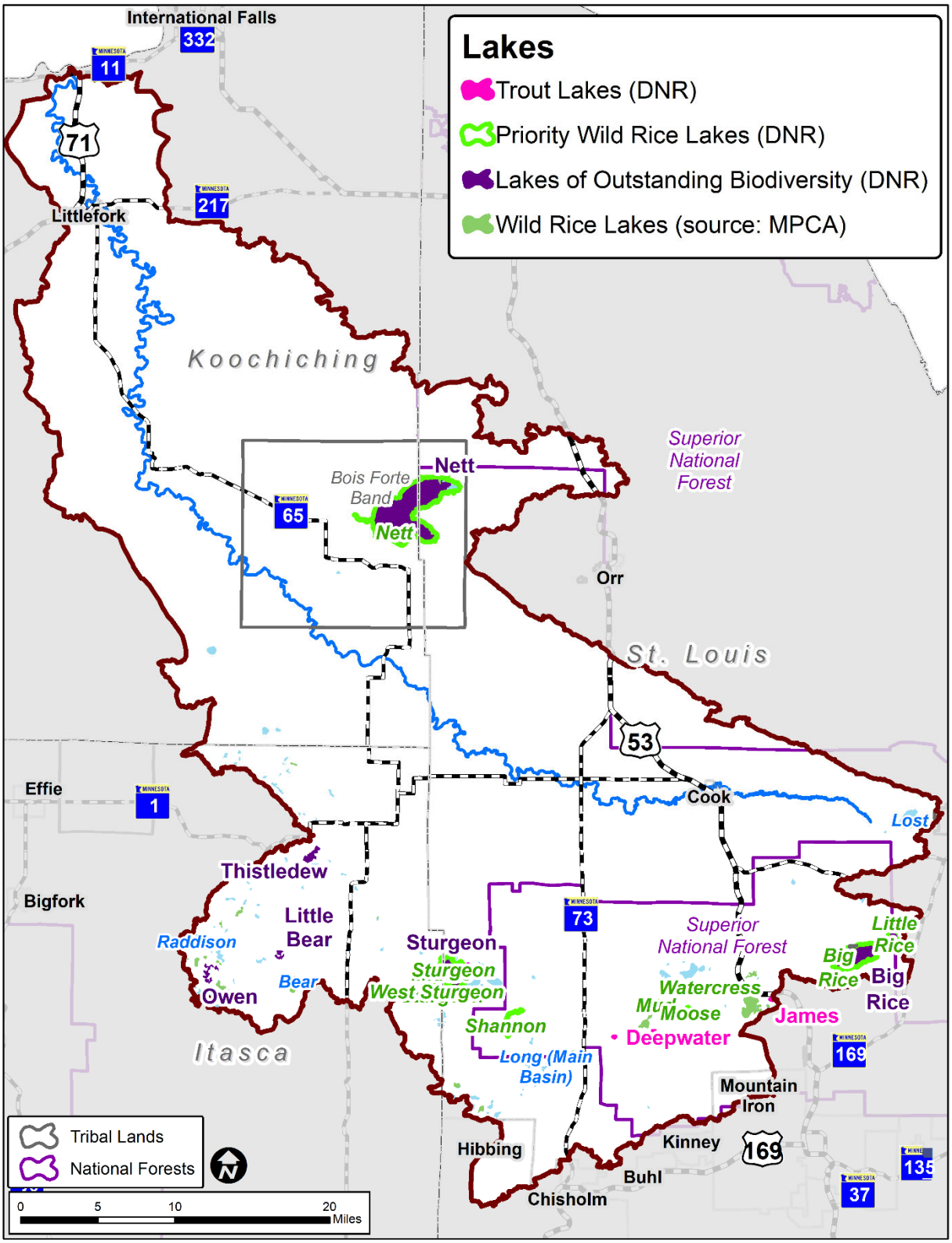
Actions were brainstormed to help address the issues that were prioritized during the meeting. These actions will be implemented into the plan, with more actions added during the planning process.

- Outreach and public education for all topics
- Promote forest stewardship plans and Sustainable Forest Incentive Act (SFIA)
    - Cost share plans in high priority areas
    - Complete a Landscape Stewardship Plan
- Upstream water storage
- Topo analysis to find depressions near streams for possible storage
- Restore hydrology – rates
- Forest management for invasive species potential, assisted migration
- Following voluntary site level guidelines for forest management and forest harvesting
- County overlays in planning and zoning to protect sensitive areas/bluffs/etc.
- Comparing updated LiDAR with older layers for erosion analysis
- Culvert inventory
- Economic impact of flooding in Cook

Meeting Attendees

- Ada Tse – St. Louis County
- Austin Steere - Itasca SWCD
- Austin Wallin – Koochiching SWCD
- Brett Nelson - DNR
- Chad Severts - BWSR
- Dan Disrud- MDH
- Daniel Manick – Mayor of Cooke
- Jeff Forester - Minnesota Lakes and Rivers Advocates
- Jeff Hrubes- BWSR
- Jólen Simon – Koochiching SWCD
- Kelly Condiff - DNR
- Kevin Strum - MPCA
- Liza Root – Cooke City Council
- Matt Gutzmann - Itasca SWCD
- Mitch Brinks, GIS
- Pam Tomevi - Koochiching SWCD
- Phil Norvich – North St. Louis SWCD
- Reid Christianson - MDA
- Scott Kronholm - Citizen
- Whitney Sims - Koochiching County
- Moriya Rufer, Houston Engineering
- Aaron Frankl, Houston Engineering


Streams
Impaired Streams
Designated Trout Streams
Wild Rice Streams
International Falls
332
11
71
Little Fork River
Littlefork
217
Koochiching
Bois Forte Band
65
Nett
Lost River
Superior National Forest
Orr
St. Louis
Little Fork River
Valley River
Effie
1
Bigfork
Itasca
Flint Creek
53
Cook
Little Fork River
Lost
Rice River
Angora Creek
Gilmore Creek
Sand Creek
Stony Brook
Dark River
Johnson Creek
169
Big Rice
Sturgeon
Sturgeon River
Sand
Superior National Forest
73
Timber Creek
Mountain Iron
Kinney
169
Hibbing
Buhl
Chisholm
135
37
Tribal Lands
National Forests
0
5
10
20
Miles


Lakes
Trout Lakes (DNR)
Priority Wild Rice Lakes (DNR)
Lakes of Outstanding Biodiversity (DNR)
Wild Rice Lakes (source: MPCA)
International Falls
332
11
71
217
Littlefork
Koochiching
Bois Forte Band
Nett
65
Superior National Forest
Orr
St. Louis
53
Effie
1
Cook
Lost
Thistledew
Bigfork
Little Bear
Raddison
Bear
Owen
Itasca
Sturgeon
Sturgeon
West Sturgeon
73
Superior National Forest
Little Rice
Big Rice
Big Rice
Watercress
Moose
James
Shannon
Deepwater
Long (Main Basin)
169
Mountain Iron
Hibbing
Kinney
169
Buhl
Chisholm
135
37
Tribal Lands
National Forests
N
0
5
10
20
Miles

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