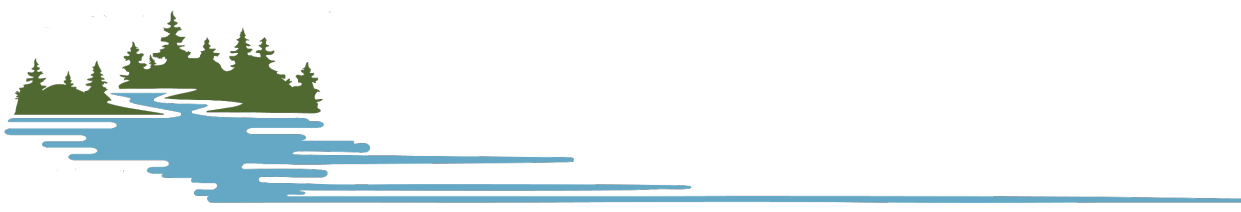




Appendix A. Planning Memorandum of Agreement



**MEMORANDUM OF AGREEMENT FOR THE PLANNING OF THE
LITTLE FORK RIVER COMPREHENSIVE WATERSHED MANAGEMENT PLAN**

This MEMORANDUM OF AGREEMENT FOR THE PLANNING OF THE LITTLE FORK RIVER COMPREHENSIVE WATERSHED MANAGEMENT PLAN (the “agreement” or “MOA”) is made and entered into among:

The Counties of Koochiching, St. Louis and Itasca, by and through their respective County Board of Commissioners, and Koochiching, North St. Louis and Itasca Soil and Water Conservation Districts, by and through their respective Soil and Water Conservation District Board of Supervisors, and Bois Forte Band of Chippewa, federally recognized American Indian Tribal government pursuant to Minnesota Statute §471.59, and the City of Littlefork, ~~through their City Council~~, and the City of Cook, through their City Councils, collectively referred to as the “Parties” and individually each is a “Party.”

RECITALS

WHEREAS, the Counties of this Agreement are political subdivisions of the State of Minnesota, with authority to carry out environmental programs and land use controls, pursuant to Minnesota Statutes Chapter 375 and as otherwise provided by law; and

WHEREAS, the Soil and Water Conservation Districts (SWCDs) of this Agreement are political subdivisions of the State of Minnesota, with statutory authority to carry out erosion control and other soil and water conservation programs, pursuant to Minnesota Statutes Chapter 103C and as otherwise provided by law; and

WHEREAS, the parties to this Agreement have a common interest and statutory authority to prepare, adopt, and assure implementation of a comprehensive watershed management plan in the Little Fork River Watershed to conserve soil and water resources through the implementation of practices, programs, and regulatory controls that effectively control or prevent erosion, sedimentation, siltation and related pollution in order to protect natural resources, ensure continued soil productivity, protect water quality, reduce damages caused by floods, preserve wildlife, protect the tax base, and protect public lands and waters; and

WHEREAS, with matters that relate to coordination of water management authorities pursuant to Minnesota Statutes Chapters 103B, 103C, and 103D with public drainage systems pursuant to Minnesota Statutes Chapter 103E, this Agreement does not change the rights or obligations of the public drainage system authorities:

WHEREAS, this Agreement and the developed Little Fork River Watershed Management Plan does not replace or supplant local land use, planning/zoning authority of the respective Parties and the Parties intend that this Agreement shall not be construed in that manner; and

WHEREAS, the Parties have formed this Agreement for the specific goal of developing a plan pursuant to Minnesota Statutes § 103B.801, Comprehensive Watershed Management Planning, also known as *One Watershed, One Plan*.

NOW, THEREFORE, the Parties hereto agree as follows:

1. **Purpose:** The Parties to this Agreement recognize the importance of partnerships to plan and implement protection and restoration efforts for the Little Fork River Watershed (Attachment A). The purpose of this Agreement is to collectively develop and adopt, as local government units, a coordinated watershed management plan for implementation per the provisions of the Plan. Parties signing this Agreement will be collectively referred to as “Little Fork River Watershed Planning Partnership.”
2. **Recitals:** All recitals set forth above are hereby incorporated into this Agreement.
3. **Term:** This Agreement is effective upon signature of all Parties in consideration of the Board of Water and Soil Resources (BWSR) Operating Procedures for One Watershed, One Plan; and will remain in effect until adoption of the plan by all parties or the end date of the BWSR Grant Agreement, unless canceled according to the provisions of this Agreement or earlier terminated by law.
4. **Adding Additional Parties:** A qualifying Party desiring to become a member of this Agreement shall indicate its intent by adoption of a board resolution in writing to the Policy Committee for consideration and approval *only within the first six months following* the BWSR One Watershed, One Plan Planning Grant Agreement execution. The Party agrees to abide by the terms and conditions of the Agreement; including but not limited to the bylaws, policies and procedures adopted by the Policy Committee.
5. **Withdrawal of Parties:** A Party desiring to leave the membership of this Agreement shall indicate its intent in writing to the Policy Committee in the form of an official board resolution. Notice must be made at least 30 days in advance of leaving the Agreement.
6. **General Provisions:**
 - a. **Compliance with Laws/Standards:** The Parties agree to abide by all federal, state, and local laws; statutes, ordinances, rules and regulations now in effect or hereafter adopted pertaining to this Agreement or to the facilities, programs, and staff for which the Agreement is responsible.
 - b. **Indemnification:** Each Party to this Agreement shall be liable for the acts of its officers, employees or agents and the results thereof to the extent authorized or limited by law and shall not be responsible for the acts of any other Party, its officers, employees or agents. The provisions of the Municipal Tort Claims Act, Minnesota Statute Chapter 466 and other applicable laws govern liability of the Parties. To the full extent permitted by law, actions

by the Parties, their respective officers, employees, and agents pursuant to this Agreement are intended to be and shall be construed as a “cooperative activity.” It is the intent of the Parties that they shall be deemed a “single governmental unit” for the purpose of liability, as set forth in Minnesota Statutes § 471.59, subd. 1a(a). For purposes of Minnesota Statutes § 471.59, subd. 1a(a) it is the intent of each Party that this Agreement does not create any liability or exposure of one Party for the acts or omissions of any other Party.

- c. **Records Retention and Data Practices:** The Parties agree that records created pursuant to the terms of this Agreement will be retained in a manner that meets their respective entity’s records retention schedules that have been reviewed and approved by the State in accordance with Minnesota Statutes § 138.17. The Parties further agree that records prepared or maintained in furtherance of the Agreement shall be subject to the Minnesota Government Data Practices Act. At the time this Agreement expires, all copies of pertinent documents will be held by the fiscal agent for continued retention consistent with their record retention schedules.
- d. **Timeliness:** The Parties agree to perform obligations under this Agreement in a timely manner and keep each other informed about any delays that may occur.
- e. **Extension:** The Parties may extend the termination date of this Agreement upon Agreement by all Parties.
- f. **Amendment of Memorandum of Agreement:** This MOA may be amended by recommendation of the Steering Committee and approval of the amendment(s) by the Policy Committee.

7. Administration:

- a. **Establishment of Committees for Development of the Plan.** The Parties agree to designate one representative, who must be an elected or appointed member of the governing board to a Policy Committee for development of the watershed-based plan and may appoint one or more technical representatives to an Advisory Committee for development of the plan in consideration of the BWSR Operating Procedures for One Watershed, One Plan.
 - i. The Policy Committee will meet as needed to decide on the content of the plan, serve as a liaison to their respective boards, and act on behalf of their Board. Each representative shall have one vote.
 - ii. Each governing board may choose one alternate to serve on the Policy Committee as needed in the absence of the designated member.
 - iii. The Policy Committee will establish bylaws within 90 days of the execution of the Memorandum of Agreement to describe the functions and operations of the committee(s).

- iv. The Steering Committee will be comprised of staff from local agencies formally participating in 1W1P by signing the MOA and BWSR staff acting as advisors. The Steering Committee will provide the logistical organization of the planning process and associated meetings. They may make recommendations to the Advisory Committee and to the Policy Committee.
 - v. The Advisory Committee will meet monthly or as needed to assist and provide technical support and make recommendations to the Policy Committee on the development and content of the plan.
 - b. **Submittal of the Plan.** The Policy Committee will recommend the plan to the Parties of this Agreement. The Policy Committee will be responsible for initiating a formal review process for the watershed-based plan conforming to Minnesota Statutes Chapters 103B and 103D, including public hearings. Upon completion of local review and comment, and approval of the plan for submittal by each Party, the Policy Committee will submit the watershed-based plan jointly to BWSR for review and approval.
 - c. **Adoption of the Plan.** The Parties agree to adopt and begin implementation of the plan within 120 days of receiving notice of state approval, and provide notice of plan adoption pursuant to Minnesota Statutes Chapters 103B and 103D.
- 8. **Fiscal Agent:** Koochiching SWCD will act as the fiscal agent for the purposes of this Agreement and agrees to:
 - a. Accept all responsibilities associated with the implementation of the BWSR grant agreement for developing a watershed-based plan.
 - b. Perform financial transactions as part of grant agreement and contract implementation.
 - c. Annually provide a full and complete audit report.
 - d. Provide the Policy Committee with the records necessary to describe the financial condition of the BWSR grant agreement.
 - e. Retain fiscal records consistent with the Koochiching SWCD's records retention schedule.
- 9. **Grant Administration:** Koochiching SWCD will act as the grant administrator for the purposes of this Agreement and agrees to provide the following services:
 - a. Accept all day-to-day responsibilities associated with the implementation of the BWSR grant agreement for developing a watershed-based plan, including being the primary BWSR contact for the *One Watershed, One Plan* Grant Agreement and being responsible for BWSR reporting requirements associated with the grant agreement.
 - b. Provide the Policy Committee with the records necessary to describe the planning condition of the BWSR grant agreement.

10. **Services:** Koochiching SWCD agrees to provide the following services set forth in Attachment B to the Parties.
 - a. In the event of a vacancy of the above listed roles, the Party responsible for the role will determine if there is adequate capacity within the organization to fulfil the listed role. If it is determined by the partner agency they no longer have capacity and would like to relinquish their duties they must inform the Steering Committee. The Steering Committee will then reassign the service to another Party with the capacity to fulfil the grant agreement.
11. **Multiple Counterparts:** The Parties may sign multiple counterparts of this Agreement. Each signed counterpart shall be deemed an original, but all of them together represent the same Agreement.
12. **Authorized Representatives:** The following persons will be the primary contacts for all matters concerning this Agreement:

[THE REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK. SIGNATURE PAGE FOLLOWS.]

Appendix B. Public Input



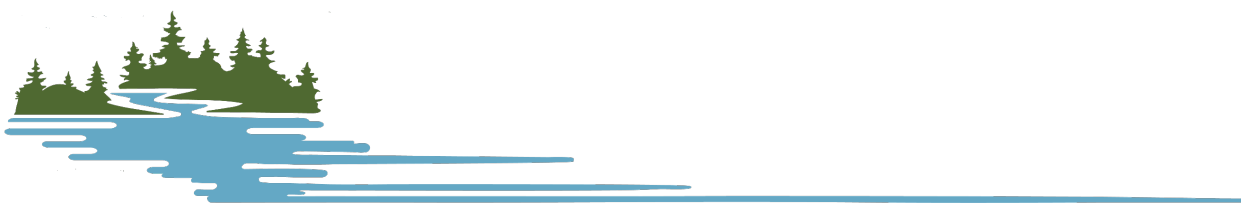
Public Kickoff Event and Survey

On July 22 and July 24, 2025, the Little Fork River Watershed Planning Group held two public kickoff meetings to introduce Little Fork River Watershed residents to the One Watershed, One Plan program and receive public feedback on issues in the watershed. The meeting was advertised widely to gather a large, diverse group of landowners and residents, as well as those with interests (e.g. employed in the watershed) within the watershed. Between the two meetings, there were 36 attendees.

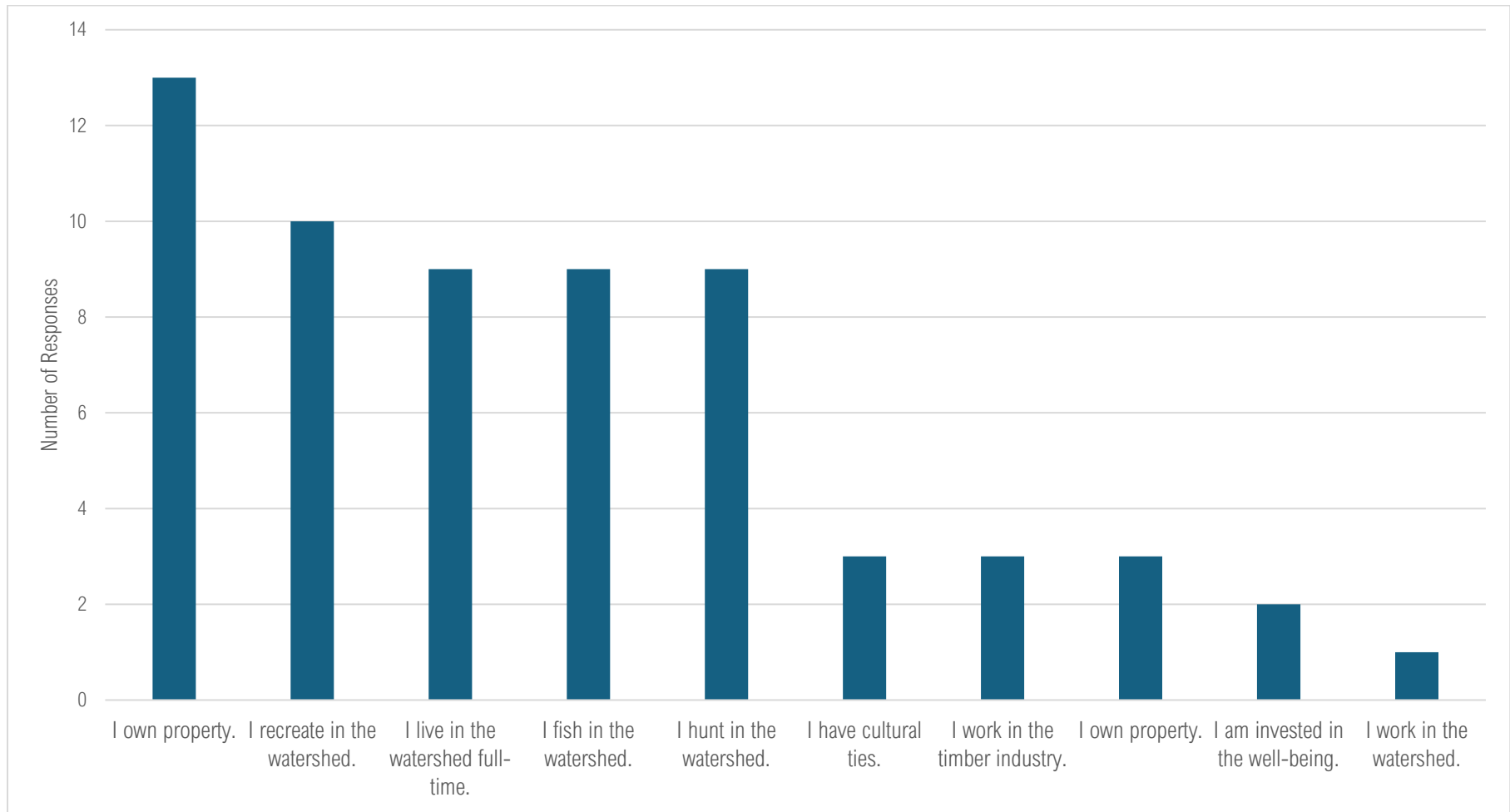
At the event, a survey was conducted for those who attended to provide their input about the planning process and to gather stakeholders' general thoughts on the watershed. Those who were unable to attend the event were able to complete an online survey. Results from both the in-person and online surveys have been combined and the results of them can be found in the following pages (both surveys asked the same questions). In total, 21 respondents provided input.



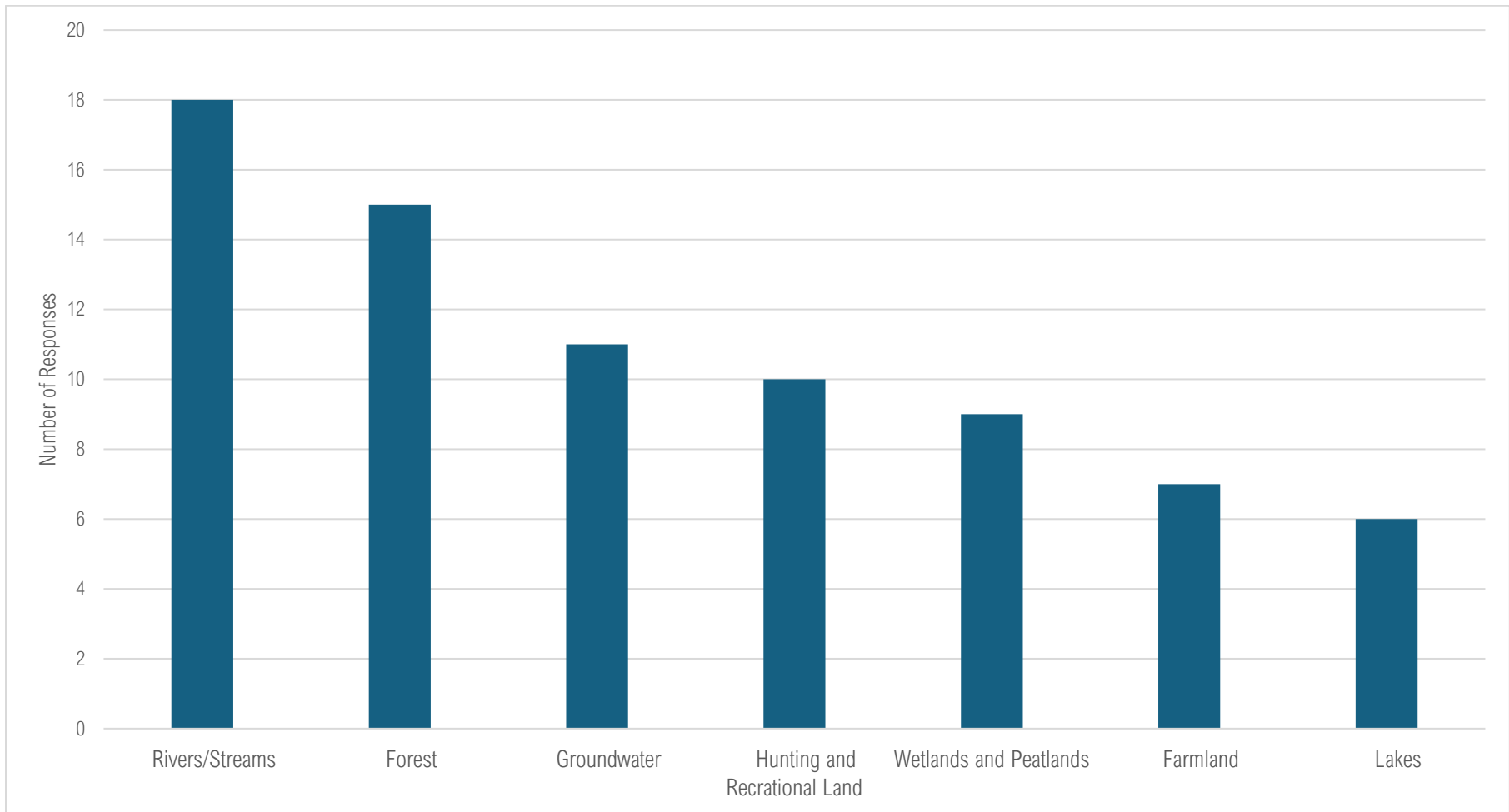
Photo from the kickoff event in Cook, MN.



1. How do you associate with the Little Fork River Watershed?



2. What is the most important natural resource in your area?



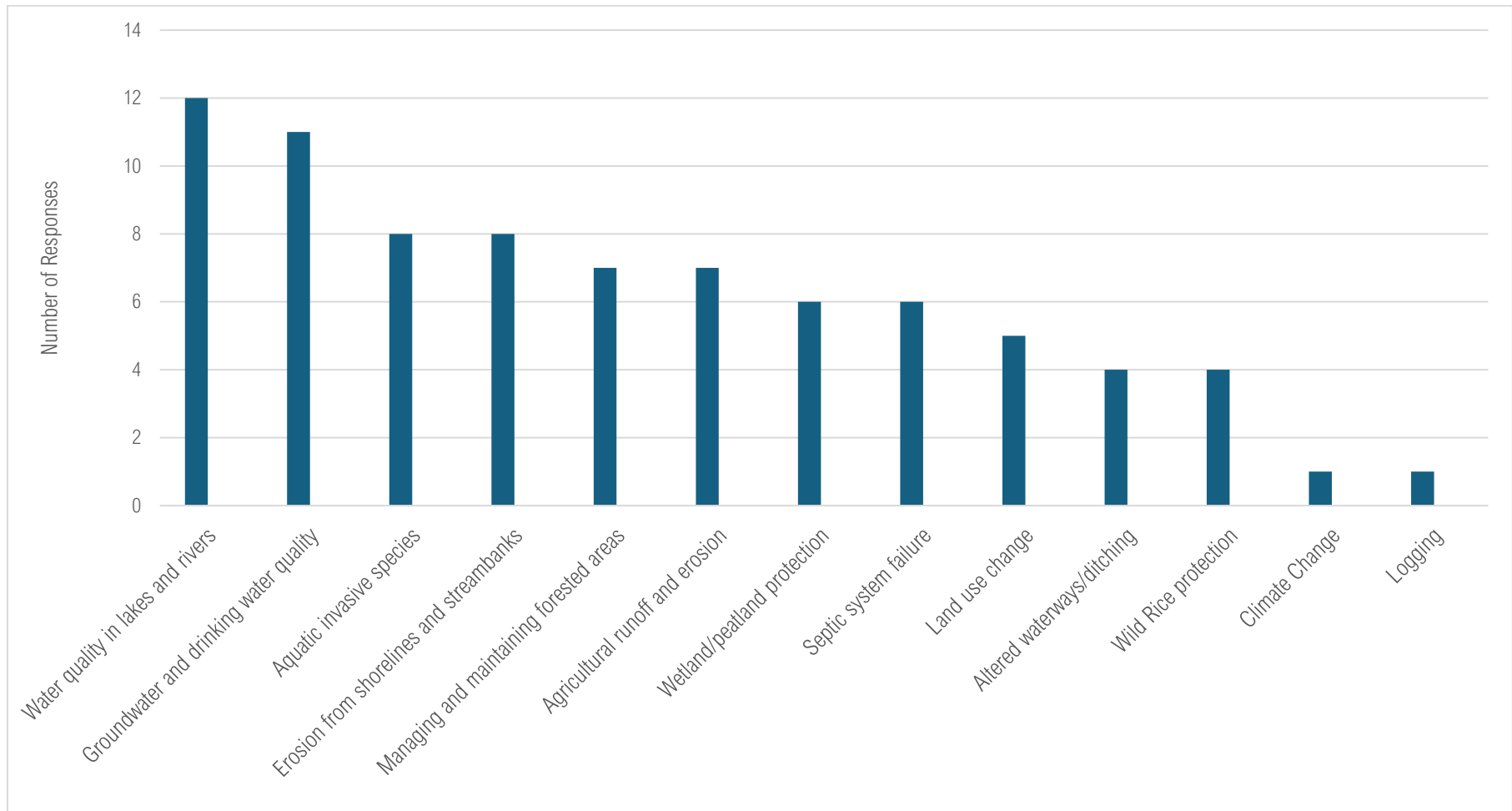
3. Are there any specific waterbodies or natural areas you are most concerned about in the watershed?



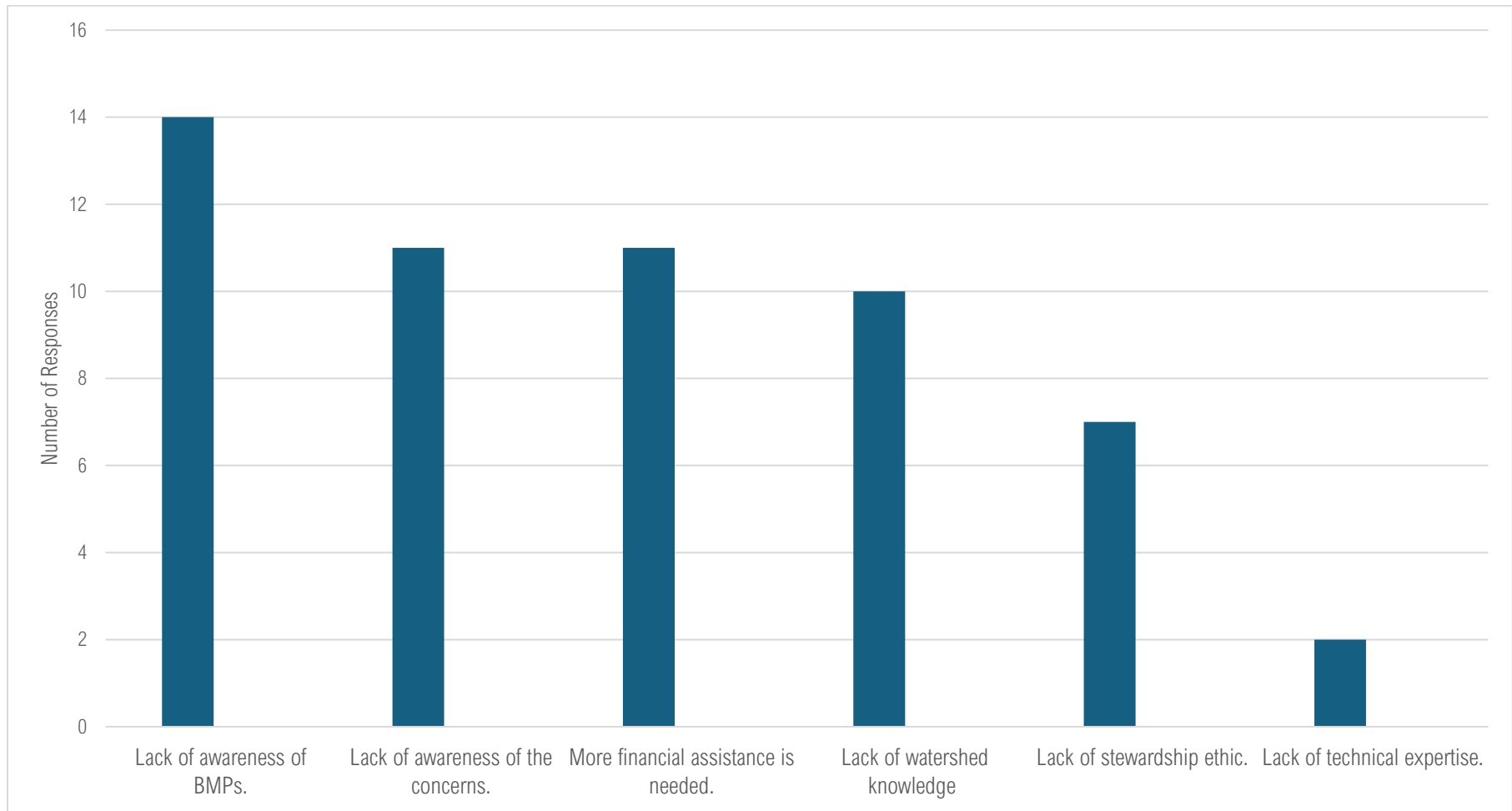
4. What 2-3 words come to mind right now when you think about the Little Fork River Watershed?



5. What do you see as the most important issues facing natural resources in the area?



6. What do you think are barriers to fixing natural resource concerns on private property?



7. What do you think the Little Fork River Watershed will look like in 50 years?



8. What do you hope the Little Fork River Watershed will look like in 50 years?

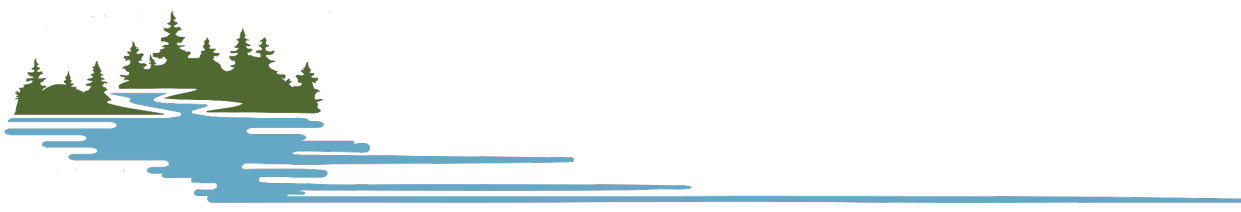


9. Are there any topics, resources, problems, or opportunities we didn't cover in this survey you'd like to comment on?

- State and government impact
- Dumping of waste into Little Fork River
- Resource concerns for Boise Forte
- Side Lake Area
- Ice jams in the spring
- Logging on slopes with clay soils
- Invasive species

10. Are you representing an organization or citizens / general public? If you are representing an organization, please provide the name of the organization.

- Citizen (5)
- St. Louis County Emergency Management (2)
- Cook City Council
- MPCA



Appendix C.

Rivers & Lakes 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).

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).



Major Lakes in the LFRW:

- Big Rice
- Sturgeon
- Sand
- Lost
- Nett

Major Streams in the LFRW:

- Little Fork River
- Sturgeon River
- Rice River



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**).

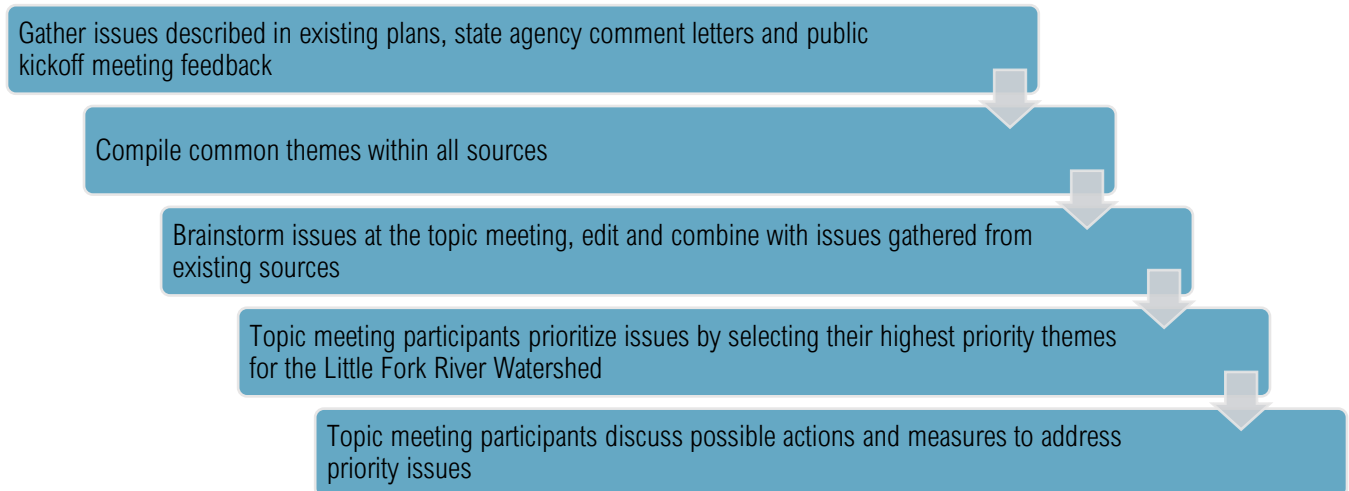
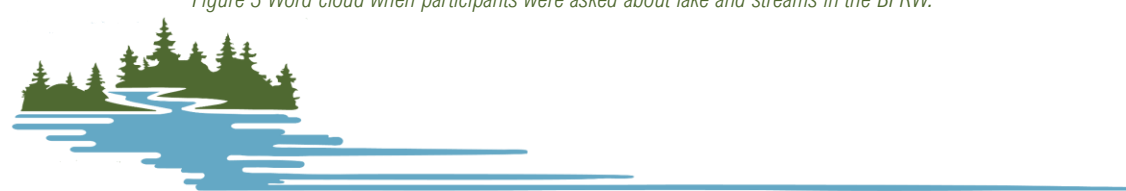


Figure 2 Issue development for the BFRW 1W1P during topic meetings.

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).

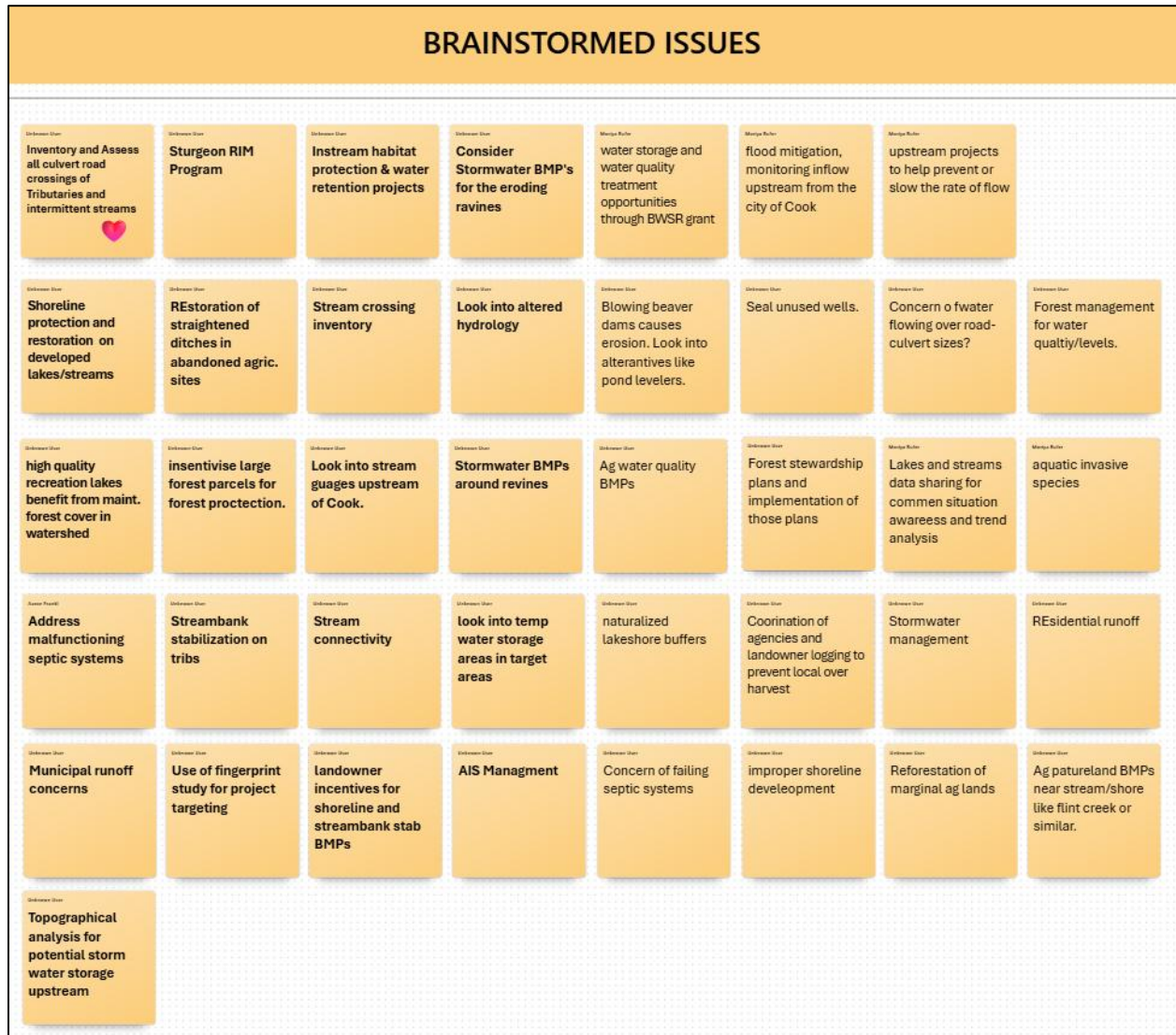


Figure 4. Brainstorming results for issues and opportunities about lakes and streams in the LFRW.



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 Gullies and Streambanks	Eroding gullies 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 | **Koochiching 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.

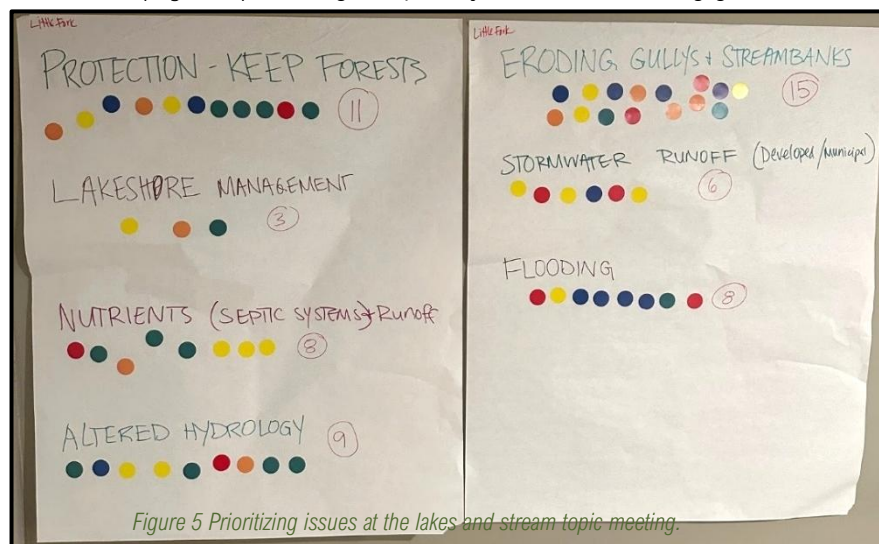


Figure 5 Prioritizing issues at the lakes and stream topic meeting.



Lakes and Streams Actions

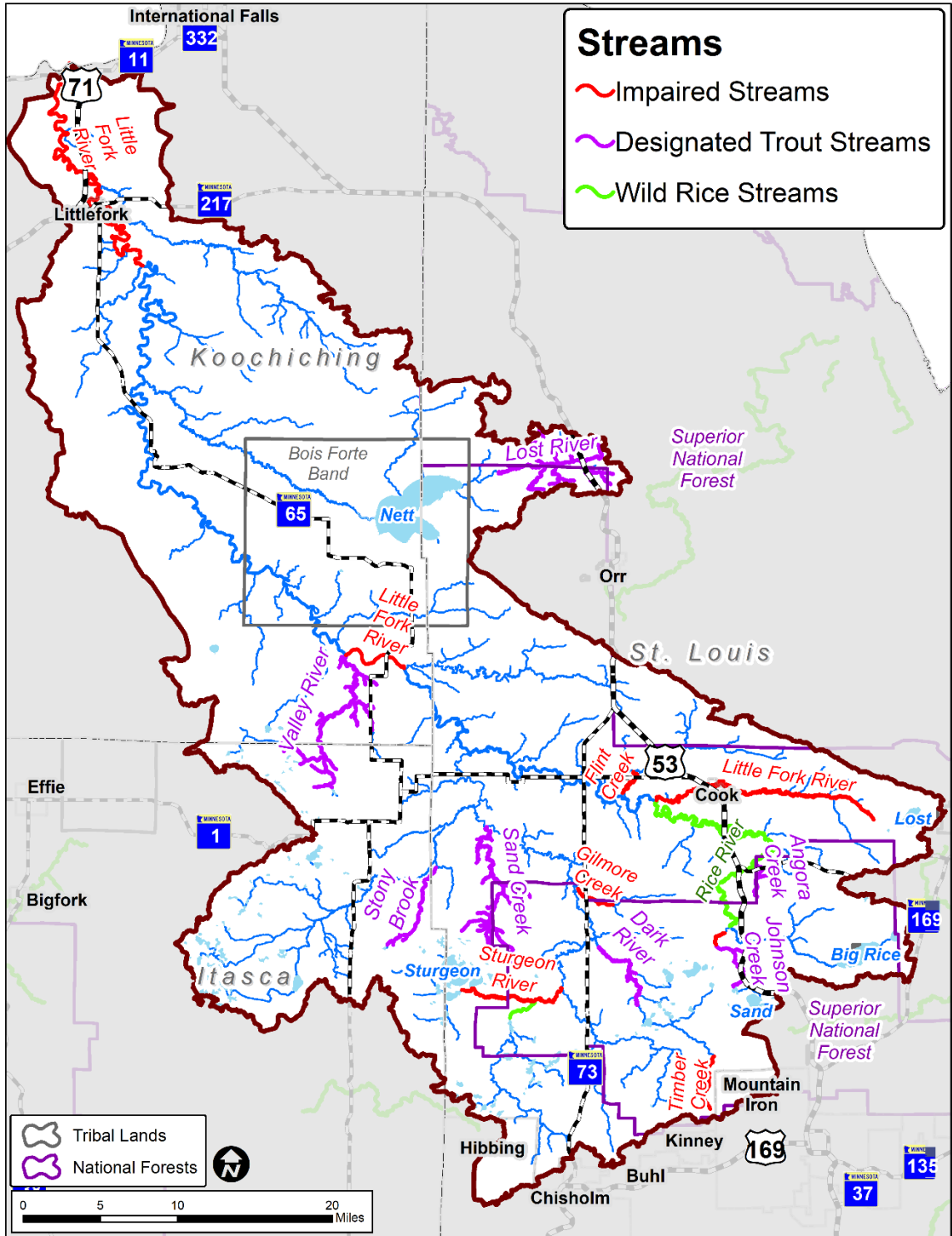
Actions were brainstormed to help address the issues that were prioritized during the meeting. These actions will be implemented into the plan, with more actions added during the planning process.

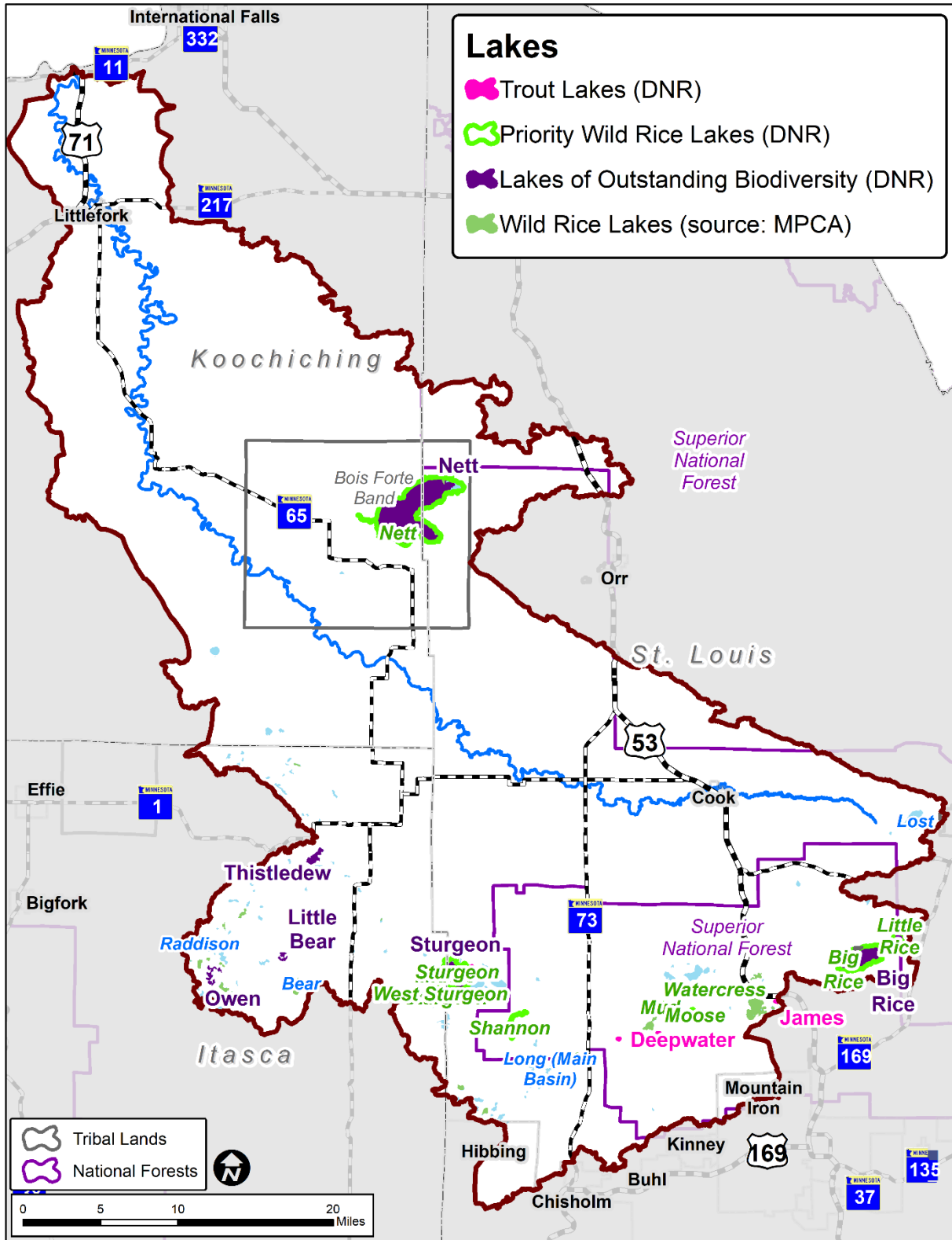
- Outreach and public education for all topics
- Promote forest stewardship plans and Sustainable Forest Incentive Act (SFIA)
 - Cost share plans in high priority areas
 - Complete a Landscape Stewardship Plan
- Upstream water storage
- Topo analysis to find depressions near streams for possible storage
- 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 Norwich – North St. Louis SWCD
- Reid Christianson - MDA
- Scott Kronholm - Citizen
- Whitney Sims - Koochiching County
- Moriya Rufer, Houston Engineering
- Aaron Frankl, Houston Engineering







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Koochiching County, 2018. Koochiching County Comprehensive Local Water Management Plan.

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Minnesota Pollution Control Agency (MPCA), 2017a. Little Fork River Watershed Sediment Reduction Project (Total Maximum Daily Load).

Minnesota Pollution Control Agency (MPCA), 2017b. Little Fork River Watershed Restoration and Protection Strategy Report.

St. Louis County, 2010. St. Louis County Comprehensive Water Management Plan.



Forests & Wetlands Topic Meeting Summary

Introduction

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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 Forests & Wetlands/Peatlands Overview

Wetlands and forest dominate the LFRW. Almost half of the watershed is classified as wetlands and peatlands (46%). It is estimated that a large majority (93-98%) of pre-settlement wetlands in St. Louis and Koochiching counties remain today (MPCA, 2006). Another 37% is forest, which is made up of 18% deciduous forest, 13% mixed forest, and 6% evergreen forest (DNR, 2017). The peatlands are predominantly in the northern portion of the watershed while the evergreen and deciduous forests are more common in the central and southern portion of the watershed (Figure 2).

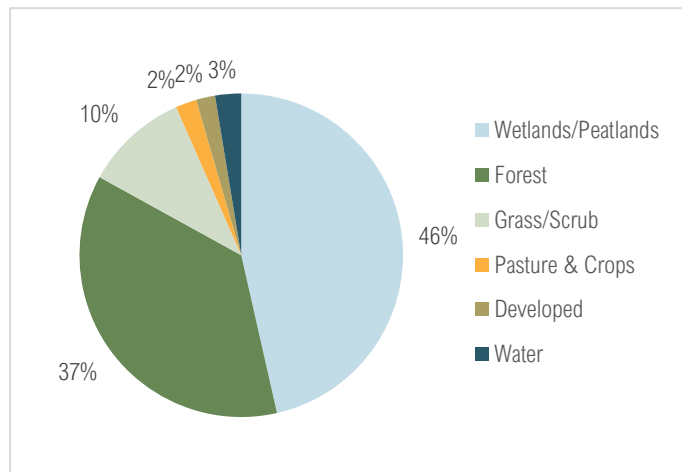


Figure 2. Land Use in the LFRW.

Peatlands are different than depressional wetlands in that they are at higher elevations and slowly release water to stream channels. They consist of partially decayed vegetation, organic matter, and sphagnum moss. Peatlands are known for their inefficiency at moving water. They are ecologically unique for fish, bird, and wildlife habitat, water storage, and carbon storage. However, they are considered unproductive economically. The LFRW lies within one of the largest continuous boreal peatlands in the contiguous United States. The Little Fork River flows through the bed of glacial Lake Agassiz. Glacial lake plains are ideal environments for peat formation (Severson, et. Al, 1980).

The LFRW generally is well protected due to its high percentage of forests and wetlands, as both ecosystems are important in land protection. Over half of the minor watersheds in the LFRW are over 75% protected, and only a small number as less than 40% protected. The northern half of the watershed is extremely well protected, as those lands are mostly peatlands.

The LFRW has a large Aspen population throughout the watershed. Other significant forest types include pine, northern white-cedar, spruce, and ash. These forests have been a significant economic resource for the watershed. Historical logging has impacted water quality, both due to altered hydrology and increased erosion and turbidity (MPCA, 2006). Corresponding to the expected changes in nutrient export from forested watersheds during the reforestation following logging events is likely to impact nutrient levels within the watershed (MPCA, 2017). Best management practices will need to be considered to bring harmony between the logging industry and water quality. The decrease in long-term stream flow is the result of land cover changes related to logging and reforestation (MPCA, 2006).

The forests are also a recreational and ecological resource. Roughly 52% of the land in the watershed is open to the public. There are several state forests and the Superior National Forest that provide opportunities for hunting, fishing and canoeing. Being an area of pristine condition, there is 5% high and 8% moderate ranked sites of biological significance (DNR, 2017). There are four Scientific Natural Areas (SNA) within the watershed: Nett Lake Peatland SNA, Myrtle Lake Peatland SNA, Potato Lake SNA, and Lost Lake Peatland SNA. Four state



forests (Smokey Bear State Forest, Koochiching State Forest, George Washington State Forest and Sturgeon River State Forest) and one National Forest (Superior National Forest) are spread throughout the watershed, which provide space for recreation and habitat.

In this packet, there are figures related to forests, wetlands, and peatlands to provide additional context: current land cover (**Figure 7**) in the LFRW, percent protected lands (**Figure 8**), and peatland extent (**Figure 9**).

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 3**).

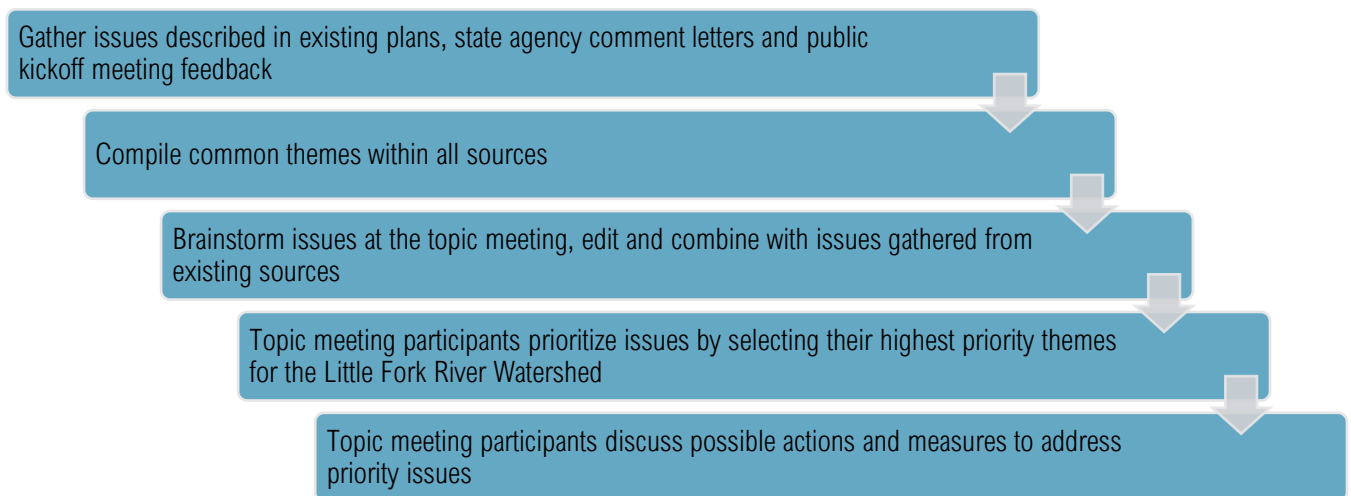


Figure 3 Issue development for the BFRW 1W1P during topic meetings

The Forest & Wetland Topic meeting for the 1W1P planning effort was held on September 4, 2025 in the city of Littlefork. 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 forests and wetlands in the LFRW in a few words. Their responses are shown below in a word cloud (Figure 4).





Figure 4 Word cloud when participants were asked about forests and wetlands in the BFRW.

Prior to large group discussions, the group heard two presentations: one from Mitch Brinks (TSA 8 GIS specialist) who discussed current progress on the upcoming Landscape Stewardship Plan in the LFRW, and one from Matt Picklo concerning forest health in the LFRW. At the meeting, attendees were asked to write about issues and opportunities related to forests and wetlands on sticky notes (Figure 5). 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 5 themes related to forests and wetlands (Table 1).



Figure 5 Brainstorming results for issues and opportunities about forests and wetlands in the LFRW.



Table 1 Draft issue statements for forests and wetlands 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.	BWSR Letter, DNR Letter, Itasca County, Koochiching County, Monitoring, MPCA Letter, TMDL, WRAPS
Forest Health	Managing forest health for invasive species, climatic changes, and changes in plant communities is essential to maintaining an important economic and recreational resource.	Itasca County, Koochiching County, Monitoring, TMDL, WRAPS, BWSR Letter
Forest and Recreational Infrastructure	Forest and recreational infrastructure impacts hydrology and increases erosion if not managed properly.	DNR Letter, MPCA Letter, Itasca County, Logging, Monitoring, Monitoring, Trends, EPA TMDL
Altered Hydrology/Ditching	Altered hydrology , such as culverts, previous ditching, and channelization has altered stream flow and impacted aquatic habitats.	EPA TMDL, Koochiching County, MPCA Letter, WRAPS, BWSR Letter
Wetland/Peatland Health	Wetland and peatland health needs to be managed for invasive species, changing climate impacts, wildlife habitat, changing plant communities, and wildfire deposition.	DNR Letter, Koochiching County, MPCA Letter, St. Louis County, Itasca County

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 | **Koochiching 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 forests and wetlands. An image of this process can be found below (Figure 6). The highest priority items were altered hydrology (14 votes), forest health (14), and impacts on hydrology and erosion (11). Wetland/peatland health (7) and land protection (5) received less priority votes. Although some received higher prioritization during this exercise, all issues will be addressed in the plan.

Figure 6 Prioritizing issues at the forest and wetland topic meeting.



Forests and Wetlands 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.

Forest Actions

- Forest stewardship plans (private lands)
- Diversify ash stands
- Invasive species monitoring
- Tree planting in marginal farmland
- Support for public lands
- Public outreach
- Infrastructure and culvert inventory
- Forestry BMP promotion (site level guidelines)
- Coordination of infrastructure improvements (state, federal, county)
- Smart parcel shoreline management
- Upshed water storage from ravines
- Feasibility and pilot project to restore ravines from erosion
- Look at ravine study on Minnesota River
- Outreach to public on how to identify EAB
- Grade school and high school engagement

Wetland Actions

- Idea to explore having mining companies restore ravines for wetland credits
- Feasibility study for peatland restoration
- Monitor health of wetlands and peatlands – how? Look at MPCA IBI data
- Use sediment fingerprinting for peatland health
- Aerial monitoring of peatlands



Meeting Attendees

- Ada Tse – St. Louis County
- Cal Saari, Itasca SWCD Board Supervisor
- Chad Severts - BWSR
- Dan Disrud - MDH
- Danae Schafer, Koochiching County
- David Demmer, BWSR
- Holly Hoy, City of Littlefork
- James Aasen, Koochiching SWCD
- Jeff Hrubes- BWSR
- Jólen Simon – Koochiching SWCD
- Lynda Ponting, BWSR
- Matt Gutzmann - Itasca SWCD
- Matt Picklo, Itasca SWCD
- Mike Kennedy, MPCA
- Mitch Brinks, GIS Specialist TSA 8
- Skyler Webb, St. Louis County
- Tristian Nelson, North St. Louis SWCD
- Waylon Glienke, Itasca SWCD
- Whitney Sims - Koochiching County
- Moriya Rufer, Houston Engineering
- Aaron Frankl, Houston Engineering



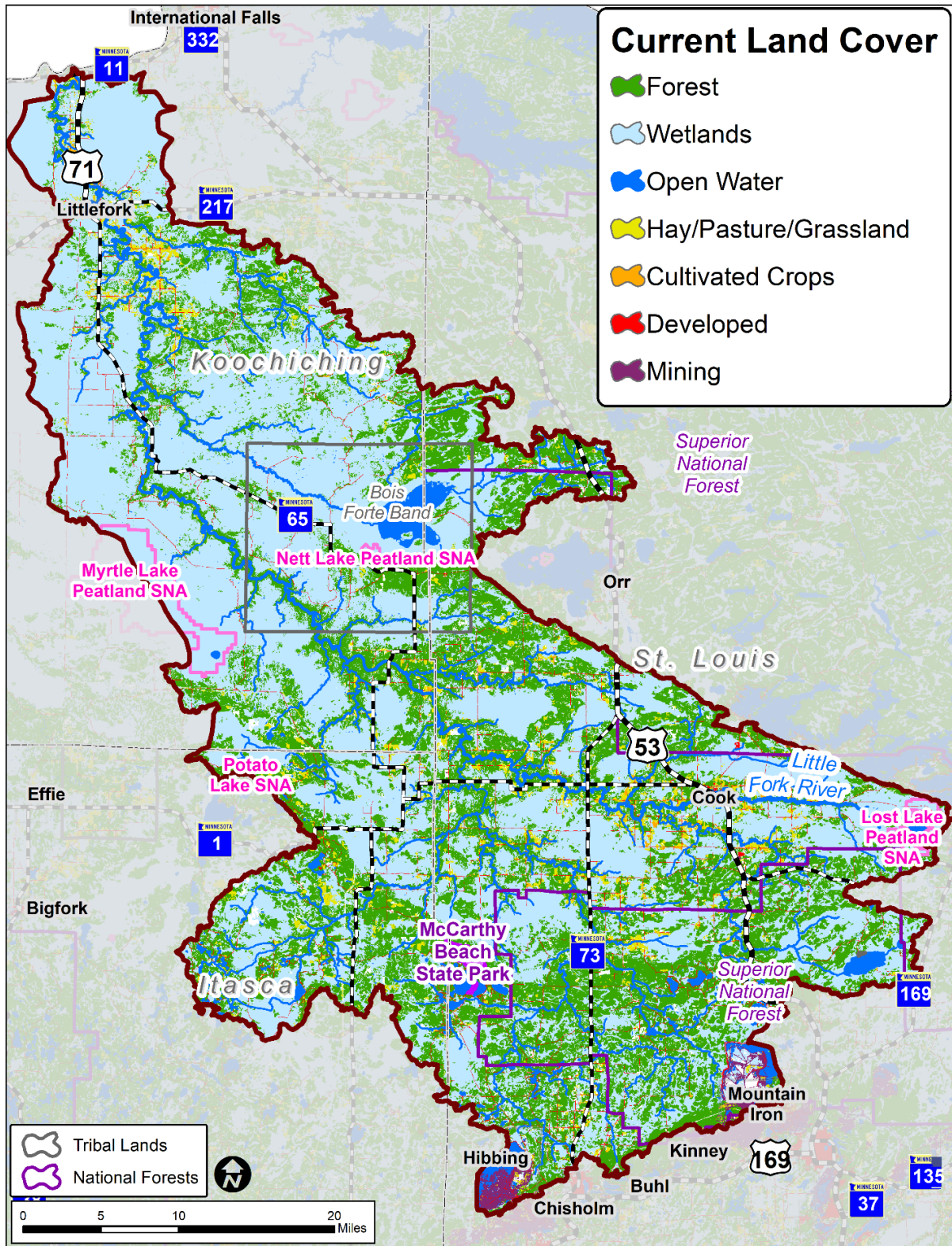


Figure 7. Land use in the LFRW.

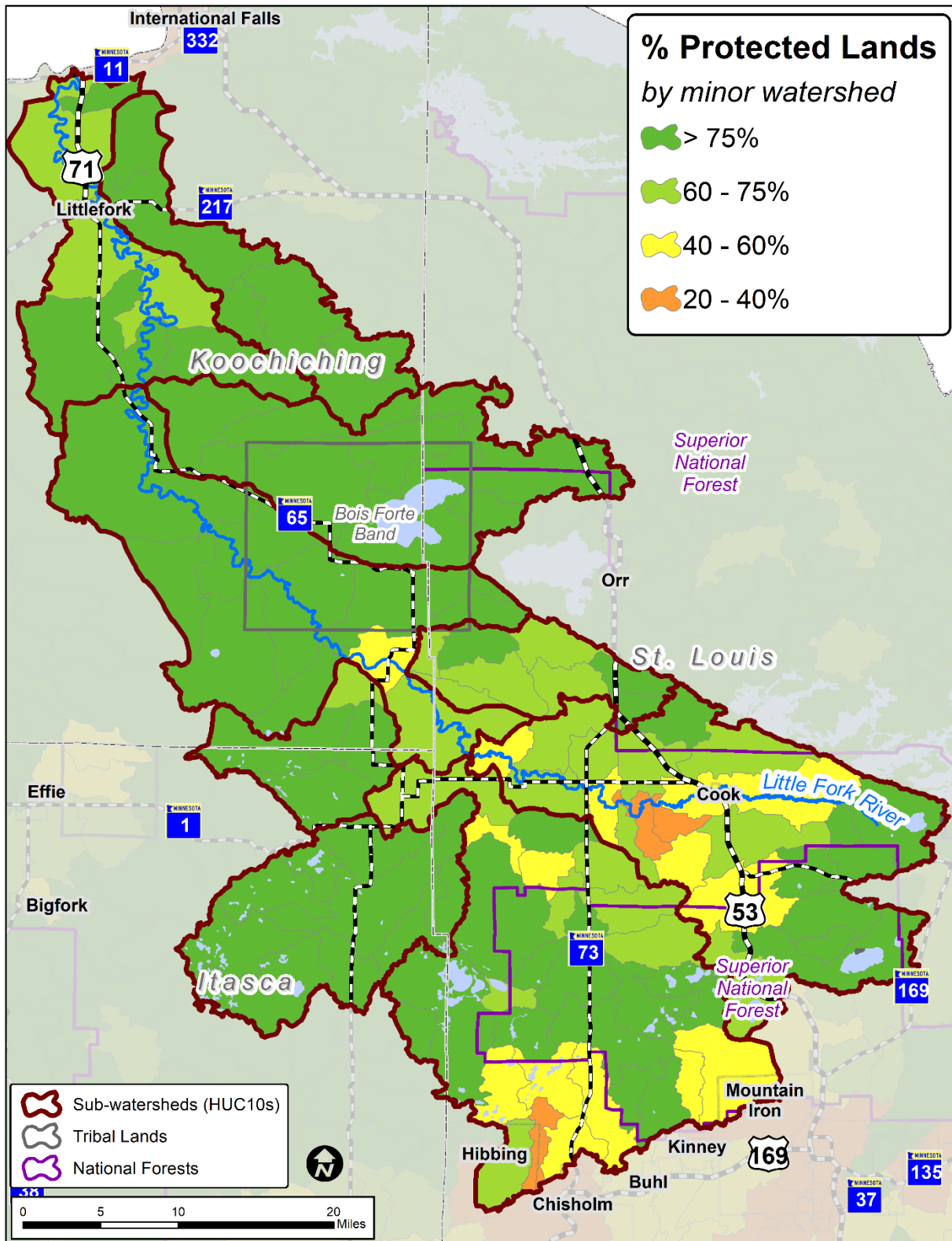


Figure 8. Protected lands in the LFRW.



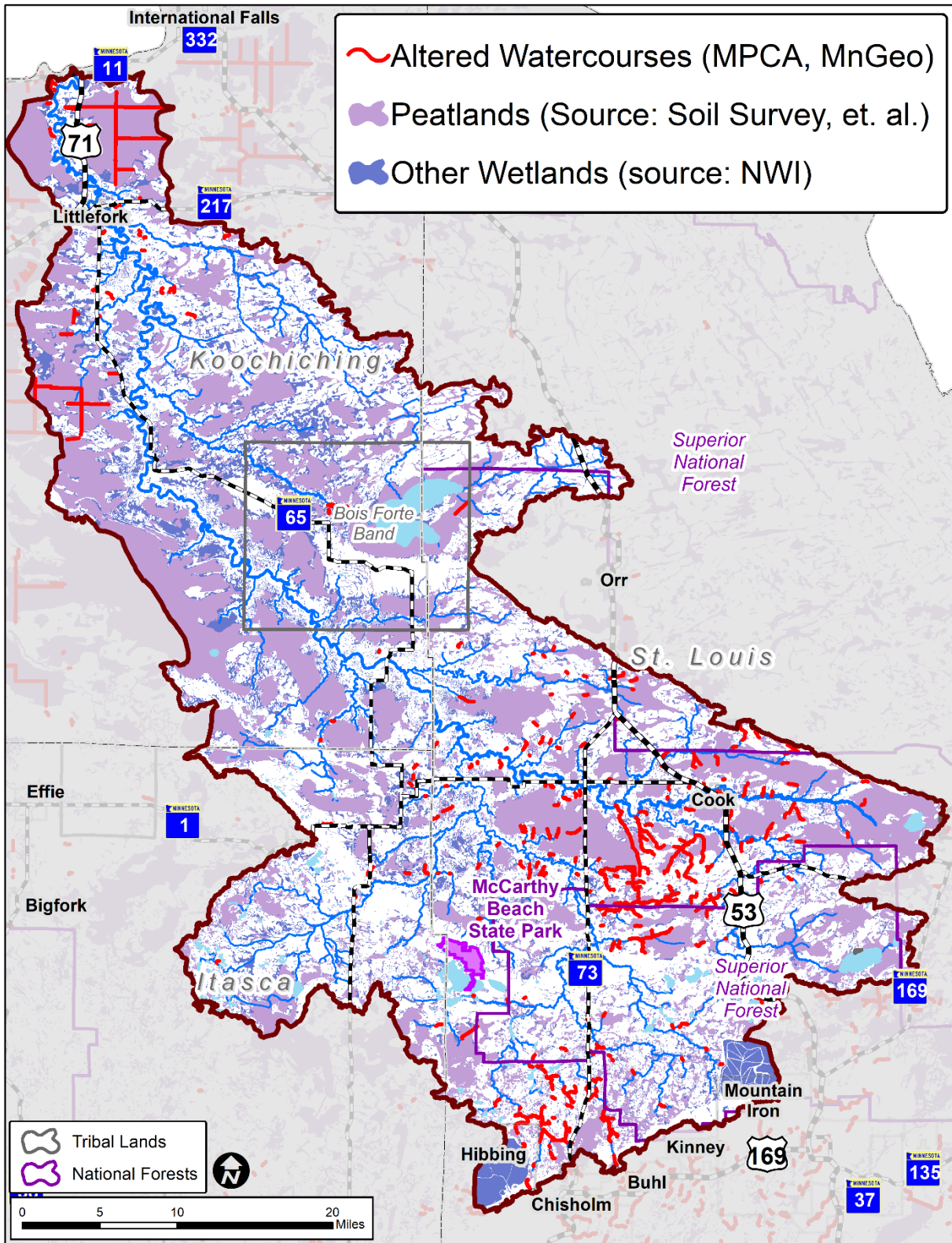


Figure 9. Peatlands and ditching in the LFRW.



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Minnesota Department of Natural Resources (DNR), 2017. Watershed Context Report.

Minnesota Pollution Control Agency (MPCA), 2006. Effect of Historical Logging on Geomorphology, Hydrology, and Water Quality in the Little Fork River Watershed.

Minnesota Pollution Control Agency (MPCA), 2017. Little Fork River Watershed Restoration and Protection Strategy Report.

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Stormwater & Drainage 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%). There are no large cities within LFRW: the largest towns are Littlefork (population of 674) and Cook (population of 667).

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. This is a summary of the Urban Stormwater & Drainage meeting.



Figure 1 Planning process for the LFRW 1W1P.



Little Fork River Urban Stormwater & Drainage Overview

Much of the LFRW is covered by forests and wetlands, therefore very little land in the watershed is developed (approximately 2% is developed; DNR, 2017; **Figure 6**). In addition, the developed areas of the watershed have low population density with no large cities within LFRW (**Figure 5**; **Figure 7**). The largest cities in the LFRW are Littlefork (population of 674) and Cook (population of 667; Koochiching County, 2018). There is little development adjacent to lakes compared to other northern Minnesota watersheds, although the most developed lake in this watershed is Sturgeon Lake. For drinking water, the largest withdrawals are at Littlefork and Cook, which have municipal water supplies (Helgesen, Lindholm, and Ericson, 1976).

Flooding along the Littlefork River has been a concern for residents and is a large economic concern. In 2024 there was a major flood in Cook (**Figure 2**). With changing weather patterns expected in the coming decades, flooding could potentially occur more commonly. Building resilient landscape that can reduce flooding risk will be important moving forward.



Figure 2. Flooding in Cook, MN on June 21, 2024.



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 3).

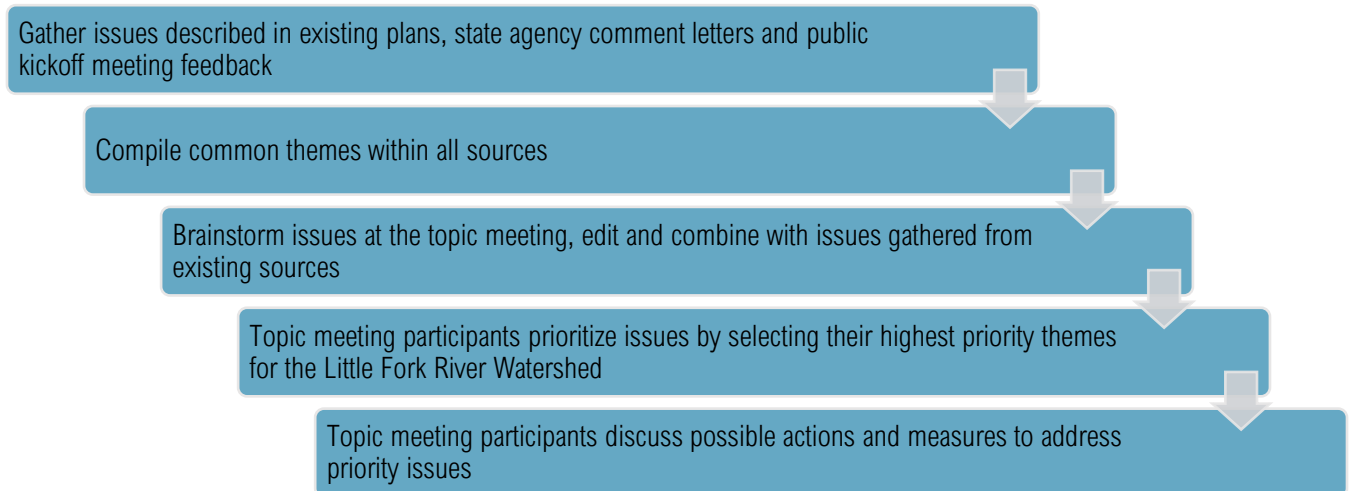


Figure 3 Issue development for the BFRW 1W1P during topic meetings

The Stormwater & Drainage Topic meeting for the 1W1P planning effort was held on October 2, 2025 in the city of Cook. 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 forests and wetlands in the LFRW in a few words. Their responses are shown below in a word cloud (Figure 4).



Figure 4 Word cloud when participants were asked about stormwater and drainage in the LFRW.



Next, the meeting participants worked to gather more information about stormwater and flooding the watershed. Table 1 shows key notes about the cities of Littlefork and Cook, as well as Koochiching and St. Louis Counties, and the forest road networks of the LFRW.

Table 1 Notes on Stormwater and Flooding in key communities

Community	Notes on Stormwater and Flooding
Littlefork	Have a couple areas of concern that would be interested in help with (area by Whitney's property), houses by city hall – road was not done correctly – now flooding at driveways – roads need to be redone. Stormwater washouts. By Lofgren Park – inlet to the river, Need management plan.
Cook	Flood Mitigation Plan? 3 box culvert where the river goes through town that can back up and cause issues (Vermilion Drive)?
St. Louis County	Can provide map of the 5 year county plan for road construction to line up opportunities for projects. Co Rd 74 slump/culvert blow out issue.
Koochiching County	Samuelson Park area
Rural Areas – Forest Road Network	Culvert resizing and fixes. Kooch Co Lands & Forests, DNR Forestry, Molpus (wood products industry)
French Township	Stormwater protection in Side Lake area (in WRAPS)
Bearville Township	Stormwater protection in Side Lake area (in WRAPS)

Draft issue statements were created based on discussion throughout the meeting. These can be found in Table 2, as well as the relevant documents which identify the issue.

Table 2 Draft issue statements for stormwater and drainage in the BFRW.

Draft Issue	Draft Issues Statement	Sources (see key below)
Flooding	Flooding along rivers can threaten economic and natural resources.	BWSR Letter, Itasca County, WRAPS, Logging
Stormwater Runoff	Stormwater runoff in developed areas increases peak flows and contributes pollutants to streams and lakes.	WRAPS, TMDL, EPA TMDL, Select Lakes, Trends, Koochiching County
Forest and Recreational Infrastructure	Forest and Recreational infrastructure affect hydrology, runoff, and erosion.	WRAPS, TMDL, Logging, Itasca County, Koochiching County, DNR Letter, BWSR Letter, MPCA 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 | **Koochiching 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 |

Discussion about outreach: Are all the different township boards aware of this planning process? Concern was that they don't meet very often. A suggestion was made that after the final Advisory Committee Meeting, we connect with them to let them know the general direction of the plan to get their input.



Stormwater & Drainage 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.

- Stormwater plan with retrofit analysis for Cook, Side Lake, and Littlefork
- Explore culvert inventories for possible replacements (State & County)
- Hazard/flooding mitigation plan for Cook
- Stormwater management on small parcels near lakes (i.e. rain gardens, shoreline restoration)
- Continue to update culvert inventories
- Sturgeon Lakes and Side Lake (and lakes North of Virginia) shoreline buffers and other stormwater projects such as rain-gardens, re-directing gutter downspouts, driveway water bars/open top box culverts, etc.
- Outreach to lakeshore owners about living lightly
- Outreach to ATV club about culverts
- Consolidating Highway department data
- ATV trail from Lake Superior to North Dakota (directed by the legislature). Crosses the Little Fork
- Outreach to township boards about partnership opportunities
- Nett Lake outreach
- Rerouting North Country trail issues
- Inventory of campsites and canoe accesses along the Little Fork River (County and State)

Meeting Attendees

- Ada Tse – St. Louis County
- Andy Arens – Itasca SWCD
- Austin Steere – Itasca SWCD
- Cal Saari – Itasca SWCD Supervisor
- Carol Andrews – St. Louis County
- Chad Severts - BWSR
- Christine McCarthy – Lake County
- Corey Denning – North St. Louis SWCD
- Cory Williams – City of Littlefork
- Holly Hoy – City of Littlefork
- James Aasen, Koochiching SWCD
- Jolén Simon – Koochiching SWCD
- Matt Gutzmann - Itasca SWCD
- Mike Kennedy, MPCA
- Mitch Brinks, GIS Specialist TSA 8
- Phil Norvitch – North St. Louis SWCD
- Samuel Cook – St. Louis County
- Skyler Webb, St. Louis County
- Thomas Lee - MNDOT
- Moriya Rufer - Houston Engineering
- Aaron Frankl - Houston Engineering



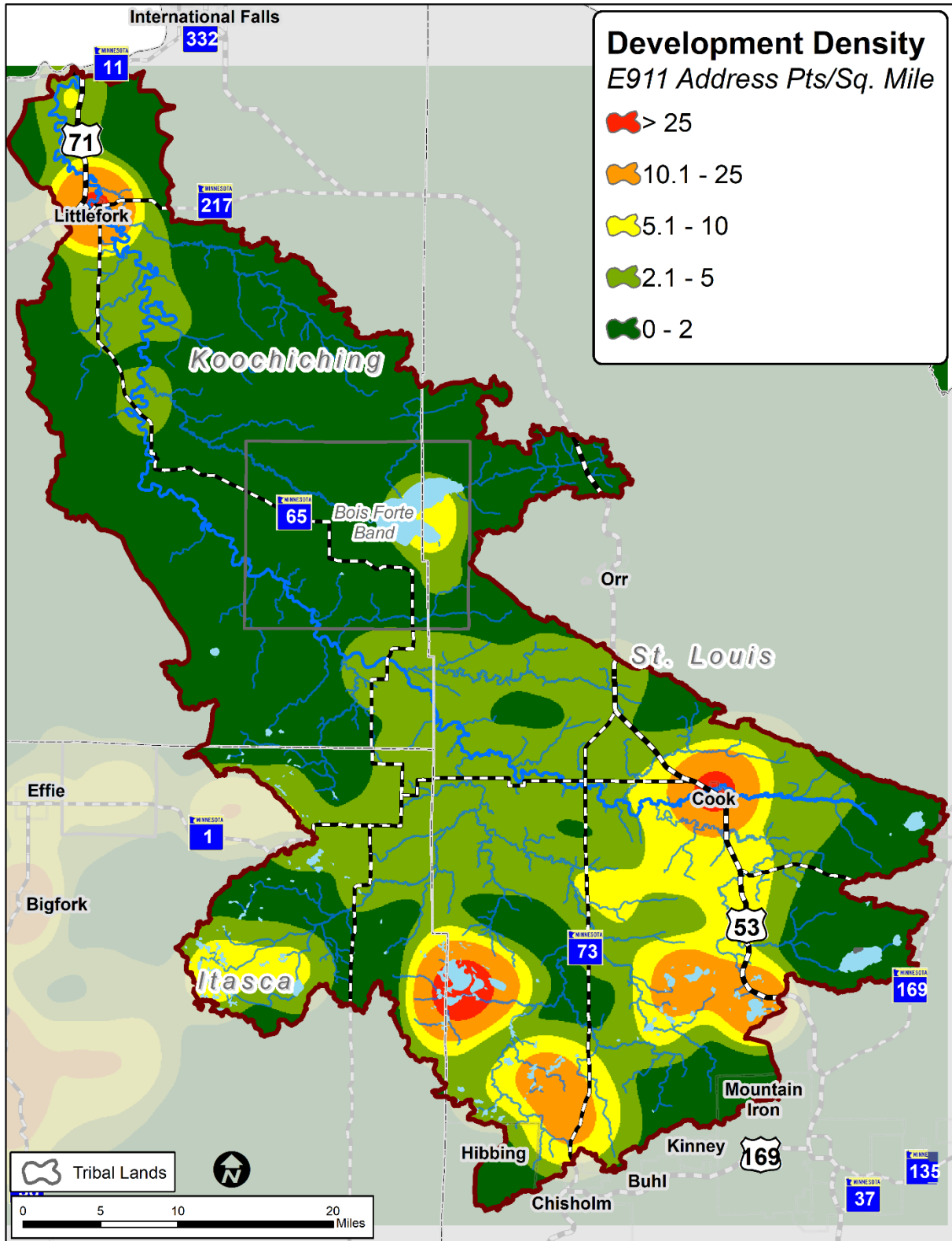


Figure 5 Development density in the LFRW as shown by the E911 address points per square mile.



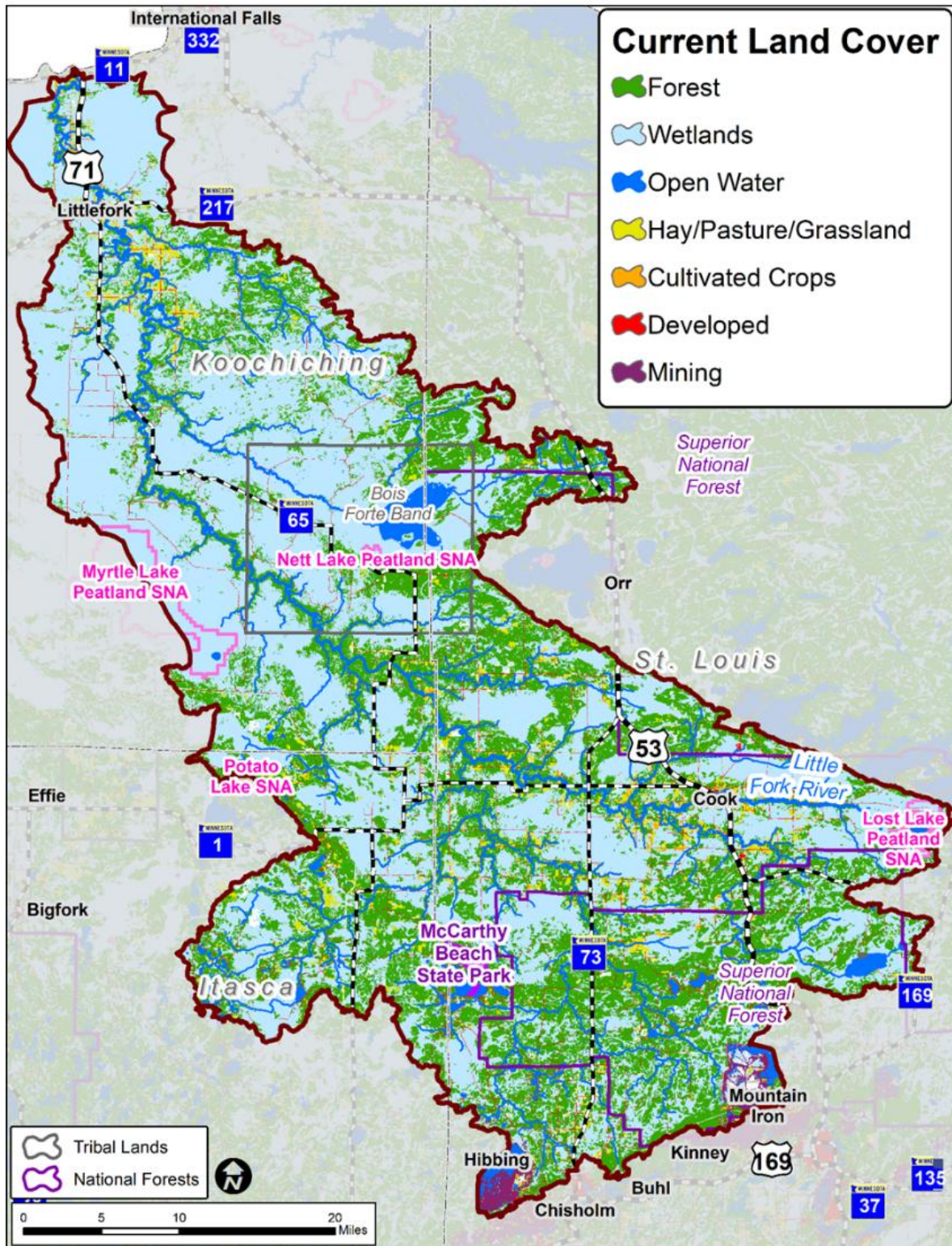


Figure 6 Current land cover in the LFRW.

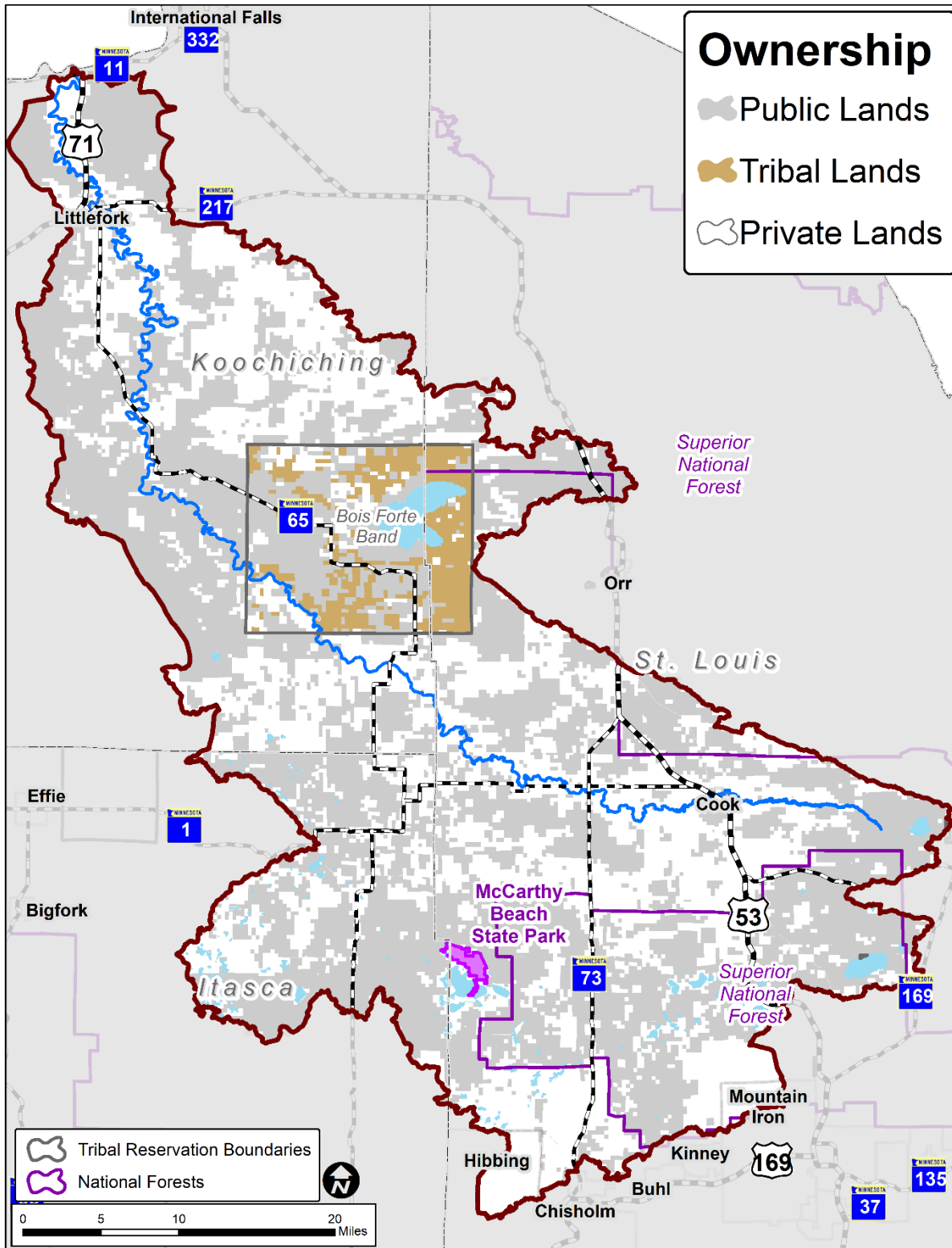


Figure 7 Land ownership in the LFRW.



References

Helgesen, Lindholm, and Ericson, 1976. Water Resources of the Little Fork River Watershed, Northeastern Minnesota.

Minnesota Department of Natural Resources (DNR), 2015. Watershed Health Assessment Framework.

Minnesota Pollution Control Agency (MPCA), 2017. Little Fork River Watershed Sediment Reduction Project (Total Maximum Daily Load).



Farms & Groundwater 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%). There are no large cities within LFRW: the largest towns are Littlefork (population of 674) and Cook (population of 667).

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. This is a summary of the Farms & Groundwater meeting.



Figure 1 Planning process for the LFRW 1W1P.



Little Fork River Farms & Groundwater Overview

Similarly to the rest of Minnesota, the LFRW was shaped by glacial activity. Most recently, melt water from the Wisconsin glaciation formed glacial Lake Agassiz. Lake Agassiz existed for nearly 4,500 years. Heavy clay deposits from Glacial Lake Agassiz can be found along the mainstem channel below more recent fluvial sediment (Figure 5).

Topography varies from the northwest flat big bog area in the Northern Minnesota and Ontario Peatlands to the rolling topography of the Northern Superior uplands in the southeast part of the watershed. Soil types range from peat over clay at the headwaters to glacial till and ledge rock to silty clay downstream of the town of Littlefork. The entire watershed consists of highly erodible types of soil structures. The heavy clay deposits below the fluvial sediments can affect slope and bank stability and infiltrating groundwater can pool and create failure planes. From the Little Fork River headwaters in Lost Lake, to the mouth at the Rainy River, the elevation drops 300 feet giving a two foot per mile drop between the towns of Cook and Littlefork (MPCA, 2006).

Little agriculture occurs in the LFRW, generally due to low productivity potential of much of the lands. Settlers attempted to drain the peat-rich landscape that dominate the watershed but were mostly unsuccessful. Because of this, there is generally low pressure for agriculture development. Only 2.1% of the land is agriculture: 1.6% of land is pasture/hay and 0.5% is cultivated crops (Figure 6; USGS, 2024). The most common crops are other hay, alfalfa, and less commonly soybeans, clover/wildflowers and spring wheat (CSISS, 2025). Agricultural lands are spread out throughout the watershed; however, much occurs south of Littlefork and near Cook. There are approximately 1,287 acres of cultivated land and 15,246 acres of pasture as of 2021 (NLCD, 2021). Breakdowns of 2016 and 2021 acres of cultivated and pastureland can be found in Figure 7. Generally, cropland acres are decreasing, and pastureland acres are increasing, although risks of conversion are generally low in the watershed (Figure 8).

There are:
1,287 acres of crops 
15,246 acres of pasture 
in the LFRW.

Although there is little agricultural land, the adjacency of this land to waterways makes management higher priority. Livestock and grazing can negatively impact streambanks and stream water quality and could be a source of targeting in the LFRW. In eLINK data, there have been no agricultural BMPs in the LFRW. However, there are 2,359 acres enrolled in the Minnesota Agricultural Water Quality Certification Program, from three producers.

There are 2,359 acres
(3 Producers)
enrolled in the
MN Ag Water
Quality Certification
Program 

In the LFRW, many residents rely on private wells to supply their drinking water. Most wells are within depths that encounter glacial till. Water resources are not intensively developed within the watershed due to the lack of population. The largest withdrawals are at Littlefork and Cook, which have municipal water supplies/DWSMAs (Helgesen, Lindholm, and Ericson, 1976). Many residents use private wells for their drinking water if they are located outside of the municipal water supplies. Less than 1% of samples tested for nitrates indicate human activity as the cause for groundwater contamination, and no wells are above the standard of 10 mg/L (MDH, 2025). The MDH notes that sealing abandoned wells and testing private wells should both be priorities in the watershed (MDH, 2025). They also note that noncommunity water supplies should be considered.



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**).

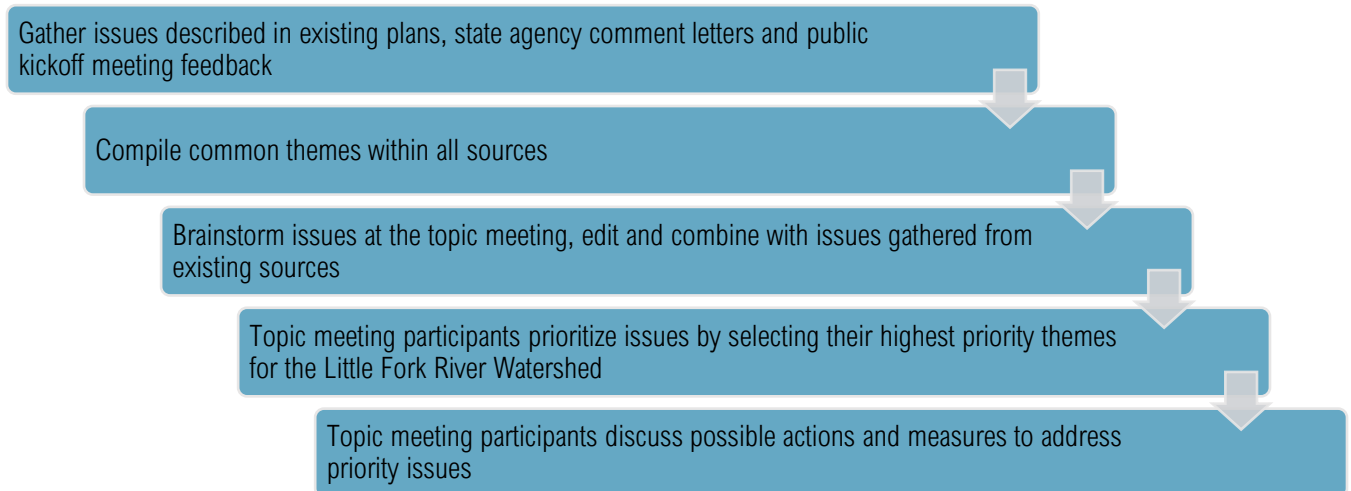


Figure 2 Issue development for the LFRW 1W1P during topic meetings

The Farms & Groundwater Topic meeting for the 1W1P planning effort was held on November 6, 2025 in the city of Littlefork. 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 forests and wetlands in the LFRW in a few words. Their responses are shown below in a word cloud (**Figure 3**).



Figure 3 Word cloud showing participants thoughts about farms and groundwater in the LFRW.



Following this, two presentations from local experts were delivered to the group: first, Ryan Clark (Carlton County) provided information on the Minnesota Agricultural Water Quality Certification Program (MAWQCP) and opportunities within the watershed for more enrollment. Then Dan Disrud from MDH provided a summary of the upcoming Groundwater Restoration and Protection Strategies (GRAPS) process and the state of wells and groundwater in the LFRW.



Figure 4 Brainstormed issues for farms and groundwater in the LFRW.

At the meeting, attendees were asked to write about issues and opportunities related to farms & groundwater 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. Draft issue statements based on these stick notes were created. These can be found in Table 1, as well as the relevant documents which identify the issue.

Table 1 Draft issue statements for farms and groundwater in the LFRW.

Draft Issue	Draft Issues Statement	Sources (see key below)
Agricultural Runoff	Agricultural runoff and livestock access increases erosion, nutrients, sediment, and bacteria in streams and groundwater.	WRAPS, TMDL, EPA TMDL, Select Lakes, Trends, St. Louis County, MPCA Letter,
Groundwater	Groundwater quality and sustainability need assessment and protection.	MDH Letter, MPCA Letter, BWSR Letter, DNR Letter, EPA TMDL, WRAPS, Koochiching County, Itasca County, St. Louis County

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 | **Koochiching 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 |



Farms & Groundwater 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.

- Technical and financial assistance for alternative water systems and access control
- Outreach to smaller farms
- Project development and technical assistance funds to cover staff time to work with Ryan Clark and producers
- well testing workshops in cooperation with IRRRB (see if they will financially help defray costs for RO systems for homes)
- Livestock exclusion fencing, water wells, and watering ponds.
- reforest abandoned fields in old farms
- Seal unused wells
- Rotational grazing, cover crops, no till/reduced tillage
- Outreach opportunities abundant
- Cost share on well screening
- Nett Lake- tribal collaboration
- Enroll more MN Ag Water Cert Farms
- Replacing failing septics
- Ag waste management practices.
- Spring protection? Mapping, ownership identification
- Coordination with DWSMAs
- Cost share for Ag BMPs
- Outreach to Ag producers for BMPs

Meeting Attendees

- Ada Tse – St. Louis County
- Andy Arens – Itasca SWCD
- Austin Steere – Itasca SWCD
- Austin Wallin – Koochiching SWCD
- Cal Saari – Itasca SWCD Supervisor
- Chad Severts – BWSR
- Dan Disrud – MDH
- Jeff Hrubes – BWSR
- Jolén Simon – Koochiching SWCD
- Kelly Condif – DNR
- Mike Kennedy, MPCA
- Mitch Brinks, GIS Specialist TSA 8
- Pam Tomevi, Koochiching SWCD
- Phil Norvitch – North St. Louis SWCD
- Rhoda Adkins – MPCA
- Ryan Clark – Carlton County
- Skyler Webb, St. Louis County
- Aaron Frankl – Houston Engineering Inc.



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- United States Geological Survey (USGS), 2024. Annual NLCD. <https://www.usgs.gov/centers/eros/science/national-land-cover-database>. Accessed June 2025.



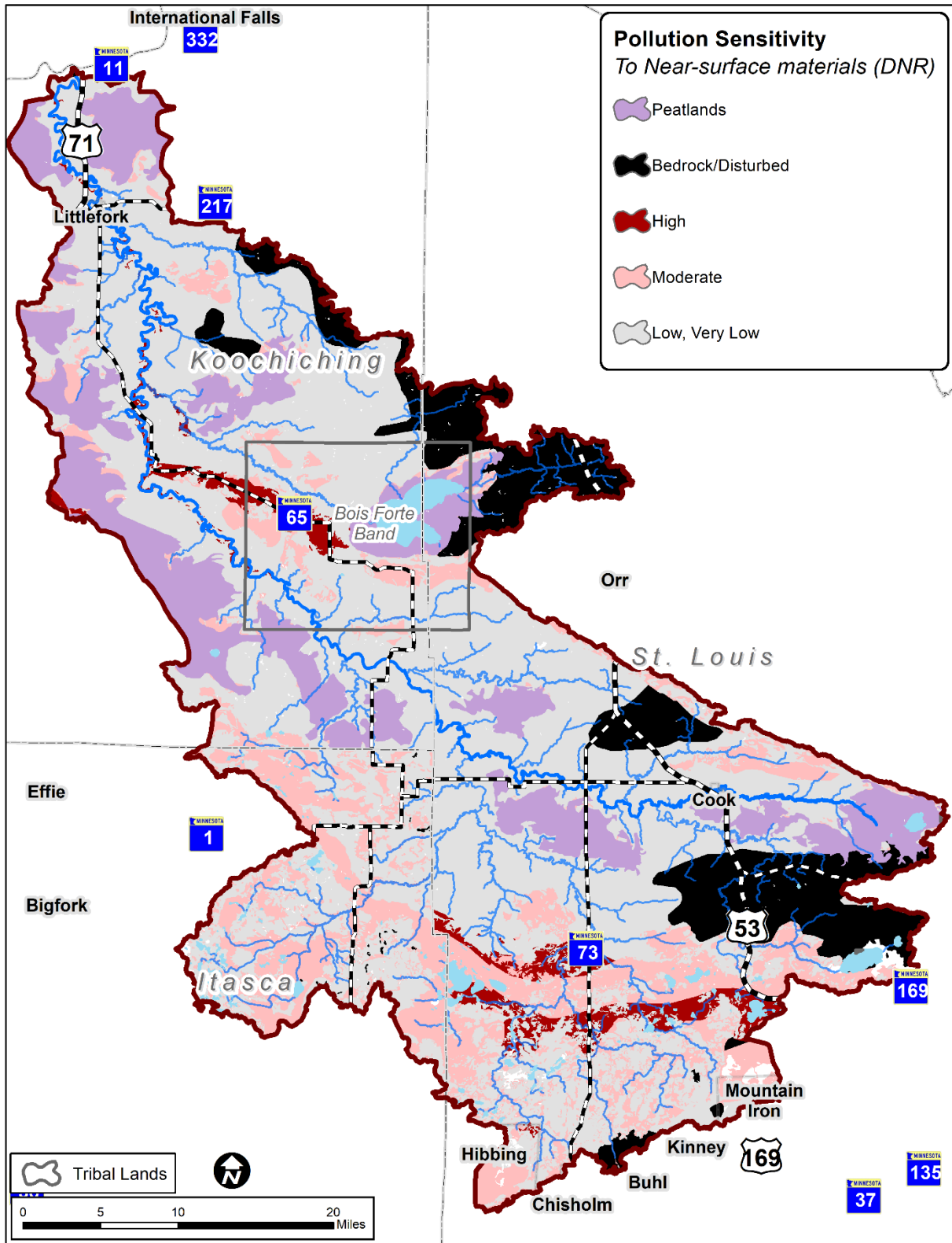


Figure 5. Pollution sensitivity of LFRW. Both DWSMAs (Littlefork and Cook) have moderate vulnerability ratings.

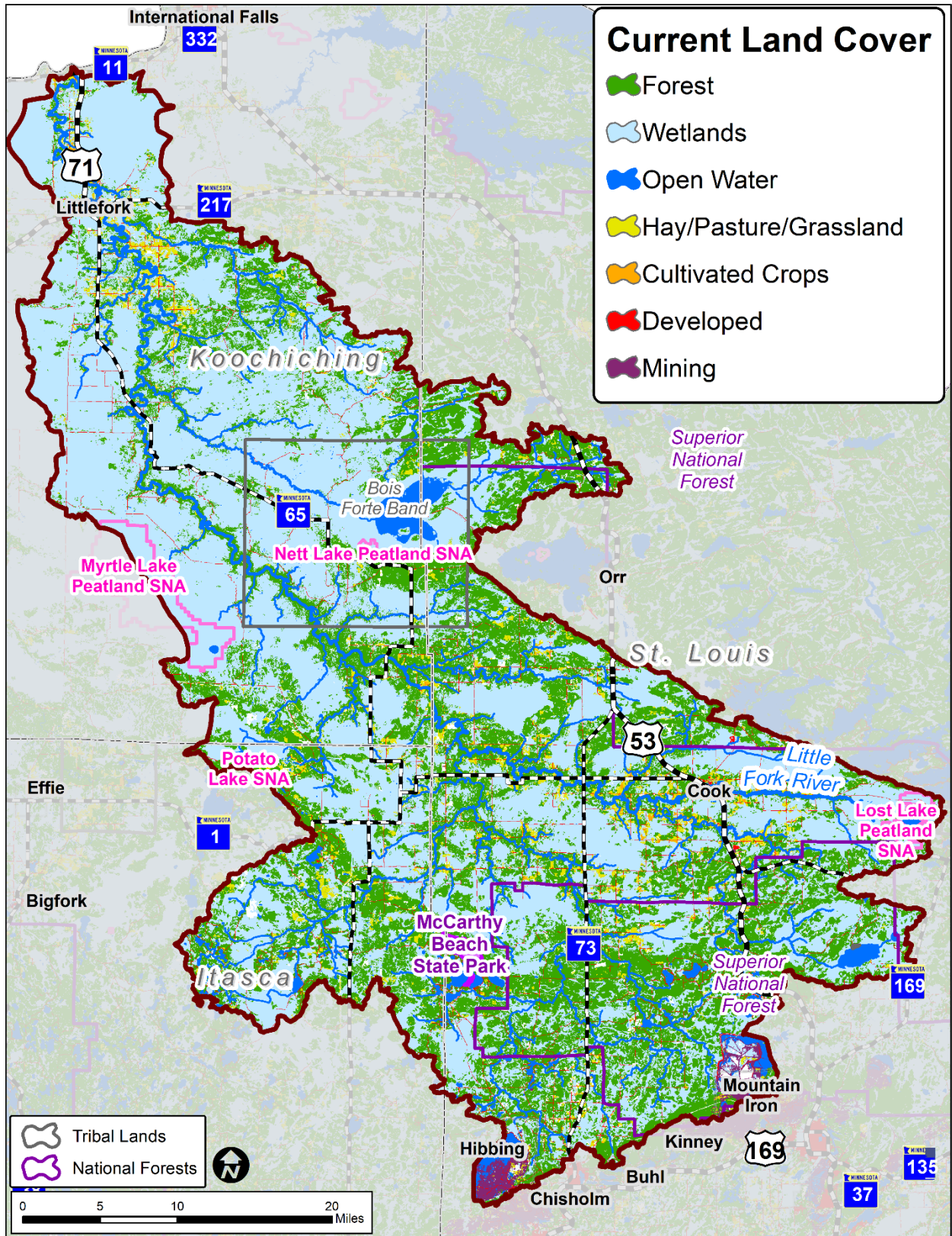


Figure 6. Land use in the LFRW.

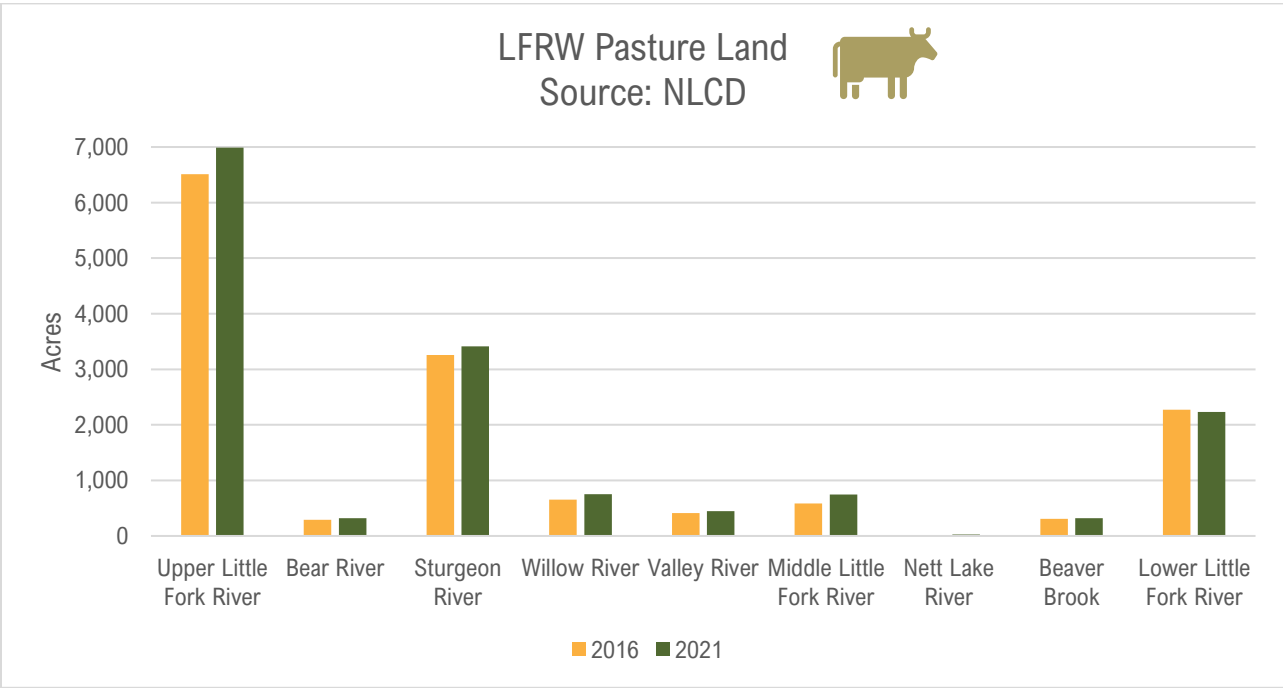
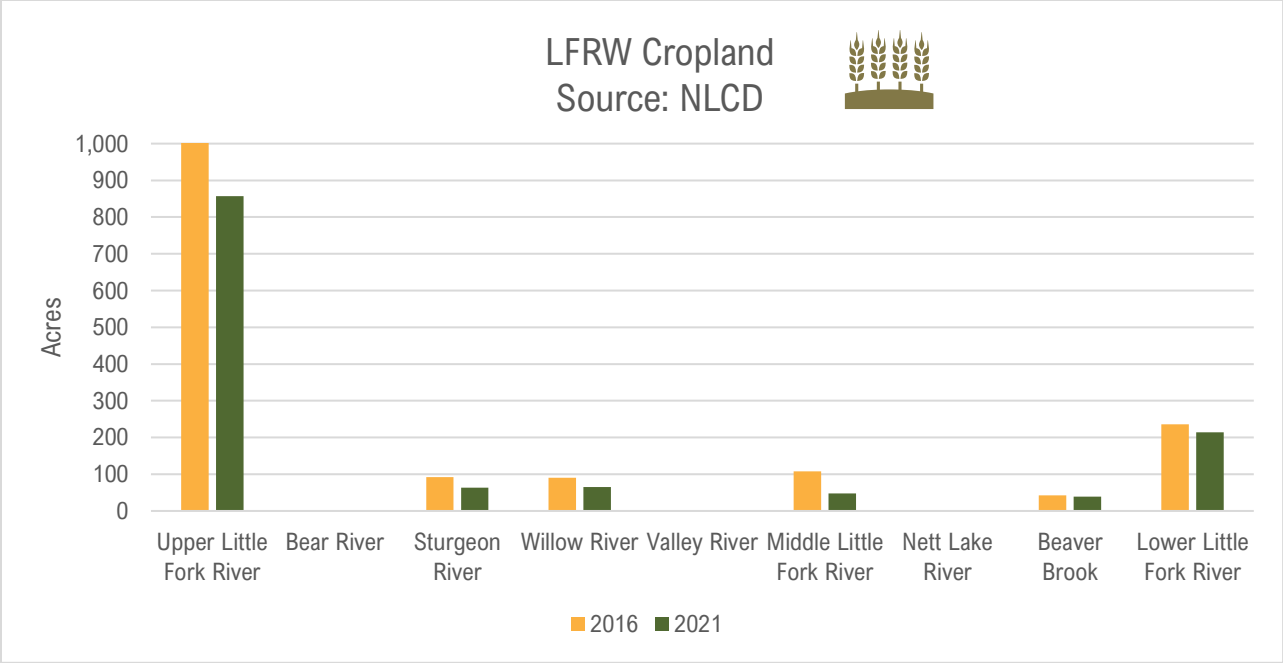


Figure 7. Cropland and pastureland in 2016 and 2021 for each subwatershed in the LFRW.



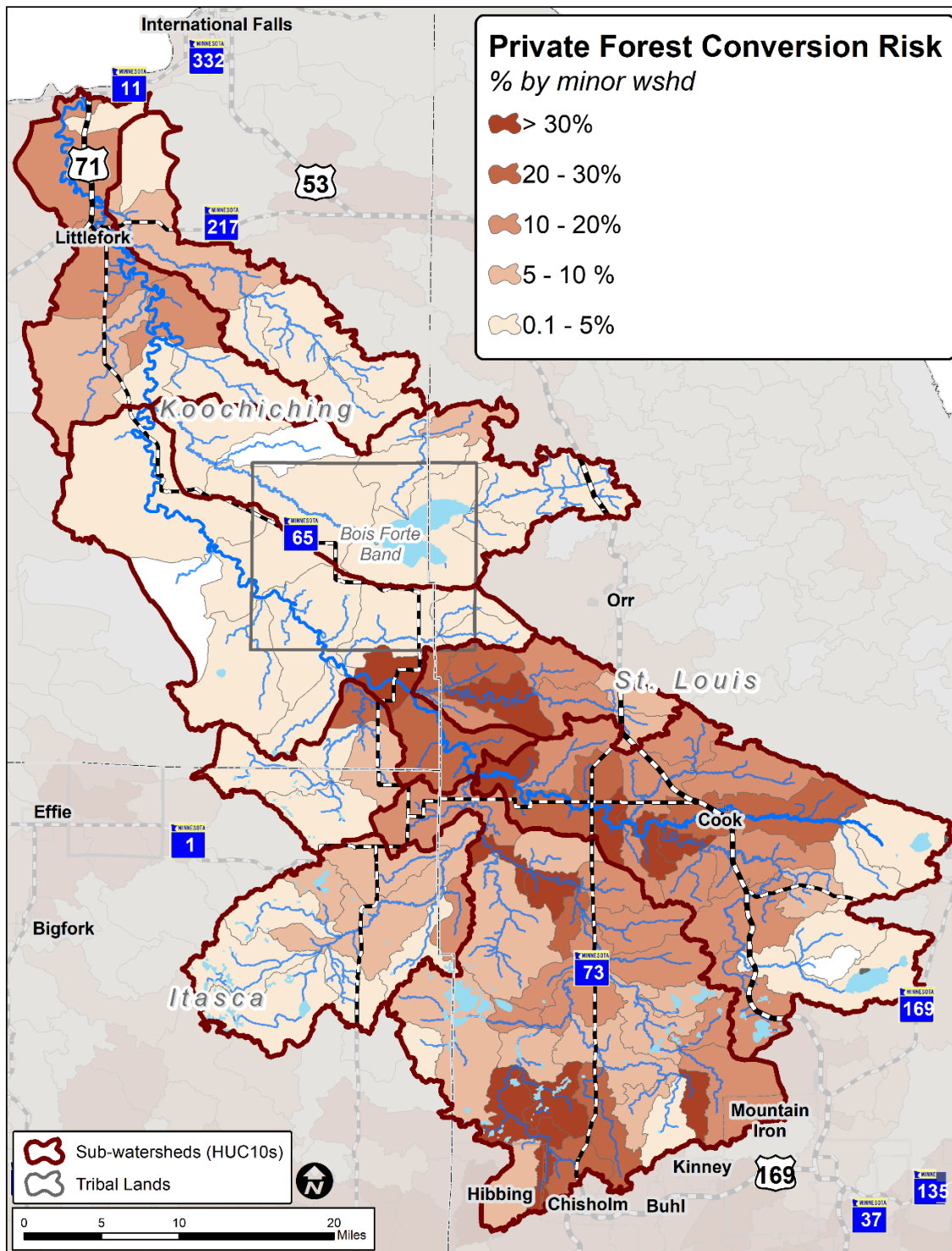


Figure 8. Private forest conservation risk in the LFRW.



Appendix D. Lake Prioritization Process



108 Lakes in the Watershed (>10 acres)

>75% Protected
91 Lakes

<75% Protected
17 Lakes

VIGILANCE
Unimpaired, Fully Protected
84 Lakes

ENHANCE
Unimpaired, Declining Trend
6 Lakes

RESTORE
Impaired for Sulfate
1 Lakes

PROTECT
Unimpaired, Good Quality
17 Lakes

Priority:
Clear (St. Louis)
Fourteen (St. Louis)
Leander (St. Louis)
Perch (St. Louis)
Side (St. Louis)
Owen (Itasca)
Bear (Itasca)
Little Bear (Itasca)
Napolean (Itasca)
Raddison (Itasca)

Priority:
Beatrice (Itasca)
Sturgeon Chain (5 lakes)

Priority:
Dark (St. Louis)

Priority:
Sand (St. Louis)
Dewey (St. Louis)
Long (2 lakes)
Little Sand (St. Louis)
Island (St. Louis)
McCormack (St. Louis)

STRATEGY
Shoreline Projects

STRATEGY
Phosphorus Reduction, Shoreline Projects

STRATEGY
Restoration

STRATEGY
Focus on Shoreline Projects & Land Protection

Appendix E. Regulatory Comparisons



General Ordinance Standards	Itasca	Koochiching	St. Louis	Comments
County Wide Zoning Ordinance	Yes	Yes	Yes	
Department of Natural Resources Approved Shoreland Ordinance	Yes	Yes	Yes	
Subsurface Septic Treatment Systems	Yes	Yes	Yes	
Feedlots	Yes	Yes		<p>Itasca: On all lakes, animals shall be set back 150 feet, No animals may be fenced in the shore impact zone, bluff impact zone or steep slopes. New feedlots are only allowed in farm residential zoning districts, prohibited in all shoreland overlay zoning districts, and must follow state feedlot regulations. Manure spreading in shoreland overlay zoning district must have an approved plan by the Itasca County SWCD and is prohibited in the shoreland impact zone.</p> <p>Koochiching: New feedlots must not be in the shoreland of watercourses or in bluff impact zones and must meet a minimum setback of 300 feet from the ordinary high water level (OHWL) of all public water basins and modifications or expansions to existing feedlots that are located within 300 feet of OHWL or within bluff impact zone are allowed if they do not further encroach into the existing OHWL setback or encroach on bluff impact zones.</p> <p>St. Louis: No ordinance, regulated by MPCA.</p>
Subdivision Ordinance	Yes	Yes	Yes	
Wetland Conservation Act	Yes	Yes	Yes	
Grading & Filling (Shoreland)	Yes	Yes	Yes	<p>Koochiching: permit required for movement of 10 cubic yards or more on steep slopes or within shore or bluff impact zones and for more than 50 cubic yards outside of steep slopes and shore and bluff impact zones.</p>
Riprap-Permits	Yes	Yes	Yes	<p>Itasca: Allowed for erosion control. To the extent possible, riprap should be designed to display natural aesthetics.</p> <p>Koochiching: Placement of natural rock riprap is permitted if the finished slope does not exceed three feet horizontal to one foot vertical, the landward extent of the riprap is within ten feet of the ordinary high water level, and the height of the riprap above the ordinary high water level does not exceed three feet.</p> <p>St. Louis: Requires land use permit, allowed for erosion control. Should be designed to display natural aesthetics</p>
Stormwater	Yes	Yes	Yes	<p>Itasca: Subdivisions or Conservation Development within a shoreland overlay zoning district require an erosion control and stormwater management plan. One or more acres require a stormwater permit from MPCA.</p> <p>Koochiching: Impervious surface coverage of lots must not exceed 25% of lot area. Documentation must be provided by a qualified individual that they are designed and installed consistent with the field office technical guide of local SWCD. New constructed stormwater outfalls to public waters must provide for filtering or settling of suspended solids and skimming of surface debris before discharge.</p>

General Ordinance Standards	Itasca	Koochiching	St. Louis	Comments
				St. Louis: Handled largely through zoning, environmental review, grading/filling permits, and other state/federal programs. No single stormwater ordinance, however, it is considered regulated.
Vegetation Removal- Bluff/Steep Slopes	Yes		Yes	<p>Itasca: Intensive vegetation clearing within the bluff impact zone and on steep slopes is not allowed.</p> <p>Koochiching: Intensive vegetation clearing within the shore and bluff impact zones and on steep slopes is not allowed.</p> <p>St. Louis: Vegetation removal is heavily restricted.</p>
Vegetation Removal – Shoreland	Yes		Yes	<p>Itasca: Limited clearing of trees and brush is allowed to provide a view of the water and accommodate the placement of permitted water-oriented structures. Access paths shall not exceed 12 feet. Vegetation within the shore impact zone shall be maintained to screen structures with trees and shrubs so that structures are at most 50% visible from public waters in the summer leaf on conditions. Shading of rivers must be preserved.</p> <p>Koochiching: Limited clearing of trees and shrubs and cutting, pruning, and trimming of trees is allowed to provide a view to the water and to accommodate the placement of stairways and landings, picnic areas, access paths, livestock watering areas, beach and watercraft access areas, and permitted water-oriented accessory structures or facilities. Screening items from the water and shading of river must be preserved.</p> <p>St. Louis: Limited clearing of vegetation with path allowed. Selective pruning is allowed.</p>