Lakes & Streams Topic Meeting Data

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 Littlefalls (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 the figure 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 packet is for the Rivers & Lakes meeting and the following pages will provide some background information on the topic in the LFRW for discussion.

Figure 1 Planning process for the LFRW1W1P.

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 (79%), 11.0% of the water courses within the LFRW have been altered (DNR, 2017).

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 are an impairment for high turbidity. Historical Logging has been found to be directly linked to contributing 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).

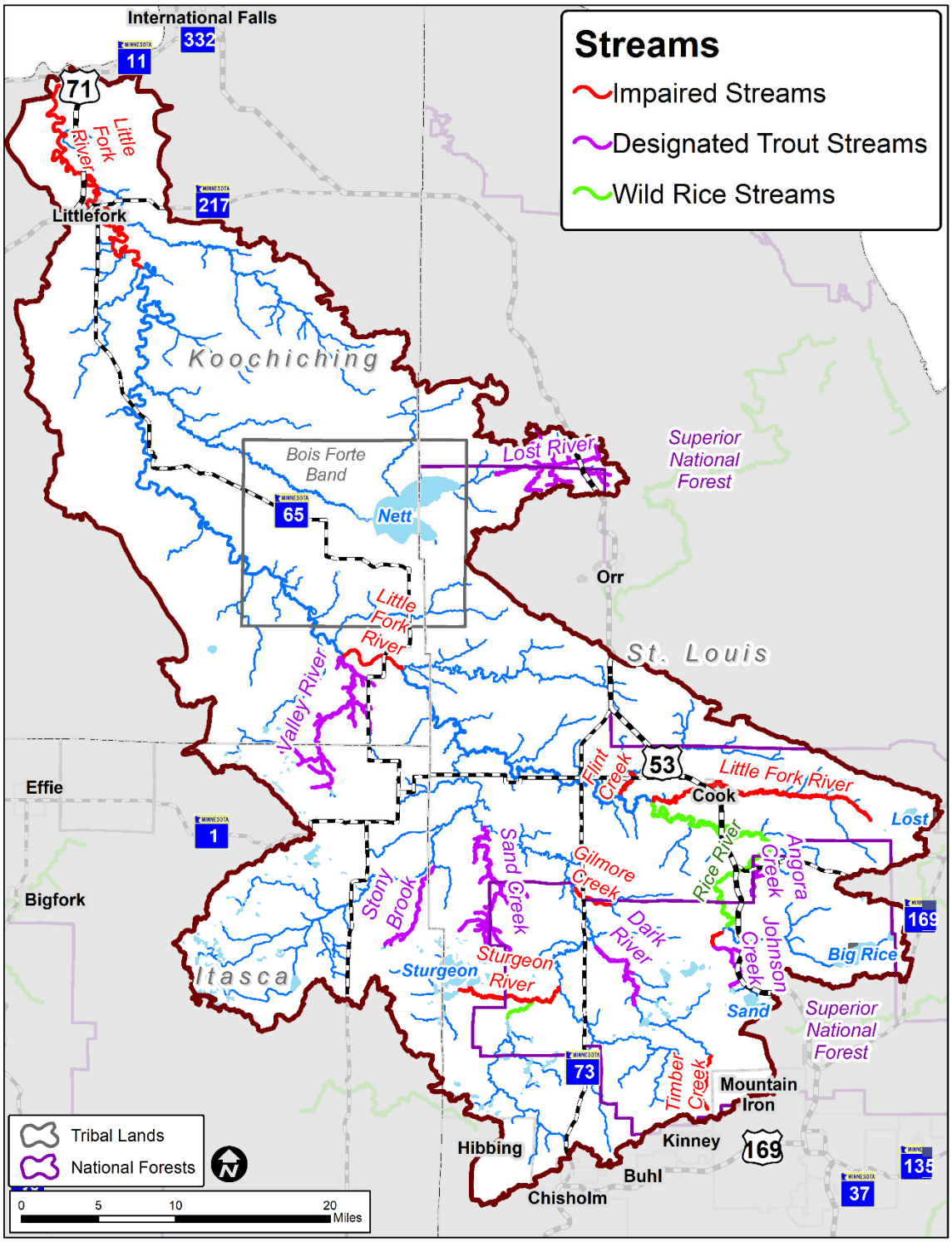
The figures below show impaired streams, rivers, and lakes in the most updated 2024 impaired waters list. An increasing trend in nitrates and a decreasing trend in phosphorus concentrations is expected within the watershed, corresponding to the expected changes in nutrient export from forested watersheds 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 was determined to be the results of land cover changes related to logging and reforestation and not precipitation changes (MPCA, 2006).

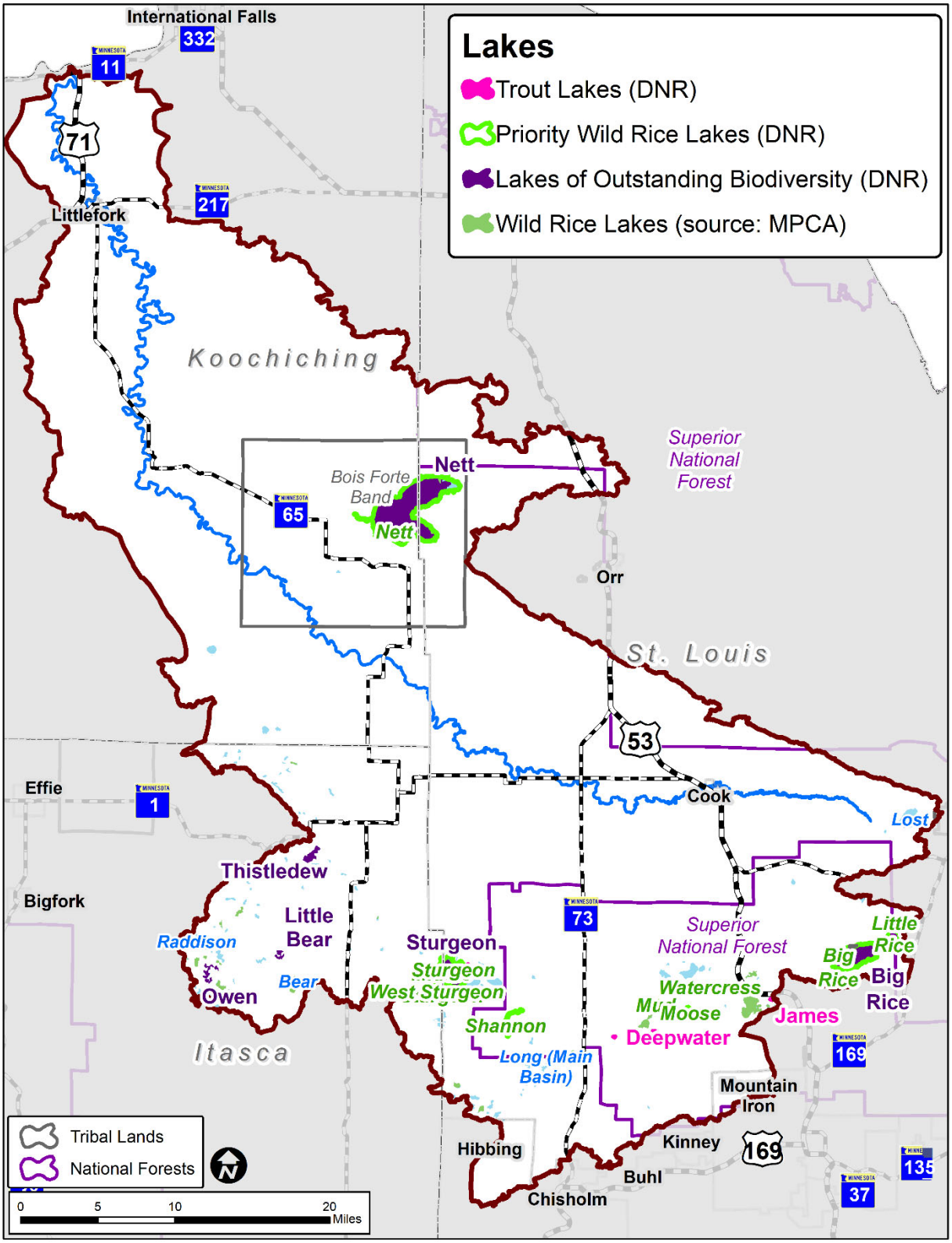
Waters in the LFRW are important for recreation such as canoeing and swimming. But they are also important for sustaining life with fishing, hunting, and wild rice harvesting. The Boise Forte Reservation is located within the watershed and contains Nett Lake, the world's largest wild rice lake (MPCA, 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 mostly in the southern portion of the watershed.

On the next few pages you will find figures identifying important streams and lakes in the watershed: impaired, trout, and wild rice streams (Page 4), trout, wild rice, and outstanding

significance lakes (Page 5). The figure on page 4 also identifies impaired water bodies (excluding mercury and wild rice impairments).




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
Shannon
Long (Main Basin)
Superior National Forest
Little Rice
Big Rice
Watercress
Moose
James
Deepwater
169
Mountain Iron
Kinney
Hibbing
Buhl
Chisholm
135
37
Tribal Lands
National Forests
N
0
5
10
20
Miles

References

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

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

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

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), 2011. Little Fork River Watershed Monitoring and Assessment Report.

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.