

Appendix E: Isanti County Water Plan Summary

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Lower St. Croix River Comprehensive Watershed Management Plan

March 2020

ISANTI COUNTY APPENDIX D-SUMMARY OF LOWER ST. CROIX WATERSHED.

I. Executive Summary

The purpose of the Local Water Management Plan (LWMP) is to identify existing and potential water resource issues, create an implementation strategy for protection and foster positive land use management and sustainable development within the entire County in a way that is respectful of the resources. The LWMP is administered by the Isanti County Zoning Office with assistance from the Isanti Soil and Water Conservation District (ISWCD). Both agencies are committed to providing landowners with applicable information to assist them in making wise choices in land management and collectively protect the natural resources of Isanti County.

Isanti County is aware that many local, state and federal agencies are involved with water resource restoration and protection. The intent of this plan is to reduce the duplication and eliminate gaps in implementation strategies aimed at the common goal of protecting, preserving and improving water resources in Isanti County. Additionally, the County is aware that there are several existing plans that address water resources within the county (i.e. Watershed Restoration and Protection Strategies/WRAPS and Storm Water Retrofit Assessments/SRAs). These existing plans will incorporate water quality monitoring and assessment, watershed analysis, civic engagement, planning, implementation, and measurable results to increase the effectiveness and efficiency of the LWMP. The goal of this plan was to incorporate the high priority actions from said plans such that the actions to protect waters can be found in one location.

The original LWMP was formally adopted on August 18, 1993. The second update and current local water management plan was adopted on January 1, 2006 and was originally set to expire in December 2015. The County was granted a two-year extension from the Minnesota Board of Water and Soil Resources (BWSR) which extended the expiration date to May 2018.

This plan was developed in accordance with the requirements of Comprehensive Local Water Management Minn. Stat. 103B.301 to 103B.355

Isanti County held public participation meetings with the Water Plan Task Force (WPTF) to identify the priority concerns. These meetings were facilitated to receive input about perceived threatened water resources, environmental issues, riparian zone decline, land use changes, and aquatic invasive species. The WPTF then considered all input and used this information to create an implementation plan to address these issues. From this selection process, the following priority concerns and goals were identified:

- **Protect groundwater resources from impairments and develop a sustainable framework for groundwater users.**
- **Protection and restoration of Isanti County surface water quality and quantity.**
- **Promote land use management practices that are beneficial to Isanti County's natural resources.**
- **Aquatic invasive species (AIS) prevention and management.**

Ditches and drainage management is also identified as a concern and will be addressed within the surface water quality priority concern. After the priority concerns were established, the County Zoning Office and ISWCD worked together to develop the implementation schedule and plan.

Additional water quality data are lacking at County Ditch outlets in the North Branch and West Branch of the Sunrise River and obtaining this data to understand surface water drainage and potential impairments from drainage ditches is a priority concern for Isanti County.

II. Implementation Plan Summary

The [implementation schedule](#) (pages 43-61) was developed by the Isanti County Zoning Office in partnership with the Isanti Soil and Water Conservation District (ISWCD). Within this portion of the document, all goals, objectives, and action items for this current plan are identified to address the four priority concerns and are strategies identified in the 1W1P for LSC. The following respective objectives under each priority will obtain the County's goals.

Ground Water Priorities

- Increase local agencies, stakeholders, and consumers capacity to protect Isanti County's groundwater resources.
- Protect quality and quantity of groundwater within areas identified as vulnerable/sensitive using the most current plans/studies.
- Promote wise groundwater withdrawal to protect and conserve current and future uses including drinking water, recreation, ecological, agricultural, commercial, and industrial uses.

Surface Water Priorities

- Work with local municipalities and developments to protect and conserve surface water quality.
- Acquire data necessary to gain a greater understanding of the resources, threats, and strategies to better target practices for planning and implementing watershed activities.
- Implement projects that minimize the transport of nutrients, sediment, and bacteria to surface waters to meet the goals of WRAPS, TMDLs and/or SRAs.
- Enforce County zoning ordinances with land uses to protect surface water quality and pursue additional regulations or ordinance amendments.

Land Use Management Priorities

- Develop and improve local plans, controls, and ordinances to reduce impacts from storm water runoff from lands being developed or converted.
- Develop a process for drainage management with a focus on public and private drainage systems.
- Ensure the protection of healthy, connected forest and natural areas for both water quality and habitat.

AIS Prevention and Management Priorities

- Monitor and map surface waters for current and new infestations of AIS.
- Protect lakes with public accesses from AIS infestation.
- Make informed decisions regarding AIS.
- Proactively provide education and information on AIS.

The action items identified in this section also align with the Watershed Restoration and Protection Strategies (WRAPS) for the Rum River, Lower St. Croix, and the Snake River Watersheds and strive to be consistent with other local, state, and regional watershed plans. The following sections of this summary will provide information regarding the County's major watersheds, summary of the priority concerns and implementation schedule, and a table of additional public waters in the Lower St. Croix Watershed.

Isanti County will leverage funds from the natural resource block grants and clean water fund grants to support the work within this One Watershed One Plan as identified in the implementation table and text. Table 1 lists an inventory of public waters within the Lower St. Croix that may not have enough water quality monitoring to identify impairments. These additional lakes are shallow natural lakes that protection strategies shall be addressed to preserve the aesthetics and high value they represent to the County and Watershed. Isanti Soil and Water Conservation District will assist the County and Watershed Partners to further develop more data to assess those waterbodies as time and funding allows. The County will focus efforts to pursue additional Shoreland Ordinances to protect the upland and riparian habitat surrounding these sensitive resources.

III. Watershed Distribution

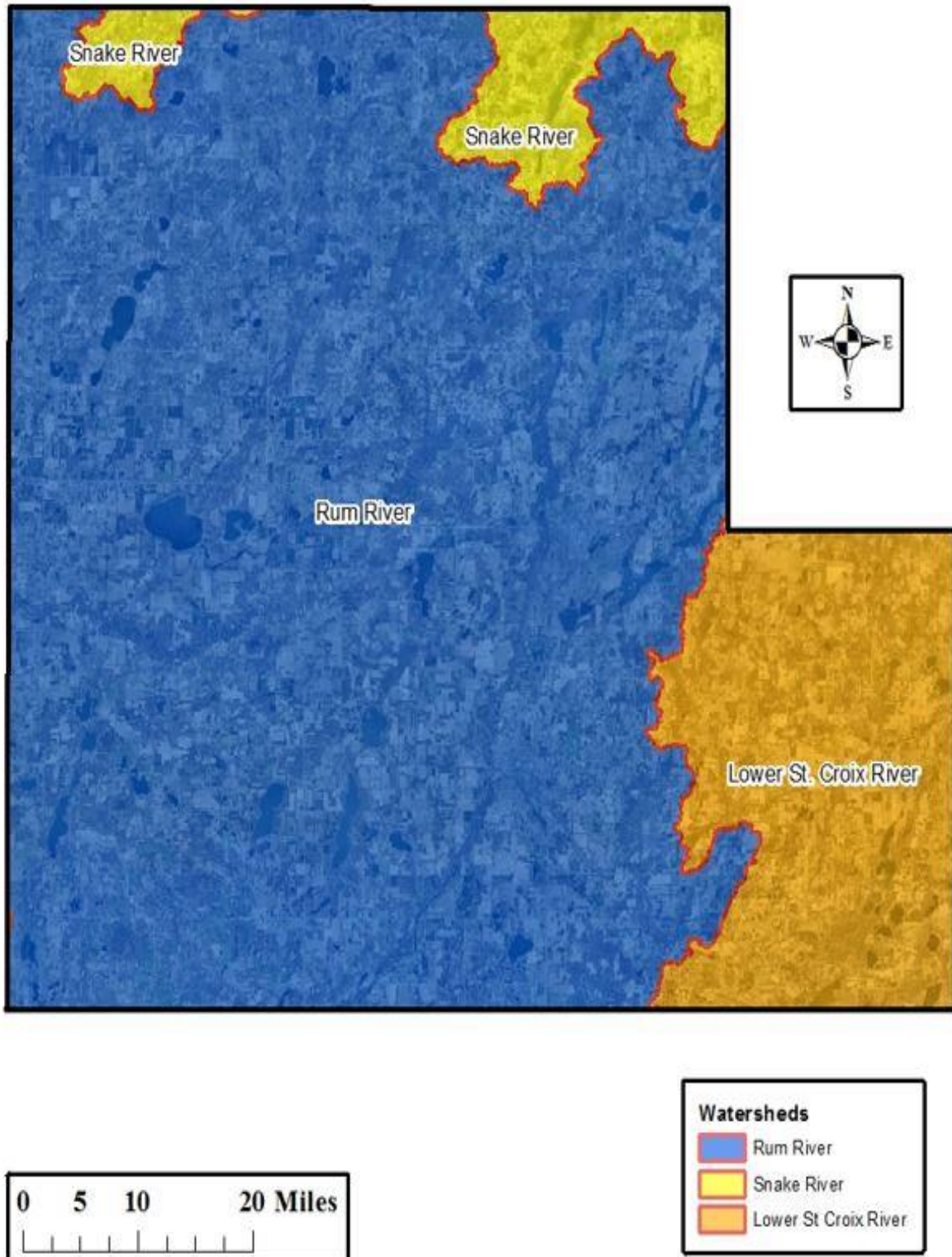


Figure 1-Lower St. Croix is 14.4% of Isanti County.

Lower St. Croix River Watershed:

The eastern edge of Isanti County is in the Lower St. Croix River Watershed and represents 14.4% of the total land mass in the county. This watershed encompasses 585,735 acres in east central Minnesota and is within the St. Croix River Basin. The sub watersheds within Isanti County's boundaries include the north and west branch of the Sunrise River. The Lower St. Croix River is in the process of the 1W1P and is projected to be completed early in 2020. Both the Isanti County and ISWCD have chosen to participate in the development of the action goals. The [implementation schedule](#) section of this plan will include action items comparable to the [Watershed Restoration and Protection Strategy \(WRAPS\) for the Sunrise River Watershed](#) and implementation table in the 1W1P. The North Branch of the Sunrise River has multiple natural environment lakes and are considered healthy and need protection efforts identified in this plan. The stream itself however, has some impairments that have been identified in the completed report (Dec. 16, 2014). Maps on page 8,9,10 of the [Sunrise WRAPS](#) indicate that the stream is not supporting aquatic recreation and the goals of the 1W1P will help identify additional areas for water quality monitoring which have insufficient data at this time. A [County Ditch 20 Feasibility Study](#) has been completed by the Anoka Conservation District to understand the complexity of water quality issues with Typo Lake, which is a hypereutrophic lake shared by both Isanti and Anoka County. Currently this is the only lake with enough water quality data within the Sunrise River to determine the stressors. Additional monitoring may be necessary for other lakes and tributaries as part of the 1W1P for the Lower St. Croix. As mentioned in the implementation schedule in action item 3.8 the ISWCD will continue to identify projects to implement as they arise. Additional funding may be necessary to implement these projects along with the ones mentioned in the County Ditch 20 Study.

Rum River Watershed:

The Rum River Watershed flows through the county from the west to the northeast, then flows out to the south – southeast. The Rum River Watershed covers 80.9% of the this county's land mass and has a whole total watershed land mass of 1,013,760 acres, stretching from Lake Mille Lacs and flowing south emptying into the Mississippi River in the City of Anoka. The watershed covers portions of Aitkin, Mille Lacs, Isanti, Anoka, Crow Wing, Morrison, Benton, Kanabec, Chisago, and Sherburne Counties as well as portions of the Mille Lacs Band of Ojibwe Tribal Land. This watershed is broken down into five smaller subwatersheds in Isanti County which include Upper Rum River, Stanchfield Creek, Middle Rum River, Lower Rum River, and Cedar Creek. The river also passes extensive marshes and backwaters throughout the County. The Rum River is also designated a Wild and Scenic Riverway by the Minnesota DNR. With the Rum River Watershed comprising the vast majority of this county's land mass, the implementation schedule focuses action items to address the priority concerns within this watershed. These concerns are comparable to efforts identified in the [Watershed Restoration and Protection Strategy \(WRAPS\) for the Rum River](#), which was completed in July 2017. County staff has proceeded into the One Watershed One Plan process for the Rum River after the Lower St. Croix had started.

Isanti County has elected to complete both One Watershed One Plans as this encompasses 95.3 percent of the County's Land Mass. Currently, only 1 lake within the LSC watershed portion of the County are actually impaired(Typo Lake). The natural environment lakes are also of concern because development is occurring around some of these lakes as well and may have indirect impacts from land use changes.

A full list of the natural environment lakes and public water wetlands in LSC Watershed are in this appendix summary in Table 1.

Table 1-Inventory of shallow natural environment lakes and public water wetlands in LSC Watershed in Isanti County.

Isanti County Public Water Inventory For Protection and Restoration						
<u>Lake Number</u>	<u>Lake/Wetland Name</u>	<u>Acres</u>	<u>Classification</u>	<u>Township</u>	<u>Section(s)</u>	<u>SubWatershed</u>
30-0015	Big Pine Lake	165	NE	North Branch	4,9	NBSR
30-0142	Grass Lake	107	NE	North Branch	12,13	NBSR
30-0012	Horseleg Lake	95	NE	N.Branch, Oxford	4,35	NBSR
30-0003	Horseshoe Lake	119	NE	Oxford	2,11	NBSR
30-0011W	Mud Lake	51	NE	N.Branch, Oxford	1,2,36	NBSR
30-0006W	Hurley Lake	39	NE	Oxford	12	NBSR
30-0010W	Lilligren Lake	30	NE	Oxford	23	WBSR
30-0019	Little Pine Lake	29	NE	North Branch	4	WBSR
30-0002	Long Lake	199	NE	Oxford	24	WBSR
30-0007	Lower Birch Lake	75	NE	Oxford	14	WBSR
30-0018	Rice Lake	54	NE	North Branch	11,14	WBSR
30-0041	Splittstoesser Lake	30	NE	Isanti	25	WBSR
30-0014	Spring Lake	33	NE	North Branch	2	WBSR
30-0001	Tamarack Lake	135	NE	Oxford	18	WBSR
30-0004	Twins Lake	59	NE	Oxford	10,11	WBSR
30-0005	Upper Birch Lake	83	NE	Oxford	11,12	WBSR
30-0016	Unnamed	40	NE	North Branch	9,10	WBSR
30-0008	Hoffman Lake	187	RD	Oxford	14,23	WBSR
30-0009	Typo Lake	273	RD	Oxford	21,22	WBSR
All lakes in this table are classified as shallow lakes less than 15 feet deep.						
<u>Wetland Number</u>						
30-206W	Unnamed		PWWetland	North Branch	9	NBSR
30-16W	Unnamed		PWWetland	North Branch	10	NBSR
30-208W	Unnamed		PWWetland	North Branch	32	NBSR
30-146W	Unnamed		PWWetland	North Branch	33	NBSR
30-210W	Unnamed		PWWetland	North Branch	33	NBSR
30-211W	Unnamed		PWWetland	North Branch	34	NBSR
30-147W	Knute		PWWetland	North Branch	23	NBSR
<u>Tributaries</u>						NBSR
30-150W	Hay Creek		PWWetland Tributary	North Branch	36,25	NBSR
	Unnamed Trib. From NBSR to Big Pine Lake and Spring Lake		PWWetland Tributary	North Branch	9,10,11,14 ,23	NBSR
NBSR=North Branch of Sunrise River, WBSR=West Branch of Sunrise River						

As part of the MnDNR biological survey, many of the lakes listed above are surrounded by rare and natural plant communities and were surveyed by botanists and biologists from MnDNR. A map of these in Isanti County can be viewed on the 1W1P LSC Sites of Biodiversity [interactive map](#) or Fig. 13 of the [Land and Water Resources Inventory](#). Northwest Anoka County also has an abundance of these plant and animal communities identified in the 1W1P.

IV. AIS Concerns for North Branch and Oxford Township

Currently there is only a select few known AIS investigations in public water bodies in the Isanti County portion of the Lower St. Croix. One of those is purple loosestrife (*Lythrum salicaria*), a species of concern in Horseleg Lake and has been mapped by Isanti County Parks Director. Currently biological control may be obtained to manage this infestation.

Secondly, Chisago County has identified concerns for the aquatic or semi aquatic invasive species European Phragmites (*Phragmites australis ssp. australis*). Currently this species has only been found in a few Isanti County Highway Right of Ways and active treatment plans have begun for these known infestations through Minnesota Department of Agriculture(MDA) Noxious Weed Grants and partnerships with Anoka Conservation District Metro wide Phragmites Level 2 Grant. No known infestations have affected public water lakes or wetlands to date. Additional surveying of these wetlands around the natural environment lakes and township road right ways will be considered a protective strategy to keep invasive Phragmites out of these rare plant communities and environments surrounding these lakes. Isanti County will leverage local funds and additional MDA grants to continue the Early Detection, Eradication, and Monitoring Plan through the Isanti County Agriculture Inspector.

There are no identified infestations of aquatic invasive fish or invertebrates are known in this portion of the LSC watershed. Additional surveying data would help assess these natural environment lakes.

See Isanti County Implementation Plan(pages 43-61) at <https://www.co.isanti.mn.us/documentcenter/view/474> .