

Le Sueur County Environmental Services

NEWSLETTER

July 1, 2024



This Issue:

2| Upper Cannon River Flood Study

3-4| Lower Minnesota River East
Comprehensive Watershed
Management Plan

5-6| Middle Minnesota River
Mankato One Watershed One Plan
Public Kick Off Meetings

7-8| Featured Minnesota Native
Plant

9-10| Featured Non-Native Plant

11-13| Flooding, Its Impacts, and
What We Can Do

14| Contact Information

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Upper Cannon River Watershed Flood Risk Reduction Study

We will continue to provide updates with the flood study on a quarterly basis.

- We are working with the City of Waterville and DNR to install a flood gauge on the Cannon River just south of Sabre Lake. The flood gauge is instrumental in providing data for this study as well as providing future notifications of flooding within the community. The flood gauge installed has had some delays, and hopefully will be installed by Summer 2024.
- Approximately 80% of our required match or in-kind services has been accounted for through financial support, staff time, or additional data collection and drone surveys due to recent flooding events.
- Due to recent flooding events, we have gathered drone footage, water elevations, and flow data that will be helpful to utilize within the Upper Cannon Flood Study.



Figure 1. Flooding Impacts in the Upper Cannon River Watershed. *Photo Credit: Mike Schultz.*

This study is listed as an implementation activity within our Cannon River Comprehensive Watershed Management Plan (Table 4.1.2 Landscape Alterations Targeted Implementation Table, Activity ID 3.2.2-A-1). Once the Flood Study is completed, it will provide opportunities for the partnership to seek out additional funding to implement flood reduction practices.

Lower Minnesota River East Comprehensive Watershed Management Plan

The Lower Minnesota River East Partnership has developed a Final Draft of the Lower Minnesota River East Comprehensive Watershed Management Plan to submit to the Board of Water and Soil Resources! This is the final phase of the planning process before we have a completed Plan! During this time, the Comprehensive Watershed Plan is undergoing review to make sure we have met all State Requirements as well as receiving final approval to adopt the Plan locally!

To view the most up to date version of the Lower Minnesota River East Comprehensive Watershed Management Plan, please visit the Lower Minnesota River East website at: <https://www.lowermnrivereast.org/>.

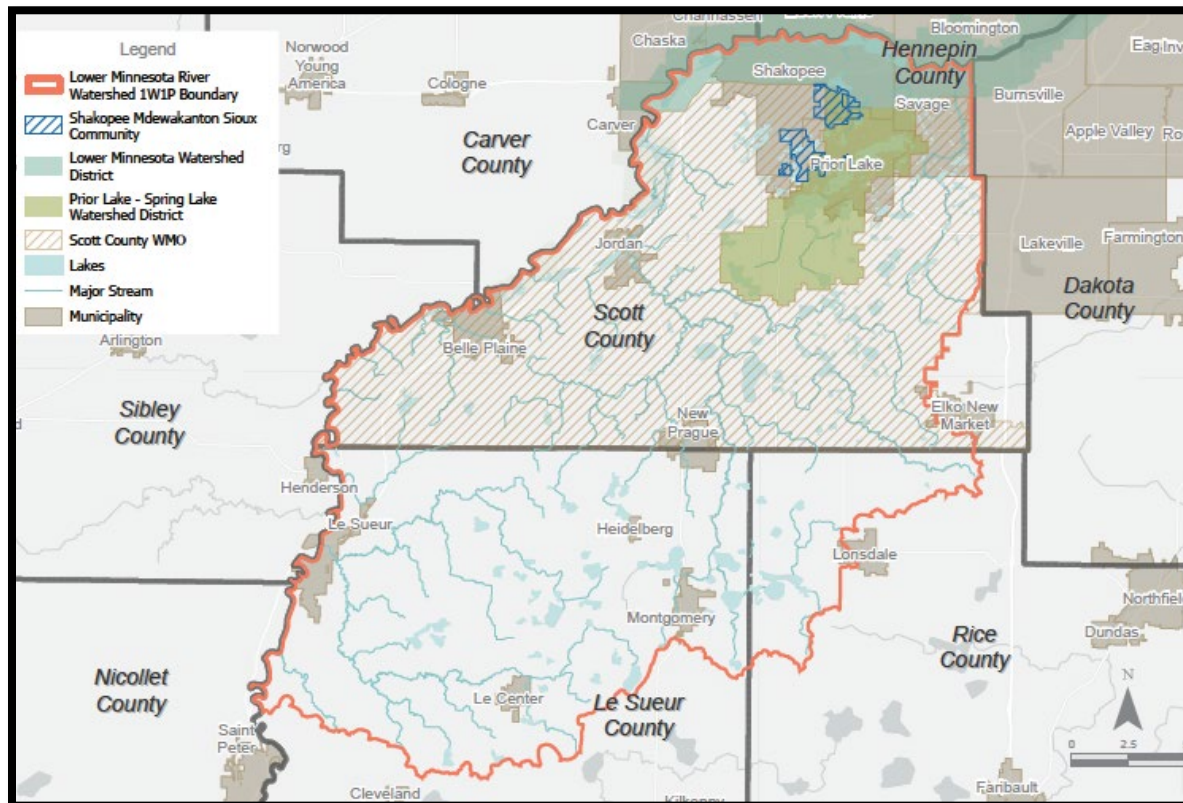


Figure 2. Lower Minnesota River East Watershed Boundary. Photo Credit: ISG Inc.

In Fall 2024, the Partnership will begin to work on implementing strategies identified in the Plan! These strategies are projects and practices that will help address our resource concerns and issues. The main resource concerns and issues we had for the Lower Minnesota River East Watershed include: Sediment Loading, Reducing Peak Flows and Volumes, Reducing or Maintaining Levels of Total Phosphorus in Priority Lakes (depending on impairment status),

Groundwater Protection (Nitrates, Arsenic, and Education/Outreach), and Restoring and Protecting Habitat (riparian or high value resources).

TABLE 4.1: BMP IMPLEMENTATION SCHEDULE									
ID	Strategy	Priority Area	Implementation Action	Measurable Output + Outcome	Timeframe (In Years)				
					1 and 2	3 and 4	5 and 6	7 and 8	9 and 10
BMP.1	Soil Health	Priority streams, lakes, and groundwater priority areas	Implement soil health practices, including but not limited to no-till, strip till, cover crops, perennial cover, and nutrient management	Implement 17,520 acres of soil health practices or a reduction of 3,945 lbs TP/yr and 563 tons TSS/yr	2,283 acres	2,464 acres	3,554 acres	4,432 acres	4,787 acres
BMP.2	Agricultural BMPs	Priority streams, lakes, and groundwater priority areas	Install Ag BMPs, including but not limited to grassed waterways, WASCOBs, alternative side inlets, controlled drainage, and bioreactors	Implement 109 Ag BMPs or a reduction of 940 lbs TP/yr and 78 tons TSS/yr	22 BMPs	18 BMPs	26 BMPs	19 BMPs	24 BMPs
BMP.3	Urban BMPs	Priority streams and lakes	Implement urban BMPs such as permeable pavers, filtration basins, retention basins/constructed stormwater ponds, bioretention basins/rain gardens, enhanced street sweeping, tree trenches, screening/straining/separating processes	Implement 62 urban BMPs or a reduction of 60 lbs TP/yr and 17 tons TSS/yr	11 BMPs	12 BMPs	14 BMPs	13 BMPs	12 BMPs
BMP.4	Storage	Priority streams and lakes	Implement storage practices such as wetlands, impoundments, in-channel storage, off-channel storage, strategic culvert placement, ponds, setback existing levees, ditch plugging/abandonment, floodplain connectivity	Implement 110 acres of storage or a reduction of 250 lbs TP/yr, 46 tons TSS/yr, and 220 acre-feet	0 acres	25 acres	35 acres	30 acres	20 acres
BMP.5	Grade Stabilization	Priority streams and lakes	Implement grade stabilization practices	Implement 28 grade stabilization BMPs or a reduction of 901 lbs TP/yr and 784 tons TSS/yr	4 BMPs	5 BMPs	7 BMPs	6 BMPs	6 BMPs
BMP.6	Native Plantings	Priority streams and lakes	Implement riparian native plantings along lakes and streams	Implement 2,500 linear feet of native plantings or a reduction of 120 lbs TP/yr and 105 tons TSS/yr	500 LF	500 LF	500 LF	500 LF	500 LF

Figure 3. Lower Minnesota River East Comprehensive Watershed Management Plan Implementation Table Example. Photo Credit: ISG Inc.

If you have questions about the Plan or progress made towards our 10 year goals, please continue to check our website and other social media platforms as they become available. You may also contact your local County and SWCD offices.

Middle Minnesota River-Mankato One Watershed One Plan Kickoff Meeting

Le Sueur County and SWCD has partnered with Nicollet County and SWCD, Blue Earth County and SWCD, City of Saint Peter, City of Mankato, City of North Mankato, and the City of Lake Crystal to begin planning efforts for the Middle Minnesota River-Mankato Watershed. Our next phase of planning efforts is to host Public Kickoff Meetings to learn more about stakeholders' priorities within the watershed!

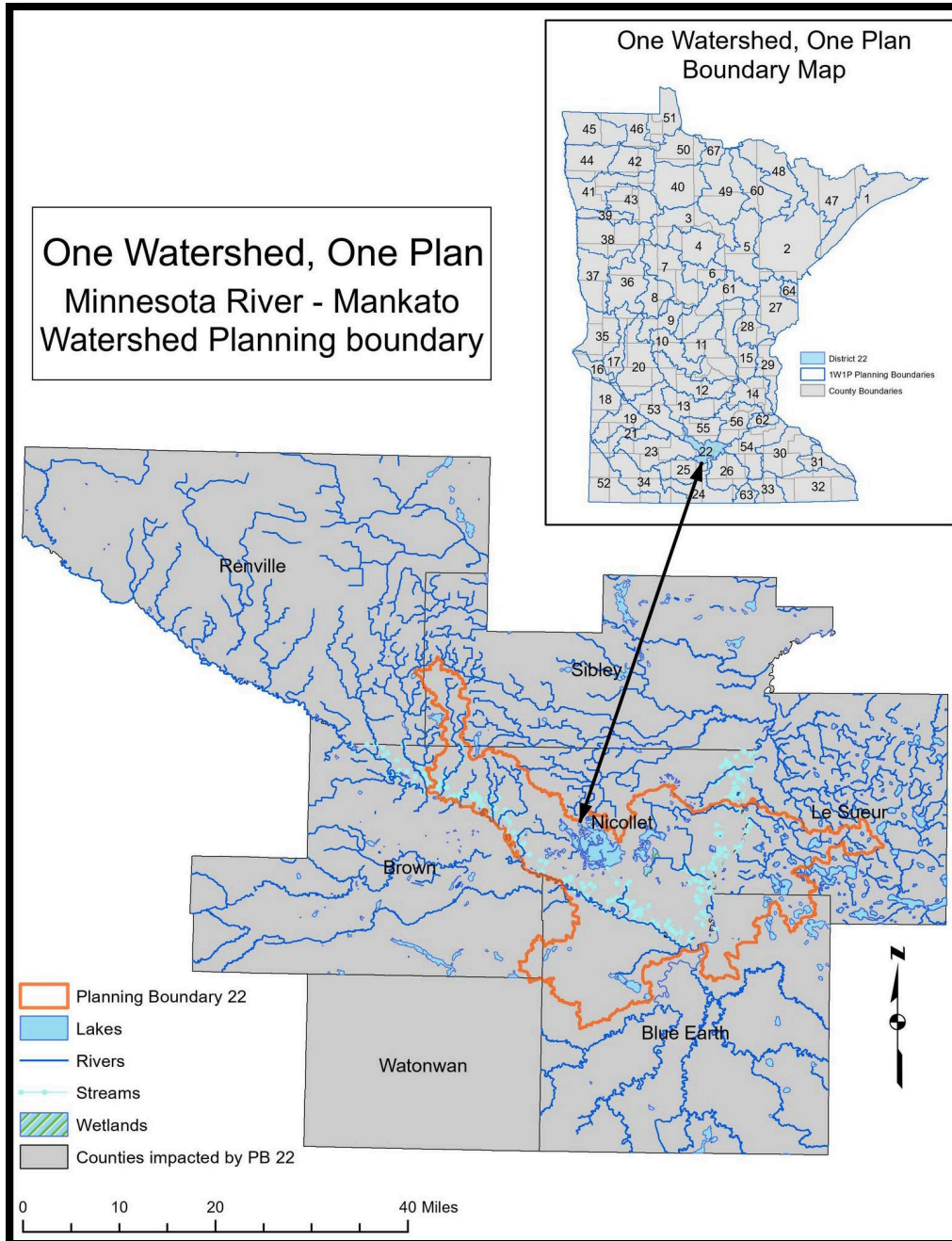


Figure 4. Minnesota River-Mankato Watershed Map. Photo Credit: Blue Earth County.



Minnesota River - Mankato W A T E R S H E D

PUBLIC KICKOFF MEETINGS

Join us for the public kickoff meeting of the One Watershed One Plan initiative! Be part of the conversation shaping the future of our watershed. Your input matters in developing a comprehensive plan to safeguard our water resources for generations to come. Don't miss this opportunity to contribute to the preservation and enhancement of our local environment. See you there!

5:00 – 7:00 P.M.

TUESDAY, JULY 23

Nicollet Conservation Club
46045 471st Lane, Nicollet 56074

&

TUESDAY, JULY 30

Land of Memories Park
Floyd Roberts Jr. Pavilion
100 Amos Owen Ln, Mankato 56001

Appetizers & refreshments provided

www.co.nicollet.mn.us/mnrivermankato

Questions?

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Minnesota Native Plant

White Baneberry (*Actaea pachypoda*)



Figure 5. White Baneberry Inflorescence. Photo Credit: University of Wisconsin-Madison Horticulture.

White Baneberry, also known as Doll's Eyes, is a perennial that is a part of the Ranunculaceae (Buttercup) family.

It grows anywhere from 2-3 feet in height. The leaves are compound. Additionally, the leaves are approximately 5 inches long, have toothless leaf edges, and are covered in white hairs. The inflorescence (flower head) is comprised of a flower spike that contains numerous small white flowers. Each flower contains 4-10 petals and has 15-40 reproductive organs which gives the inflorescence a showy and feathery appearance. White Baneberry blooms from May to June. Additionally, this species contains fruit (berries) that are white, round, and waxy and contain numerous seeds. The fruit starts to mature in summer through early fall. The root structure of White Baneberry is comprised of rhizomes that produce multiple shoots.

This plant prefers moist to mesic soil that is high in nutrients and organic matter.

Lastly, this species favors partial to full shade areas. You'll find this species

thriving in a variety of forest habitat types including conifers, deciduous, and mixed as well as in swamp, streambanks and other moist areas. Bird species such as Ruffed Grouse, American Robin, and Yellow Bellied sapsuckers will forage on the white berries. Mammals and humans should not eat the berries as they are toxic.



Figure 6. White Baneberry Fruit that resembles a “Doll’s Eye”.

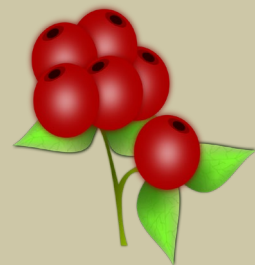
Photo Credit: Holly Bushman



Figure 7. White Baneberry Compound Leaves and Fruit. *Photo Credit: Holly Bushman*

Fun Fact:

White Baneberry is one of two baneberry species in the Midwest. Red Baneberry is smaller in size and has red berries as fruit. It is very difficult to distinguish between the two species until the fruit has matured.



Non-Native Plant

Spotted Knapweed (*Centaurea stoebe*)

Spotted Knapweed, is a biennial and/or short lived perennial that is a part of the Asteraceae, (Aster) family. This species is native to Europe and Asia and was brought into the United States in the late 1800s through seed and soil that was brought over.



Figure 8. Spotted Knapweed Inflorescence. Photo Credit: MN Department of Agriculture.

Spotted Knapweed grows any from 2 to 4 feet tall. The stems and leaves have a grey-green to blue-green hue. The leaves start off the first year as a basal rosette and then the second year produce a stalk (stem) that bolts.

The leaf arrangement during the second year of growth is alternate. The leaves are slender and have little to no lobes. The inflorescence (flower head) contains numerous ray flowers on the edge and disk flowers in the center which stronger resembles a flower of a thistle. At the base of the flower, there is are dark upside down Vs; hence the name “Spotted”. The flower color ranges from pink to purple and blooms from June to October.

The root structure of Spotted Knapweed is a large taproot. This species can thrive in a variety of different conditions, especially disturbed soils, and prefers sandy and dry soils with full sun. Spotted Knapweed can be found along prairies, roadsides, field edges, pastures, gravel pits, railways, and other areas that are highly disturbed by human land use activities.

This is an aggressive invasive species that outcompetes native vegetation and can colonize quickly. There are a vareity of different treatment options such as mechanical, chemical, and biological; however, it takes a few years before treatment efforts become effective. Spotted Knapweed is considered allelopathic; it produces chemicals that influences how other species

grow and survive. This has a huge impact on the biological diversity within the landscape in which it grows.



Figure 9. Spotted Knapweed Plant. Photo Credit: MN Department of Agriculture.



Figure 10. Spotted Knapweed Leaves. Photo Credit: University of Minnesota Extension-Amy Rager.

Fun Fact:

The Minnesota Department of Agriculture and the University of Minnesota Extension has produced a [Spotted Knapweed Lifecycle and Treatment Timing Handout](#).

Fun Fact:

Seedhead weevils, Root weevils, Seedhead flies, Goats, and Sheep are all biological agents that can be utilized to manage Spotted Knapweed.



Flooding, Its Impacts, and What We Can Do

This spring and early summer have been wet! Even with our drought conditions within the last few years, we are considered above normal precipitation for this time of year!

Le Sueur County has received anywhere from 2 to 3 times more precipitation than what normally occurs in the Spring/Early Summer.

Le Sueur County has received 6-15 inches of rain from June 12th- June 26th!

All of this precipitation has caused our rivers, streams, lakes, and ditches to reach major flooding stages which has caused damages to homes, business, roads, parks, utilities, bridges, dams, and much more! Furthermore, flooding can negatively impact nutrient and sediment loading into water resources, increase risk of groundwater contamination, and increase the risk of spreading aquatic invasive species.

Le Sueur County and the Le Sueur County Soil and Water Conservation District have been diligently working on or partnering with efforts such as the Cannon River Flood Study, Gorman Lake and Schmidtke Dam Repairs, and Storage Practices (ex: wetlands, multipurpose drainage management, stormwater basins, retention ponds, rain gardens, reducing impervious surface, and soil health practices) to help reduce impacts from peak flows and volumes!

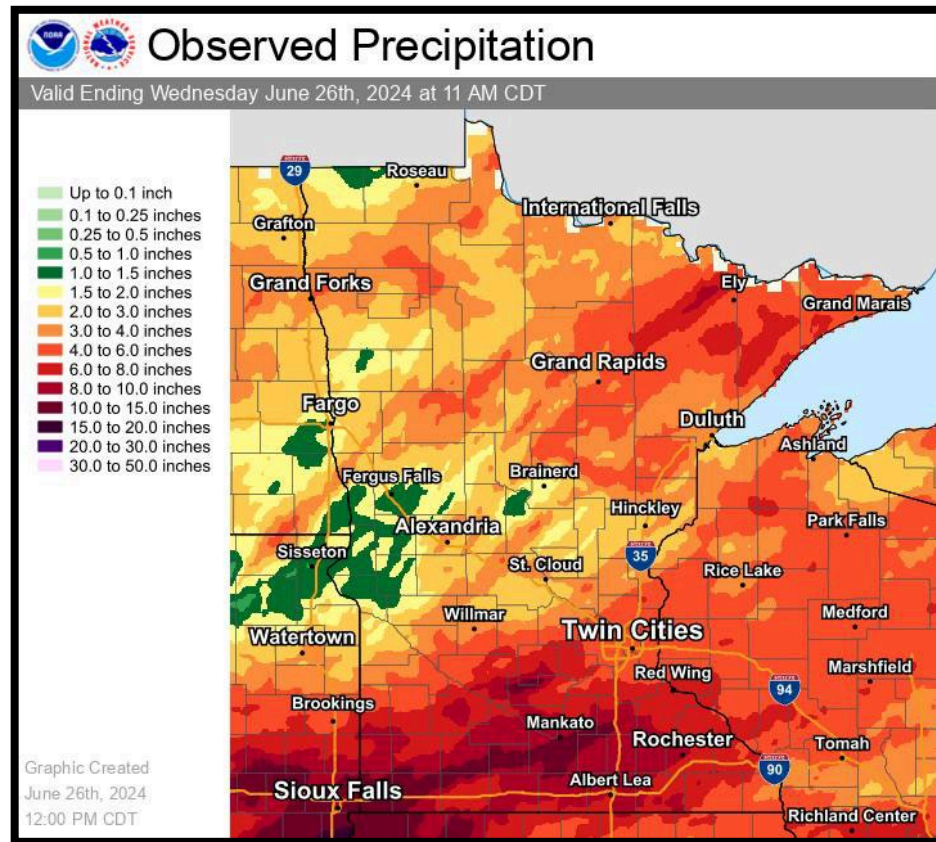


Figure 11. Observed Precipitation in Minnesota from June 12th-June 26th 2024. Photo Credit: National Weather Service-Twin Cities, 2024.

As we continue to have these large rain events, fluctuations in weather patterns, and land use changes, Le Sueur County and its residents will need to find create ways to build resiliency.



Figure 12. Minnesota River Access, Saint Peter, MN. *Photo Credit: Holly Bushman*



Figure 13. Hwy 99 Bridge in Saint Peter, MN. *Photo Credit: Holly Bushman*



Figure 14. City of Waterville-Flooded Seasonal Campers. *Photo Credit: Mike Schultz*



Figure 15. City of Waterville Hwy 13. *Photo Credit: Mike Schultz*

Contact Information

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To see which DNR staff is the Area Hydrologist for your region, please click on the following link:

https://files.dnr.state.mn.us/waters/area_hydros.pdf