60 Day Formal Review Comments

Date of review: 6/29/23-8/28/23

Commenter	Section	Page #	Comment	Change to be made in the plan (Y/N)	Response
MDH			We feel the plan is written in a manner that incorporates MDH's priority concerns pertaining to groundwater and drinking water sufficiently, while reflecting the priorities of residents of the watershed and the capacities of the local entities that will implement the plan.	N	
MPCA			All the MPCAs comments during the planning process have been incorporated into this draft. Information from the MPCA's water quality database and reports have been utilized in the Plan development and the priorities outlined during the scoping letter have been included in the draft Plan. As a result, we do not have any additional comments as part of the official 60-day review and comment period.	N	
DNR	6	72	The plan includes specific actions to enhance 2 miles of shoreline or streambank around focus lakes and streams (**see Section 6, "Shoreland Management", p. 72**) through buffers and "soft armor" among other actions. However, the plan could be strengthened by further clarifying or defining what the concept of "soft armor" means in both intent and practice as it relates to limiting rip rap and other non-natural means of shoreline protection.	Y	Added in parentheses in the shoreline action page 72: (Follow NRCS or BWSR practice requirements)
DNR	6	69	**Review of internal phosphorus load control** The plan includes specific actions to reduce phosphorus loading through in-lake management techniques, specifically alum treatment (**see Section 6, "Targeted implementation schedule",**	N	Noted, and information passed along to client for lake management planning. BWSR requires these items during

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			p. 69), and notes that alum treatment has already been conducted on Cranberry Lake (**see Section 5, "Measurable goals", p. 50**). In 2020, the MN Pollution Control Agency, in collaboration with other state agencies, completed a state and regional review of internal phosphorus load controls. Conclusions made from the report include some of the following strategies which should be strongly considered prior to making final determinations on which lakes (if any) to perform in-lake treatments: • Scientific literature suggests the duration of internal load control effectiveness can vary. Scaling the approach as appropriate for a particular lake (e.g., proper dosing of alum) and controlling external nutrients will increase the effectiveness and longevity of internal load control methods. • Lake-specific data and modeling is critical to 1) determine how to phase and balance proposed internal vs. external load reduction efforts, and 2) quantify anticipated internal load reductions. • If external load is a major source of phosphorus, the effectiveness and longevity of internal reductions could be compromised. Where alum treatments are proposed, conduct a NHIS inventory as part of the application review process to determine if any threatened or endangered species are present. Where protected plant or animal species occur, work with DNR staff to evaluate the potential effects of alum treatment on these species as part of the treatment review process. • Work with agency partners to evaluate the effectiveness of alum treatments		feasibility studies to implement internal phosphorus loading control. See page 4-5 here: https://bwsr.state.mn.us/sites/default/files/2023-08/FY24_25%20WBIF%20policy%20final.pdf

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DNR	7	75	**Aligning Mississippi River regional and national goals with statewide goals** The plan includes a set-aside chapter that addresses goals and strategies to protect and enhance water quality within the Mississippi River (**see Section 7, "Mississippi River", p. 75**). We are pleased to see this important asset featured in the plan, highlighting the river's importance not only regionally, but nationally as well. However, the plan could be strengthened by identifying the statewide goal of reducing phosphorus and nitrogen within the Mississippi River by 45% by the year 2040 and noting that comprehensive watershed plans like this one are the means of achieving this goal.	Y	Text on the statewide goal added to Section 7, page 80.
DNR	4	33	**Watershed Health Assessment Framework (WHAF) as a prioritization measure/method** The plan includes a set of prioritization methods for unimpaired waters that are the highest value and most at-risk. These appear to be expressed as 4 main management strategies (**see Section 4, "Focus Resources", Table 4.1, p. 33**). Similar prioritization strategies appear to have been identified for the Pine River Watershed 1W1P and the current (adopted) local Crow Wing County Comprehensive Water Management Plan. These strategies are an intuitive, effective way to prioritize, target, and measure outcomes of water quality protection efforts. And we understand that this approach to prioritization has resulted in many successes. The DNR's Watershed Health Assessment Framework (WHAF) is a science-based tool to help resource professionals understand watershed health (including components that may be missing in the draft plan for this watershed). The tool also provides a structured approach to help resource professionals prioritize restoration and protection strategies. While it might not be feasible to incorporate into the plan at this time, at the plan's midpoint review we	N	Comment noted and passed along to the client for implementation

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			recommend collaborating with the DNR to seek opportunities to incorporate elements of the WHAF framework when prioritizing implementation strategies and actions. DNR staff can assist with these efforts.		
DNR	8	87	**Aggregate mining** The plan includes a short paragraph on "aggregate management" that identifies the DNR's goal of using existing land use ordinances to create mining districts, among other items (**see Section 8, "Implementation Programs", p. 87**). The plan adequately addresses this in a general statement. As part of the plan's midpoint review, we recommend identifying specific areas within the watershed where potential aggregate mining issues are emerging, and formulating strategies and actions to implement the DNR's aggregate mining priorities.	N	Noted for midpoint review.
BWSR			One of the critical ideas of One Watershed, One Plan Program is that your planning process use the best available science. We thank the partnership for addressing our initial Plan comments by using information from the Watershed Restoration and Protection Strategy (WRAPS), Mississippi River Brainerd Watershed Landscape Stewardship Plan (MRBLSP), and working with agency partners to outline groundwater related concerns to prioritize areas for implementation and set measurable goals.	N	

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BWSR			The MRBCWMP is an all-inclusive plan to address surface and groundwater, water quality and quantity, habitat/forestry and land use as per the 1W1P Plan Content Requirements adopted by the Board of Water and Soil Resources (BWSR) on August 29, 2019 (Version 2.1). Implementation actions in the plan consider a broad range of tools, including conservation practices, permanent forest protection, capital improvements, official controls, and other tools and programs necessary to achieve the goals of the plan. The MRBCWMP meets the Plan Content Requirements.	N	

GOAL: SHORELAND MANAGEMENT

Enhance **2 miles** of shoreline or streambank around focus lakes and streams.

SURFACE WATER HABITAT/FORESTRY

What		Where	Management Zone 10 yr Outputs				Who	When					Costs
Action	**Program**	**Priority Resources**	**North**	**Central**	**South**	**Output for Goal Tracking?**	**Responsibility (Bold = Lead)**	**2024-2025**	**2026-2027**	**2028-2029**	**2030-2031**	**2032-2033**	**Estimated Total 10-Year Cost**
Lakeshore Restoration (follow NRCS/BWSR standards) *buffers, soft armor, capture upslope water, coir logs, willow wattles, berms, aquatic vegetation, technical assistance, tree sale*		Focus Lakes	0.6 miles enhanced	0.6 miles enhanced	0.6 miles enhanced		**DNR, SWCDs, Counties**, Lake Associations, Private Consultants	●	●	●	●	●	**$1,000,000**
Riparian Enhancement *stabilize gullies, capture upslope water, soft armor, reconnect floodplain*		Focus Streams	Included in above	Included in above	Included in above		**Cities**, SWCD, DNR	●	●	●	●	●	**$528,000**
Soil Loss and Buffer Law (103F) *perennial vegetative buffers of up to 50 feet along lakes, rivers, and streams and buffers of 16.5 feet along public ditches*		Ditches	Maintain 100% Compliance	Maintain 100% Compliance	Maintain 100% Compliance		**Counties, SWCDs**	●	●	●	●	●	**$460,000**
Shoreline Ordinance *see detailed comparison between counties in Table 8.1*		Focus Lakes and Streams	Aitkin and Crow Wing County Ordinances	Crow Wing and Morrison County Ordinances	Morrison and Todd County Ordinances		**Counties**, **Cities**, SWCDs, MHB, Townships	●	●	●	●	●	**$460,000**
Outreach Program *give away native grass seeds, shoreland workshops/educational presentations, social media*		Watershed-wide	One workshop in the watershed per year				**Counties**, **SWCDs**, **Cities, UMN Extension**, Lake Associations, 4-H	●	●	●	●	●	**$50,000**
Data Collection *complete impervious surface maps for all lakes in the watershed, develop DNR Shoreline Disturbance Tool, inventory stream crossings*		Focus Lakes	Completed maps	Completed maps	Completed maps		**SWCDs, County**	●		●		●	**$50,000**
Update Shoreline and Riparian Inventory *use new LiDAR to measure shoreline changes since the last LiDAR and target projects*		Focus Lakes and Streams	Complete shoreline and riparian inventory for Aitkin County	Complete shoreline and riparian inventory for Crow Wing County	Complete shoreline and riparian inventory for Todd and Morrison Counties		**SWCDs, DNR**	●	●	●	●	●	**$200,000**
Social Awareness of Natural Shoreline *Explore development of a shoreland incentives program*		Focus Lakes	Meet at least twice to explore possible programs and gather information on successful programs in other states.				**SWCDs, Counties,** DNR		●	●			**staff time**
Drainage systems *inventory drainage systems and current status and locations for channel restoration and remeander, bank stabilization*		Drainage systems	Inventory at least one drainage system	-	Inventory at least one drainage system		**Drainage Authorities**, DNR, BWSR			●	●	●	**$40,000**
							Level 2 Total (Baseline + WBIF)						**$2,788,000**
							Level 3 Total (DNR, Lessard Sams Outdoor Heritage Fund, Midwest Glacial Lakes)						Anything above could also be paid for by Level 3

These goals are meant to both protect the current water quality in the Mississippi River and its tributaries, and make progress towards the Mississippi River TSS TMDL, outlined in Table 7.2. In addition, protection projects will enhance aquatic and terrestrial connectivity, riparian areas, and recreational opportunities.

The Minnesota Nutrient Reduction Strategy set a statewide goal of reducing phosphorus and nitrogen within the Mississippi River by 45% by the year 2040. Comprehensive plans such as this are the means of achieving this goal.

STACKING BENEFITS

Work toward these goals also makes progress towards reductions in phosphorus and sediment to the Mississippi River; retains stormwater (storage) and sequesters carbon in trees. For details see Appendix D.

Surface Water Quality Benefits	Phosphorus = 250 lbs/yr
	Sediment = 250 tons/yr
Climate Resiliency Benefits	Storage = 100 acre-feet
	Carbon = 118,850 tons

Some progress is already being made towards the TSS TMDL in the stretch from the Pine River to the Crow Wing River - the Whiskey Creek Project and Little Buffalo Creek projects implemented by the Crow Wing SWCD, Mississippi Headwaters Board, and cities of Baxter and Brainerd.

Upon the completion of this plan, additional funding will be available for projects to make more progress in the future.

Table 7.2. Mississippi River TSS TMDL.

Reach	County Area	TMDL	Progress
Willow River to Pine River (07010104-655)	Aitkin: 70% Crow Wing: 30%	59% reduction, 13,096 tons of sediment	
Pine River to Crow Wing River (07010104-656)	Crow Wing: 100%	25% reduction, 3,056 tons of sediment	Whiskey Creek Project, Little Buffalo Creek Project

Mississippi River in Brainerd