



Office of the Regional Director
DNR Central Region Headquarters
1200 Warner Road
St. Paul, MN 55106

June 30, 2021

Caitlin Brady and Skip Langer
Olmsted County Soil and Water Conservation District
2122 Campus Drive SE Suite 200
Rochester, MN 55904

Dear Mrs. Brady and Mr. Langer,

The Minnesota Department of Natural Resources (DNR) appreciates the opportunity to review the draft *Greater Zumbro River Comprehensive Watershed Plan*. The comprehensive plan is well written and targets water quality impairments while also including strategies to improve livability for watershed residents. The DNR commends the planning committees for their vision and dedication to plan development.

At the start of the planning process, DNR submitted six resource concerns with associated issues and strategies to address them. The plan addresses many of these concerns but we believe it would be improved by the following additions:

Resource Concern: Outdoor Recreation

Issue: Bacteria impairments of surface water

Aquatic recreation is an important focus of the DNR. The number of aquatic recreation impairments in the Zumbro River is a continued concern of the department. We suggest increasing the goal for the number of feedlot fixes and manure management plans to be developed in the next 10 years. The DNR believes that Goal GWQ-8 of “*fixing five non-conforming feedlots and developing 20 new manure management plans*” may not do enough to address bacteria loading and resultant aquatic recreation impairments

Issue: Public Water Access

The population of Rochester and its surrounding communities is anticipated to increase significantly over the life of this Comprehensive Watershed Plan. The DNR would like to see site-specific plan strategies aimed at increasing public water access to meet increasing demands for aquatic recreation opportunities. A strategy could be to “*survey the condition of canoe launches from Rochester to Kellogg to identify those in need of repair and sites where new launches could be built*”. Another strategy could be to “*construct fishing piers at Kalmar, Gamehaven, and Silver Creek reservoirs to improve accessibility for anglers*”. The DNR is ready to work closely with partners to improve public water access throughout the watershed.

Resource Concern: Altered Hydrology

Issue: Stream stability and habitat

We applaud the inclusion of strategies for addressing in-channel sediment loading and suggest an additional strategy focused on the lower Zumbro River to ***“support efforts by DNR, TNC, and the Wabasha County SWCD to reduce sediment loading, restore floodplain function, and improve habitat in the lower Zumbro River”***. The DNR is leading this effort and this strategy would help support future funding proposals for project implementation.

Table 5-3 lists a sediment reduction goal for Wells Creek of 0.9 tons/yr. Given this is a TSS impaired stream, this goal seems too low. In comparison Hay Creek, which does not have a TSS impairment, has a sediment reduction target of 6.6 tons/yr. The DNR is developing a management plan for the Wells Creek subwatershed based upon a stream stability and sediment supply study. This work estimates that 89% of the sediment load in Wells Creek is coming from the stream banks. An implementation strategy could be to ***“implement stream bank and riparian restoration on Wells Creek to reduce sediment loading and improve trout habitat”***. This strategy would also be beneficial to reducing sedimentation at the mouth of Wells Creek in Lake Pepin.

The DNR also suggests a strategy to ***“conduct stream stability and sediment supply studies in subwatersheds with high sediment loading identified by HSPF to identify where channel restoration would be most beneficial”***. Two subwatersheds to consider are Spring Creek and Trout Brook (Dumfries) which suffer from high stream bank and bluff erosion.

Issue: Aquatic connectivity and dams

The DNR would like to work with planning partners to replace low-head dams in the City of Rochester with rock arch rapids. The existing dams are hazardous and pose drowning risk. They are also barriers to fish movement. A strategy would be to ***“replace low-head dams with rock arch rapids in the Rochester Flood Control project area to improve public safety and fish passage”***.

The City of Rochester is planning to remove the Silver Lake dam and replace it with a series of rock rapids designed as a kayak course. The project is currently undergoing environmental review. Removal of the dam will be costly and highly visible but does not appear in the comprehensive plan. The DNR suggests a strategy to ***“explore the full range of opportunities to eliminate long-term maintenance of the dam, reduce sedimentation, allow fish passage, and improve recreational opportunities for kayaking and fishing”***.

Resource Concern: Conservation of Habitats and Rare Features

Issue: Native plant communities and biodiversity

The Zumbro River Watershed has a high number of calcareous fens with unique plant communities including threatened and endangered species. The DNR continues to work with the City of Rochester to protect fens from development and from alteration of groundwater levels. The City may be pursuing the purchase of the Marion 30 fen and surrounding land for inclusion in a planned regional park. This creates an opportunity to develop a fen education site with great potential to reach many people. We would like to see a strategy that ***“supports the purchase of the Marion 30 fen and creation of a fen educational center”***. The DNR can provide a wealth of information regarding fens and would assist in the development of educational information.

Resource Concern: Climate Change Impacts and Landscape Resiliency

Issue: Increased precipitation and effects on infrastructure

Given that both peak and base flows are increasing, DNR is concerned that undersized culverts are vulnerable to failure and detrimental to stream health. The DNR has been coordinating with counties and municipalities

throughout southeast Minnesota to ensure that new or replacement culverts and bridges are properly sized. We suggest adding a strategy to ***“conduct a culvert and bridge inventory to assess impacts on channel stability, fish passage, and public safety and use the results to target replacement of structures that are improperly sized or pose public safety risks”***. The DNR has conducted similar inventories statewide and could provide guidance and training.

Issue: Climate adaptation and landscape resiliency

Opportunities exist throughout the watershed to remove marginal agricultural lands from production and restore them to native conditions. We realize that counties are apprehensive about this type of land conversion. However, it may present a significant opportunity to improve landscape resiliency, water quality, and habitat. The DNR suggests a strategy such as ***“conduct an inventory of marginal agricultural lands and identify those that could be targeted for native prairie, forest, or wetland restoration to improve landscape resiliency, habitat, and water quality”***.

We look forward to our continued collaboration to address water quality impairments and protect unimpaired waters in the Zumbro River watershed while increasing aquatic recreation opportunities. If you have any questions regarding our comments, please contact Jeff Weiss jeffrey.weiss@state.mn.us.

Sincerely,



Grant L. Wilson
Central Region Director

ec: Megan Moore (DNR), Kevin Stauffer (DNR), Gretchen Miller (DNR), Barbara Weisman (DNR), Dan Lais (DNR), Brandon Schad (DNR), Joseph Brown (DNR), Jeff Weiss (DNR), Justin Watkins (PCA), Adam Beilke (BSWR), Todd Kolander (DNR), Dawn Bernau (MDA), Kristen Dieterman (PCA), Jennifer Ronnenberg (MDH)

2118 Campus Drive SE, Suite 100
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July 1, 2021

Greater Zumbro River Watershed Planning Partnership
c/o Caitlin Brady, Water Resources Coordinator
Olmsted County SWCD
2122 Campus Drive SE, Suite 200
Rochester, MN 55904

RE: 60-Day Formal Review of the Draft Greater Zumbro River Comprehensive Watershed Management Plan

Dear Greater Zumbro River Watershed Planning Partnership:

Thank you for the notification of the 60-day comment period of the draft Greater Zumbro River Comprehensive Watershed Management Plan (Plan).

The Board of Water and Soil Resources (BWSR) has completed review of the Draft Plan for compliance with [Minnesota Statutes section 103B.801](#) and BWSR [One Watershed, One Plan \(1W1P\) Plan Content Requirements 2.0](#) as well as inclusion of concerns submitted by BWSR during the request for priority issues and plan expectations (April 30, 2019).

The comments for each section of the Plan are organized into those items not meeting plan content requirements (must be addressed), those that marginally meeting plan content requirements (should be addressed), and recommendations for clarification or editing. Any suggestions related to formatting and language errors will be communicated in a separate attachment to the Planning Work Group and consultant.

BWSR submits the following comments:

A. EXECUTIVE SUMMARY (SECTION 1. EXECUTIVE SUMMARY)

The purpose of this section is to provide a condensed and concise, plain language summary of the contents of the Plan. It's meant to provide an explanation of the Plan and it's intended for current and future elected officials, staff, citizens, and stakeholders.

• **Not Meeting Plan Content Requirements**

- Acknowledgements, page xii: Based on the current Memorandum of Agreement (MOA), the Policy Committee will approve final submittal of this Plan to BWSR for approval. The Joint Powers Agreement (JPA) that is being approved by the partnership does not establish a Joint Powers Entity (JPE) and does not give the Policy Committee the authority to adopt the plan on behalf of each local government unit. Adoption of the plan will be needed by each individual partnership board or council. We recommend either replacing "adopted" with "approved" and moving this line ahead of the BWSR approval date, or simply deleting the line.

• **Recommended Clarification and Edits**

- Section 1.2 Planning Boundary and Subwatersheds, page 1-2: We recommend providing the percentages of land use categories to give a better description of the planning area.
- Section 1.6.1 Implementation Costs, Figure 1-1, page 1-6: This figure is difficult to decipher as a pie graph. Consider presenting in a different format such as a table for clarity.

B. LAND AND WATER RESOURCES NARRATIVE (SECTION 2. INTRODUCTION and APPENDIX C. LAND AND WATER RESOURCES INVENTORY)

This section of the Plan should be used to help explain why issues exist in the watershed and ultimately provides the justification for the actions identified in the Plan.

● **Recommended Clarification and Edits**

- Section 2.1 Purpose and Scope, page 2-1: The third paragraph states the Plan was developed under a JPA. It was an MOA that developed the framework to plan together for this group. The JPA was developed later during the planning with a focus towards plan implementation.

C. PRIORITY RESOURCES AND ISSUES (SECTION 3. IDENTIFICATION AND PRIORITIZATION OF ISSUES AND RESOURCES and SECTION 4. TARGETING OF FIELD PRACTICES)

This section is to include a prioritized list of issue statements that clearly conveys the most pressing problems, risks, and opportunities facing the watershed as well as maps depicting locations of priority resources. The measurable goals, targeted actions, and overall implementation plans and programs in the Plan should relate directly to priority issues.

● **Marginally Meeting Plan Content Requirements**

- Section 3.3.1 Priority Areas for Surface Water Quality, page 3-21: The second paragraph discusses “opportunity projects”. There should be some additional language included here to reference that other funding sources beyond Watershed Based Implementation Funding (WBIF) would be utilized or pursued for many of these projects. Or you could simply remove this paragraph as later sections (6.0) of the Plan cover this in more detail.

D. MEASURABLE GOALS (SECTION 5. ESTABLISHMENT OF MEASURABLE GOALS)

Measurable goals are the quantifiable changes in resource conditions expected upon the completion of the actions in this 10-year Plan. They should relate to the desired future condition (long-term goals) for the watershed and what percentage or amount of progress will be made during the Plan period (short-term goals).

● **Not Meeting Plan Content Requirements**

- Table 5-2: It appears some of the 10-year Goal Measures contain a reference to the associated item from the Implementation Schedule, but most do not. There also appears to be some inconsistencies with how these measures are stated in the Implementation Schedule. Please update and/or provide more detail for this column or simply provide the reference to avoid confusion between Tables 5-2 and 6-4.
- Table 5-2: Some of the 10-year Goal Measures appear to be missing a numeric goal (listed as “XXXX acres” or “XXXX projects” as an example). Was this an oversight or do you intend to establish these values by further study?

● **Marginally Meeting Plan Content Requirements**

- Table 5-2: Many of the goals have 10-year Goal Measures including “ongoing technical assistance/communication”. This may be better described within the narrative instead of included as a goal measure as it would be difficult to measure.
- Table 5-2: Goal GWQ-6 has a 10-year Goal Measure with targeted outreach near sinkholes and Decorah Edge features. Since this has a specific audience/priority area, could it be made more measurable? As an example, “10 mailings targeting property owners near sinkholes and Decorah Edge features”.

- Table 5-2: Goal ESC-3 calls for 10 streambank projects covering 5,000 feet. Was DNR consulted on this goal? Based on previous projects, couldn't measurability be estimated regarding the amount of sediment to be reduced by these projects? Also, you may want to add "up to" to either the number of projects or linear feet to provide some flexibility in achieving this goal.
- Table 5-2: Goal LR-4 has a 10-year Goal Measure of "net change in flow rate from individual developments". How will the partnership be able to measure this? There does not appear to be a corresponding item in the implementation schedule to accomplish this.

- **Recommended Clarification and Edits**

- Table 5-2: For Goal ESC-4, we recommend placing the "TBD" with a reference to the item from the implementation schedule that would establish the baseline adoption of these practices.
- Table 5-3: Long-term goals for Phosphorus, Total Suspended Solids, and Nitrate are listed as a percentage while 10-year goals are provided as load reductions. How do they compare? Can you also provide the load reduction for the long-term goals to indicate the pace of progress intended over the 10 years in comparison to the long-term goal?
- Table 5-3: There are no field-scale goal values for the 10-year goals in the Mississippi River – Lake Pepin (MRLP) subwatersheds like there are for the Zumbro River subwatersheds. Would these now be available with the terrain analysis BMP exercise that was recently completed in these subwatersheds?

E. TARGETED IMPLEMENTATION SCHEDULE (SECTION 6.1 IMPLEMENTATION SCHEDULE and TABLE 6-4. IMPLEMENTATION SCHEDULE)

It is anticipated that the targeted implementation schedule will be one of the most used portions of the Plan when it comes to implementation. It should include descriptions of actions that will meet each measurable goal, targeted locations of the actions, cost and funding of the actions, timeline for implementation of the actions, what indicators will be used to measure outcomes of the actions, and identify the roles and responsible government unit(s) for the actions.

- **Marginally Meeting Plan Content Requirements**

- Section 6.1.1.1 Cost-Share Field Practices, page 6-4: The outline for policies and processes states that the WAGZ will consider adopting cost-share policies. We recommend changing this to "will adopt" as a local policy will be necessary for the utilization of WBIF.
- Section 6.1.1.1 Cost-Share Field Practices, page 6-4: At the top of this page there is discussion on opportunity projects. Consider rewording this for clarification to talk about the project ranking spreadsheet that is being developed by the partnership. The "opportunity project" term is a little confusing. Maybe clarify by differentiating between projects identified in the terrain analysis exercise and those that are identified within targeted areas.

- **Recommended Clarification and Edits**

- Section 6 Targeted Implementation Program, page 6-1: The second paragraph references the JPA for detail on the distribution of program funding. If you are referring to subagreements, reimbursement by the fiscal agent, etc., this is likely to be detailed by the local implementation policy and would not be found within the JPA.
- Section 6.1.1.1 Cost-Share Field Practices, page 6-3: Language in the second paragraph about Lake Zumbro seems out of place here. This may be better located towards the end of Section 5 with narrative about the intended pace of progress towards measurable goals.
- Section 6.1.1.1 Cost-Share Field Practices, page 6-4: The Policy Advisory Committee is not defined until Section 6.4 of the Plan so the reader doesn't know who this committee is at this point. Portions of Section 6.1.1.1 that address project scoring/ranking, local policies, workflow, etc. may fit better later in Section 6.4, potentially under Work Planning.

- Section 6.1.1.1 Cost-Share Field Practices, page 6-4: The outline of policies and processes in this section simply refers to “WAGZ” a few times. You should clarify if this is referring to the PAC or another committee.
- Table 6-4: There should be an explanation for the red text showing the higher funding levels and outputs, either at the beginning of the table or as a footnote.
- Table 6-4, Items ADM-2 and ADM-3: The Measurable Outputs seem to be copied from ADM-1 and don’t fit these actions.
- Table 6-4, Item FLD-1: The Target/Focus Area for this action is referencing “Figure A-X”. Is this intended to be Figure C-26? Or will you be utilizing the Surface Water Priority Areas map?
- Table 6-4, Item SWQ-1: A significant portion of the plan area comprises the Level 1 priority area for surface water quality. What was the rationale to lump the Level 1 and 2 areas in this table while separating the Level 3 areas? It’s also noted that the increased funding level (red text) shows a greater increase in number of projects in the Level 3 areas compared to the Level 1 and 2 areas. This should be explained within the narrative of the Plan.
- Table 6-4, Item ESC-2: This action needs further description. What will the partnership do once they have reviewed waters that are not subject to the Buffer Law? Will they be prioritized for implementation of buffers or alternative practices and/or be enrolled in an easement program?

F. PLAN IMPLEMENTATION PROGRAMS (SECTION 6.2 REGULATORY ROLES AND RESPONSIBILITIES and SECTION 6.3 PLAN IMPLEMENTATION COSTS AND FUNDING)

Implementation programs in this section are meant to support the targeted implementation schedule and describe how actions will be implemented and how coordination between watershed partners will occur.

• **Recommended Clarification and Edits**

- Section 6.3 Plan Implementation Costs and Funding, Figures 6-1 and 6-2, page 6-17: Both figures are difficult to read due to the very small pie slices. Consider a different format to display this such as a bar graph or table.
- Section 6.3 Plan Implementation Costs and Funding, Table 6-3, page 6-18: As a reminder, WBIF cannot pay for monitoring/studies/modeling. There may be a few activities from the implementation schedule that you are including in this category that could be eligible (for example, targeting tools that help direct implementation). Also, we have generally seen a larger amount of funding from WBIF going towards Administration. No changes are required but this does seem a little low.
- Section 6.3.2 State Funding, page 6-19: The Targeted Watershed Demonstration Grant Program no longer exists, and the Accelerated Implementation Grants have not been available for the last few years. Consider replacing them with other grant programs such as WBIF and Clean Water Fund Projects & Practices that are more likely to be utilized by the partnership.
- Section 6.3.5 Collaborative Grants, page 6-20: The two committees mentioned here aren’t defined until Section 6.4. You may want to consider moving some of this language to Section 6.4.4 and simply referring to that section here.

G. PLAN ADMINISTRATION AND COORDINATION (SECTION 6.4 PLAN ADMINISTRATION AND COORDINATION)

This section discusses the type of organizational structure(s) that will be used to administer implementation programs and how the partnership will carry out the Plan.

• **Recommended Clarification and Edits**

- Section 6.4.4 Work Planning, page 6-23: The last paragraph on this page states that the annual work plan will be approved by each board or council in the partnership. Is this what is intended? Approval of the

work plan seems like it should be handled by the PAC. Presenting the work plan to the individual boards and council as an informational item might be more appropriate.

The Partnership is commended for your efforts in development of the Greater Zumbro River Comprehensive Watershed Management Plan. We look forward to working with you to bring this draft to finalization.

Sincerely,



Adam Beilke
Board Conservationist



Shaina Keseley
Clean Water Specialist

CC: Greater Zumbro River Watershed Planning Partnership Planning Work Group (via email)
Ed Lenz, BWSR Southern Region Manager (via email)
Julie Westerlund, BWSR One Watershed, One Plan Coordinator (via email)
Margaret Wagner, MDA Pesticides and Fertilizer Management Section Manager (via email)
Dawn Bernau, MDA Soil Scientist (via email)
Jeff Berg, MDA Water Policy Specialist (via email)
Carrie Raber, MDH Groundwater Restoration and Protection Strategies Coordinator (via email)
Jennifer Ronnenberg, MDH Regional Planner (via email)
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Dear Catlin,

Thank you for the opportunity to review the Zumbro River One Watershed One Plan (plan). The Minnesota Department of Agriculture (MDA) appreciates being able to review and provide comments.

The plan is laid out in a user-friendly way. We appreciate the consistent formatting that allows a reader to move between the different issue statements and measurable goals. The implementation tables are also well laid out and summarize a large amount of information found elsewhere in the plan. Overall, the plan has a lot of good information, however, it contains a lot of detail for an average reader.

Nitrate in groundwater is a high priority resource concern for the MDA and the plan contains several items that address this concern. As we reviewed this plan, the MDA appreciates how Drinking Water Source Water Management Areas (DWSMAs) were targeted for groundwater protection and the inclusion of the Township Testing Program results and Vulnerable Groundwater area map in the land and water inventory and targeting sections. We reviewed the implementation table and MDA is appropriately listed as a partner. We look forward to working together on these programs.

As mentioned in the plan, the MDA's [Township Testing Program](#) (TTP) provides nitrate testing to private well owners identified in targeted townships. The results of the TTP determines the actions (as is identified in the NFMP) that MDA will take in cooperation with local partners in the township(s). Township testing has been done in several areas of the Zumbro River watershed and this information can be incorporated in the plan. In the appendices on page C-25 Rice and Steele counties were left out. The final overview and plans are now complete for these two counties. Please reference both Rice and Steele counties TTP in the plan.

Table C-7 on page C-26 in the appendices needs to have the Steele county TTP results put in the table. They are now complete, and you can reference the link below. The total number of wells that are referenced in the plan will also have to be adjusted when you include the Rice and Steele County TTP data.

- Statewide map of TTP results:
(<https://www.mda.state.mn.us/sites/default/files/docs/2021-02/combinedttmapfs.pdf>)
 - Olmsted: [Olmsted County: Final Overview of Nitrate Levels in Private Wells, 2014-2015 \(PDF\)](#)
 - Wabasha: [Wabasha County: Final Township Testing Nitrate Report, 2017-2019 \(PDF\)](#)
 - Goodhue: [Goodhue County: Final Township Testing Nitrate Report, 2017-2019 \(PDF\)*](#)

- Rice: [Rice County: Final Overview of Nitrate Levels in Private Wells, 2017-2018 \(PDF\)](#)
- Dodge: [Dodge County: Final Overview of Nitrate Levels in Private Wells, 2016-2107 \(PDF\)](#)
- Steele: [Steele County: Final Overview of Nitrate Levels in Private Wells \(PDF\)*](#)

Some of this watershed is irrigated, therefore irrigation water management BMPs (for water and nitrogen management) may be of interest. See: <https://www.mda.state.mn.us/node/1313>

Table 4-1 BMP suitability by agro-ecoregions in the planning area. It is unclear why Nutrient and Manure Management 590 NRCS practice is not included in this BMP list. This is a suitable practice for all soil types. Nutrient Management is the first line item in table 4-3.

Under other funding sources (6.3.4) the University of Minnesota and the Forever Green Program could be listed.

Please let us know if you have any questions regarding these comments. Thank you.

Sincerely,

Dawn Bernau

Dawn Bernau

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Protecting, Maintaining and Improving the Health of All Minnesotans

6/30/2021

Caitlin Brady
Water Resources Coordinator
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Subject: Minnesota Department of Health Comments for the Greater Zumbro One Watershed One Plan - 60 Day Public Plan Review

Dear Caitlin,

The Minnesota Department of Health (MDH) Source Water Protection Unit appreciates the opportunity to review the draft Greater Zumbro One Watershed One Plan (1W1P). MDH commends the plan partners for including drinking water as a priority concern. Thank you for allowing MDH the opportunity to be part of the technical advisory committee and for incorporating our ideas and suggestions into the draft plan.

MDH comments include an assessment of priority concerns addressed from the initial comment letter dated April 30, 2019, and TAC comments to the draft plan submitted March 22, 2021.

Protection of drinking water for public water systems: consider Drinking Water Supply Management Areas (DWSMA) as priority areas within the watershed and provide technical and educational assistance to community, and non-community, non-transient public water systems.

This priority concern was addressed in the following ways:

1. *Section 3.2 Priority Issues, subsection 3.2.1 (page 3.9): identification of groundwater/drinking water contamination as a Level 1 issue. Subsequent discussion includes both public and private drinking water wells, nitrate and other contaminants of concern, and potential sources.*
2. *Section 3.3 Spatial Prioritization of Issue Areas, subsection 3.3.2 (pages 3.21-22): assigning specific criteria to prioritize deep groundwater separately from near-surface groundwater. Criteria includes sensitivity of near surface material, water chemistry results, localized geologic controls, and well characteristics.*
3. *Table 5-2 Measurable Goals: creation of long-term goal "Achieve decreasing nitrate trends in all public drinking water supplies and private wells that are tested." This long-term goal has associated 10-year goals of "Provide annual education/outreach opportunities to all communities with MDH approved Wellhead Protection Plans, and*

BMP technical assistance for all moderate and high vulnerable public water suppliers.”, and “Establish nitrate-nitrogen trends for all public systems with average concentrations ≥ 3 ppm over the last 10 years; identify systems with chronically high nitrate concentrations relative to the MCL.”

4. *Table 6.4 Implementation Schedule: a total of 22 groundwater quality actions, including GWQ-6: Implement projects to provide adequate wastewater treatment to unsewered communities/areas (2 over 10 years), GWQ-8: Provide free and/or reduced cost well testing in groundwater quality priority areas, targeting non-community public suppliers (transient and non-transient) (1500 samples over 10 year), GWQ-12: Distribute education materials increasing resident awareness of, and promoting practices to reduce nitrogen loading to groundwater in DWSMAs (2 news articles per year), GWQ-14: Organize and/or facilitate meeting opportunities for public water suppliers to coordinate groundwater protection efforts (1 meeting per year), GWQ-22: Review and recommend updates to local ordinances, if needed, addressing infiltration in vulnerable areas.*

Protection of drinking water sources for private wells: utilize information regarding pollution sensitivity of the upper most aquifers and wells, and nitrate and arsenic results from well testing to further target areas within the watershed for implementation activities.

This priority concern was addressed in the following ways:

1. *Section 3.2 Priority Issues, subsection 3.2.1 (page 3.9): identification of groundwater/drinking water contamination as a Level 1 issue. Subsequent discussion includes both public and private drinking water wells, nitrate and other contaminants of concern, and potential sources.*
2. *Section 3.3 Spatial Prioritization of Issue Areas, subsection 3.3.2 (pages 3.21-22): assigning specific criteria to prioritize deep groundwater separately from near-surface groundwater. Criteria includes sensitivity of near surface material, water chemistry results, localized geologic controls, and well characteristics.*
3. *Table 5-2 Measurable Goals: creation of long-term goal “Achieve decreasing nitrate trends in all public drinking water supplies and private wells that are tested.” This long-term goal has associated 10-year goals of “In groundwater priority areas provide all private well owners access to well testing programs and education about water quality specific to drinking water”, and “Establish nitrate-nitrogen trends for monitored private wells with average concentrations ≥ 3 ppm over the last 10 years located in groundwater priority areas; identify wells/areas with chronically high nitrate concentrations relative to the MCL.”*
4. *Table 6.4 Implementation Schedule: a total of 22 groundwater quality actions, including GWQ-1: Provide financial assistance to seal abandoned or unused private wells with focus on groundwater target areas (40 per year), GWQ-7: Monitor private groundwater wells for nitrate, bacteria, and other emerging contaminants, initiate special study on emerging contaminants, GWQ-9: Work with state partners to assess groundwater quality data, identify trends in nitrate concentrations in residential wells, and identify priority action areas (create trend analysis and priority action areas), GWQ-20: Distribute education materials regarding private well maintenance, capping, and closure (1 news article per year), GWQ-21: Host workshops for well maintenance (1 per year).*

Prioritize sealing of unused and abandoned wells: this is a central practice in protecting groundwater quality.

This priority concern was addressed in the following ways:

1. *Table 5-2 Measurable Goals: creation of long-term goal “Reduce risk to public health through appropriate well management and maintenance.” This long-term goal has associated 10-year goal of “Reduce E. coli and other contamination through sealing of abandoned private and public wells.” and “Reduce risk to public health from wells through education and outreach regarding proper construction, maintenance, and sealing/abandonment of wells.”*
2. *Table 6.4 Implementation Schedule: a total of 22 groundwater quality actions, including GWQ-1: Provide financial assistance to seal abandoned or unused private wells with focus on groundwater target areas (40 per year), GWQ-2: Seal abandoned or unused high-capacity wells, with an emphasis on groundwater target areas. (4 wells over 10 years).*

Prioritize drinking water supply management areas impacted by nitrate: prioritize these protection areas by working with landowners on management of nitrogen from multiple sources. Use best information for establishing background levels from human-sourced and focus on trend data to better understand long-term response.

This priority concern was addressed in the following ways:

1. *Section 3.2 Priority Issues, subsection 3.2.1 (page 3.9): identification of groundwater/drinking water contamination as a Level 1 issue. Subsequent discussion includes both public and private drinking water wells, nitrate and other contaminants of concern, and potential sources.*
2. *Table 5-2 Measurable Goals: creation of long-term goal “Achieve decreasing nitrate trends in all public drinking water supplies and private wells that are tested.” This long-term goal has associated 10-year goals of “Reduce nitrogen loading to groundwater through the implementation of field practices and reduction of fertilization rates/increased nitrogen use efficiency.”, and “Minimize groundwater contamination resulting from infiltration in the Decorah Edge, near sinkholes, and other areas of Karst geology through regulation, incentives, and education.”*
3. *Table 6.4 Implementation Schedule: a total of 22 groundwater quality actions, including GWQ-3: Implement practices to reduce or limit nitrate movement into groundwater. (metrics determined in surface water quality sections), GWQ-12: Distribute education materials increasing resident awareness of, and promoting practices to reduce nitrogen loading to groundwater in DWSMAs (2 news articles per year), GWQ-16/17: Cooperate with agricultural producers to develop site-specific nutrient management plans and manure management plans (30 each over 10 years), GWQ-22: Review and recommend updates to local ordinances, if needed, addressing infiltration in vulnerable areas.*

General comments:

- Page C-22, Table C-6: Not updated with information provided by MDH in April 2021.
- Continue communicating with MDH about agency specific grant opportunities for public water systems, private well owners, and LGU partners.
- MDH priority concerns have been addressed in the draft plan, no additional recommendations at this time.

MDH looks forward to providing continued support and technical assistance with the implementation of the plan. We commend the planning team for their work in developing the plan. If you have any questions, please contact me at (507) 517-4118 or jennifer.ronnenberg@state.mn.us.

Sincerely,



Jennifer Ronnenberg, Principal Planner
Minnesota Department of Health
Source Water Protection Unit
18 Woodlake Drive SE
Rochester, MN, 55904

CC: Mark Wettlaufer, MDH Source Water Protection Unit
Bob Tipping, MDH Source Water Protection Unit
Carrie Raber, MDH Source Water Protection Unit
Chris Elvrum, MDH Well Management Section
Adam Beilke, BWSR Board Conservationist
Shaina Keseley, BWSR Clean Water Specialist
Jeff Weiss, DNR
Justin Watkins, MPCA
Dawn Bernau, MDA

July 2, 2021

Caitlin Brady, Water Resources Coordinator
Olmsted County Soil & Water Conservation District
2122 Campus Drive S.E. #200
Rochester, MN 55904

RE: 60 Day State Review – Draft Greater Zumbro River Comprehensive Watershed Management Plan

Dear Caitlin Brady:

On May 3, 2021, you made available the Greater Zumbro Comprehensive Watershed Management Plan for a 60-day review by state agencies. The Minnesota Pollution Control Agency (MPCA) staff appreciates the opportunity to review and submit comments on the Draft Plan. This letter provides comments from staff of the MPCA.

The MPCA's staff review of the Plan is guided by the MPCA's priority concerns letter, sent to you at the end of April 2019. Preliminary comments on various components of the Plan were submitted by the MPCA on November 13, 2020, and March 22, 2021. The MPCA notes and appreciates that these comments were largely addressed and are reflected in the 60-day review draft. Overall, our review will assess the Plan content in the context of the identified concerns and the application of MPCA products.

Estimated Pollutant Loading (Table 4-2)

HSPF modeling of pollutant loading estimates was used to prioritize areas for actions to address surface water quality degradation and to estimate pollutant reduction goals in the Plan. Appendix C 8.7.1 states that HSPF modeling has not been performed for the Mississippi River Lake Pepin watershed, however MPCA has completed HSPF modeling for this watershed, the most recent version was completed in 2019 (See Mississippi River – Lake Pepin Tributaries: HSPF Model Scenario Report, Tetra Tech, 2019).

Comments were previously submitted regarding the estimated pollutant loading values provided in Table 4-2 of the Plan. These comments were addressed and pollutant loading values in the Plan nearly match those provided in the original modeling technical reports of both the Zumbro River Watershed and Mississippi River Lake Pepin Tributary Streams. Additionally, the Root River Field to Stream Partnership provides a good real-world comparison to these modelled values; a summary of the Partnership's findings can be found here <https://www.mda.state.mn.us/sites/default/files/2019-10/rootrivfieldrunoff2019.pdf>. It is noted that the sediment loading values provided in Table 4-2 in the Hay Creek, Wells Creek, and Lake Pepin planning subwatersheds are low, especially when compared to modelled values in a neighboring subwatershed (Belle Creek). However the values provided in Table 4-2 are consistent with those in the original modeling technical reports.

BMP Pollutant Removal (Table 4-3)

Section 4.2.4.1 states that HSPF-SAM users can adjust the values of BMP treatment effectiveness or use the default values present in the application, however it is not specified which method was used to produce the pollutant removal values in the Plan. Furthermore, the pollutant reduction percentages

currently in the Plan do not match those present in the SAM BMP Efficiency Table. For example, a comparison of values in Table 4-3 of the Plan and values in the SAM BMP Efficiency Table for the Water and Sediment Control Basin BMP (which does not remove nitrogen from the interflow or baseflow channels) are provided below.

BMP	Average TN Reduction (%)			Average TP Reduction (%)			Average Sediment Reduction (%)
	Surface	Interflow	Baseflow	Surface	Interflow	Baseflow	Surface
Water and Sediment Control Basin (Table 4-3)	82	52	23	85	54	24	90
Water and Sediment Control Basin (SAM BMP Efficiency Table)	82	0	0	85	0	0	90

It is recommended that the default pollutant removal efficiencies be used to reflect the best available information and application of available tools. The Plan should not indicate that BMPs designed to treat surface runoff are significantly effective nitrogen removal BMPs. Please clarify whether default efficiencies or user defined efficiencies were used and explain how the pollutant reduction values were derived. MPCA staff would welcome a meeting to discuss these values.

Watershed Storage Goal

HSPF modelling does provide a flow reduction efficiency for BMP practices. It would be good to utilize this information in Table 4-3, 5-3, and others to estimate the flow reduction potential for implementation and evaluate watershed storage and flow reduction goals.

MPCA looks forward to seeing subwatershed-specific storage and peak flow goals that will be developed from modeling results.

Protection of Base Flow and Lakes

The MPCA's priority concerns letter highlighted two key protection efforts in the planning area: protection of the watershed's lakes, and protection of baseflow especially in coldwater trout streams. The Agency would like to stress the importance of these resource concerns. Section 3.2.8 does mention the connection between groundwater resources and base flow of the region's high quality trout streams and items FWH-8 and FWH-3 in the Implementation Schedule have fairly general activities aimed at the protection of trout streams, however the agency would like to emphasize the need for thorough and early monitoring, analysis, and planning for the protection of the quantity and quality of base flow to the planning area's trout streams.

During the development of the Plan the MPCA released a memo titled “Phosphorus Effluent Limit Review: Zumbro River Watershed”. This memo provides an overview of the current condition of Lake Zumbro, the applicable water quality standards, and proposed phosphorus limits for permitted facilities. Historical reductions from waste water treatment facilities upstream of Lake Zumbro have improved water quality in the lake, however, to continue to protect the lake, additional non-point reductions of phosphorus are needed. The agency acknowledges that there are many proposed project sites located upstream of Lake Zumbro that will provide overall pollutant reduction benefits and anticipates that these projects will aid in the protection of Lake Zumbro.

Nitrate-nitrogen reduction

Reduction of nitrate-nitrogen contamination of surface and ground waters is a top priority in the region. Prioritization for nitrogen work in southeast Minnesota should follow a “layering” approach: focus on areas that show high nitrate loading (per model), have drinking water issues (per MDH and/or private well analysis) and show biota stressed by nitrate (per stressor identification). The Plan’s prioritization strategies have followed this recommendation.

Minnesota’s Nutrient Reduction Strategy (NRS) illustrates that the Phase 1 Milestone (20% reduction in nitrogen) could be achieved in the Mississippi River Major Basin with a mix of BMPs. Reduced fertilizer rates on corn, along with shifting fall fertilizer applications to spring, account for an estimated 13.6% reduction from all nonpoint source nitrogen loads to the Mississippi River. Vegetative cover BMPs reduce another 5% of nonpoint nitrogen load, and another 1.4% reduction is achieved through constructed wetlands and controlled drainage BMPs. The agency would like to emphasize that it is well documented that the most effective methods for reducing nitrate-nitrogen contamination from the agricultural landscape are source control (fine tuning nitrogen rates, split application, crediting legumes and manure) and vegetative scouring of nitrogen (growing perennial crops and/or cover crops) rather than active treatment of the contaminated water. The Plan’s discussion of effective nitrogen reduction BMPs should match that in the NRS, which is a statewide general guidance developed by stakeholders and an interagency group.

The MPCA also recommends use of the Basin Alliance for the Lower Mississippi in Minnesota (BALMM) Nitrogen Memo (<https://www.pca.state.mn.us/sites/default/files/wq-b12-04.pdf>) as it identifies regional gaps regarding data, tools, and understanding of nitrate pollution that the partnership could contribute to, where appropriate.

Climate Change Considerations

The Minnesota may experience warmer temperatures, and wetter weather due to the worldwide problem of climate change. To reduce the impacts of climate change, Minnesota has set a goal to reduce greenhouse gas emissions by 80% by 2050. Agriculture accounts for approximately ¼ of Minnesota’s greenhouse gas emissions, so strategies to reduce emissions from this sector are critical to reaching statewide goals. Many of the strategies in the Plan target reductions in erosion and increases in soil health, often these strategies also have greenhouse gas reduction benefits. MPCA’s technical report estimates the impact of 21 different agriculture best practices on greenhouse gas emissions (<https://www.pca.state.mn.us/air/agriculture-and-climate-change-minnesota>). As the Partnership begins implementation and tracking of associated pollutant reductions, MPCA recommends incorporating a greenhouse gas component.

Caitlin Brady

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General Corrections

Table 6-4, column 4, 'Applicable Goals (see Table 4-1)'. The reference to Table 4-1 does not appear to be accurate.

Again, thank you for the opportunity to review and comment on the draft Plan. If we may be of further assistance, please contact Kristen Dieterman at 507-206-2626 at the MPCA's Rochester Office.

Sincerely,

Wayne Cords

This document has been electronically signed.

Wayne Cords
Manager
South Section
Watershed Division

WC:jw

CC: Shaina Keseley, BWSR Clean Water Specialist (via email)
Adam Beilke, BWSR Board Conservationist (via email)
Margaret Wagner, MDA Pesticides and Fertilizer Management Section Manager (via email)
Dawn Bernau, MDA Soil Scientist (via email)
Jennifer Ronnenberg, MDH Regional Planner (via email)
Jeff Weiss, DNR Clean Water Hydrologist (via email)
Juline Holleran, MPCA Watershed Information and Assistance (via email)
Jeff Risberg, MPCA Watershed Unit Coordinator (via email)
Justin Watkins, MPCA SE Watershed Unit Supervisor (via email)
Kristen Dieterman, MPCA Watershed Project Manager (via email)

From: [John Weiss](#)
To: [Brady Caitlin](#)
Subject: my comments on 1W1P plan
Date: Monday, June 21, 2021 3:30:19 PM

* Green bridge picture in first page - it's is longer there (I'm assuming it was the one on Wabasha County Road 7 below Lake Zumbro Dam. But people still remember it and love it.

* I would put enhanced soil health in top tier. of priorities. It's a relatively new idea to me but the more I drive around the watershed and see too much exposed soil and see dirty water, the more I think it should be a key, maybe THE key because so much else would work off it. If we improve soil health, I think many other factors would follow.

Also, to get this to work well, we need the buy-in of urban people, and city slickers don't see much about dirty water etc. BUT if we tell them the soils on which they depend for food are being depleted, degraded or ignored, that would be easier to grasp. Plus it's something new so those who know something about it might get on board more with this. If we write that we need cleaner water and less sediment, that's yesterday's news. We've known this for years so if it's written that this is what the big planning process came up with, they might think - ghee, I could have told you that. Why did we need all the planners etc.

Farmers might get more excited too if they knew what they were doing was great for them.

Finally, it could be a good metric. I'm assuming that there is a way to measure soil health and that could be something you could measure and tell people it's getting better, or worse. We can also use nitrates and water clarity.

Is this meant for the average reader? If so, we need a place that simply states the overall priorities as well as cures. I probably understand better than average reader but I was still a bit confused.

I'm guessing this is more of a technical document for the experts and a more reader-friendly one will be coming out later. Or at least I hope so.

One thing that caught my eye in first meeting was catch basins. There are a ton of them out there but most I've seen are in wretched shape - filled in etc. Rejuvenating

them and adding more sounds like an excellent idea because they tend to be in areas not suitable for row crops and would be good watering holes for livestock (maybe wood duck habitat too). But I'm wondering if we couldn't buy easements to have them at base of tiling systems. That would probably take ag land out of production but the benefits to river and society could be great - slow the flow etc. Landowners could let them dry now and then to dig them out and get some topsoil and nutrients back.

p 4.5 it seems the total gains are really modest compared with total problem. Table 4-3 shows some very promising results in lowering so many pollutants but Table 4-4 shows barely a blip. For example, 484,000 pounds of total nitrate but only reduction of 1,380 tons. I suspect I'm misreading that table but it's really confusing.

After this, it got much more technical and I frankly don't feel competent to say anything about it.

On Jun 21, 2021, at 8:37 AM, Brady Caitlin <brady.caitlin@co.olmsted.mn.us> wrote:

Hi John,

Yes, please send comments to me and you can also 'cc adam beilke, our Board of Water and Soil Resources Board Conservationist: adam.beilke@state.mn.us

Thanks,

Caitlin Brady

Water Resources Coordinator

Olmsted Soil and Water Conservation District

(w) 507-328-6396

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<image003.png><image004.png>

From: weiss239@gmail.com <weiss239@gmail.com>

Sent: Thursday, June 17, 2021 7:12 PM

To: Brady Caitlin <brady.caitlin@co.olmsted.mn.us>

Subject: Re: Update on Oxbow - Zumbro Samples

CAUTION: This email originated from outside of the organization. Do not click links or open