WinLaC 1W1P

Formal Review: Response to Comments

KEY

Material Comments represent changes in material and content of the plan.
Editorial Comments represent spelling, grammatical, clarification, or visual issues.
Note Generally consist of a statement expressing a perspective.

Commenter	Comment #	Section	Page/ Figure	Comment	Material	Editorial	Note	Plan Change Made (Yes/No)	Comment Response / Action
BWSR	1	4		Page 4-2: BWSR recommends additional narrative describing the short-term goal to recognize the lack of available tools or models that can estimate nitrogen loading to groundwater through leaching. The narrative should also clarify that PTMApp is being used as a surrogate for this issue, since it measures overland nitrogen loading.	x			Y	Language will be added to the plan to address PTMApp's limitations and use as a surrogate for vertical leaching. See response to MPCA Comment #2.
BWSR	2	4		Pages 4-6 and 4-7: "Number of incentives" is listed as the indicator for the short-term goal on the karst issue, but no specific value is provided on the number of incentives to make this a measurable goal.	x			Y	Metric revised to match output numbers in Action Table (one workshop per year)
BWSR	3	4		Page 4-10: Our previous comment asking for the Lake Winona phosphorus reduction goal to be provided as a load was addressed. However, the value entered (94 pounds per year) does not match the goal provided on page 23 of the Lake Winona Water Quality Improvement Plan. That plan utilized updated monitoring and modeling after the 2016 TMDL was completed for Lake Winona. To meet state water quality standards, that plan found that total phosphorus must be reduced by 210 pounds (15% reduction) from the watershed entering the Northwest Bay, followed by an in-lake alum treatment and 46-pound reduction in total phosphorus from the direct watershed for the Southeast Bay.	x			Y	Load goal revised to mirror the Lake Winona Water Quality Improvement Plan. Language about alum treatment added to 4-10 narrative.
BWSR	4	5		Page 5-23: For Action #8 (well water system upgrades), the output was changed to "number of systems upgraded" but a specific value is not provided which does not fully address our previous comment that a measurable output is needed.	x			Y	Revised language to "water treatment systems" instead of water softeners , with an output of 7 / year
BWSR	5	5		Page 5-24: For Action #11 (drainage management), our previous comment has not been addressed regarding a measurable output. A specific number of drainage management projects, field days, and/or communications should be provided to address this.	x			Y	Revised to: Output: one written communication over 10-year plan Cost: $2,000 Timeline: 2025-26
BWSR	6	5		Page 5-25: For Action #6 (cover crop benefits), the output was changed to "number of farmers engaged with for soil testing" but a specific value is not provided which does not fully address our previous comment that a measurable output is needed.	x			Y	Output revised to combine with previous action items: 2 educational and outreach events per year to promote and evaluate soil health practices
BWSR	7	5		Action Tables in Section 5: The footnote explanation for the estimated cost of each action is confusing. Since the asterisks only appear next to PTMApp cost estimates, it could be interpreted from the explanation that those estimates include both PTMApp costs and other costs. We recommend considering a different method of differentiating between PTMApp estimates and other estimates, such as a "P" symbol next to the PTMApp estimates.		x		Y	Footnote revised as suggested
BWSR	8	5		Page 5-17: For Action #6 (water storage), the output is listed as "1 flood control structure" but the timeline has 2 structures over the 10-year period.		x		Y	Timeline revised to match 1 flood control structure
BWSR	9	6		Page 6-5: The BWSR Drinking Water Protection Grant should be removed from the list of programs currently available for groundwater monitoring efforts.		x		Y	Program removed as suggested
BWSR	10	Acronyms		Acronyms section: There are two "CWMP" acronyms listed. The first one is a typo and should be "CWMA" for Cooperative Weed Management Area.		x		Y	Acronym revised as suggested
MDA	1	General		The comments and suggestions provided by the MDA as a part of the advisory committee have been effectively addressed. As written, we believe this plan sufficiently addresses the priority concerns for groundwater that were indicated in our initial comment letter for this plan. 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. Thank you for including reference to a few of the MDA programs in this plan including, Minnesota Ag Water Quality Certification Program, Ag BMP Loan program and the Nutrient Management Initiative. We look forward to working together on these programs.			x	N	Comment noted, with thanks
MPCA	1	General		The Plan adequately addresses the following priority concerns submitted by the MPCA staff dated April 20, 2021. [Please see comment letter for detailed list]			x	N	Comment noted, with thanks

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MPCA	2	4		The MPCA acknowledges that the PTMApp tool was used to estimate nutrient reductions of various best management practices (BMPs) for the Plan. While the MPCA supports the use of this tool, it is known that PTMApp does not target the primary transport mode of N for karst areas like the WinLaC Watershed nor does it offer reductions for the most appropriate N reduction BMP (nutrient management/source control). Structural BMPs (water and sediment control basins (WASCOBs, filtration strips and several others listed in Appendix G) are not effective in reducing vertical leaching loss of N to groundwater. It is recommended that the Groundwater Contamination and Nitrates factsheets (Page 4-2 and 4-3) acknowledge these two shortcomings of PTMApp, while also acknowledging that the activities in Section 5 of this Plan will aim to address N leaching. And, that the overland reduction goals should be considered a surrogate for a vertical leaching reduction goal. Example narrative could include: a. Page 4-2 paragraph 4: Replace "structural field practices, alternative cropping systems, perennial cover, and nutrient management plans," to read: "alternative cropping systems, perennial cover and nutrient management (source control). b. Page 4-2 under Short-Term Goal: Include an asterisk in the indicator bullet narrative and add footnote: "PTMApp estimates N reduction from overland transport, which is not the primary mode of N transport in the WinLaC. While this deficiency exists, PTMApp is the best available tool for developing numeric N reduction goals at this time. The overland reduction goal is considered a surrogate for a vertical leaching reduction goal. Activities listed in Section 5 will aim to address N leaching into groundwater."	x			Y	Plan revised with language as suggested. Action revised to include "nutrient and manure management."
MPCA	3	4		In the Streams factsheet on Page 4-17, the map shows priority restoration and protection surface waters for habitat improvement projects. The South Branch Whitewater River section identified as a restoration priority appears to be a lot longer than the recommended area submitted by the habitat improvement sub-group. The subgroup recommended targeting an area of the South Branch Whitewater above and below Crystal Springs. It appears the map on Page 4-3 has a more extended area than the targeted area near Crystal Springs. The area that this extension highlights is in the WMA with little road crossings and difficult access. It may not be capturing the intent of the habitat improvement sub-group's recommendation. It's encouraged that this map be reviewed and revised.	x			Y	Map revised to reflect comment
MPCA	4	General		Adding a list of tables and figures to the Plan as well as numbering corresponding tables and figures.		x		Y	List added
MPCA	5	2		Caption of Figure 2-3 (Page 2-5): recommend replacing "PCBs/metals" with "PCBs/Mercury."		x		Y	Caption revised accordingly
MPCA	6	4		On Page 4-2, consider adding the following additional secondary outcomes: • Addressing N stressors to aquatic life; • Meeting Minnesota Nutrient Reduction Strategy goals • Meeting trout stream goals		x		Y	Outcomes added as suggested
MPCA	7	4		On Page 4-3, consider referencing the map on Page 5-6 to specify that targeted N reduction will be focused on the headwater areas of the Whitewater River planning area where there is a higher density of agricultural land compared to middle and lower areas of the watershed.		x		N	Map is intended to only reflect groundwater nutrient issues
MPCA	8	4		Page 4-8 (Nutrients Factsheet): While mentioning the two N impaired streams in the WinLaC watersheds, it's also recommended to include the streams identified as have N as a stressor to aquatic life: North Branch Whitewater, Middle Branch Whitewater, South Branch Whitewater, and Bear Creek		x		Y	Language added to include streams with nitrate as a stressor
MPCA	9	4		Recommend including citation for Lake Winona water quality improvement plan referring to on Page 4-10; and add citation to list of References in Appendix K.		x		Y	Citation added and goal revised per BWSR Comment #3

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MPCA	10	5		Due to do the historic fish kills in the WinLaC Watershed (South Branch Whitewater (2015), Garvin Brook (2019), Trout Valley Creek (2021), the MPCA finds it appropriate to acknowledge how the existing goals identified in the Plan work to reduce the likelihood of future fish kills. The MPCA recommends that the Plan acknowledge that fish kills have occurred in the past (consider adding narrative to the Trout Streams factsheet (4-22) and that the Plan, while voluntary in nature, will work to reduce future risk if goals are achieved. Continuing to coordinate and develop tools for identifying and targeting high risk areas prone to contributing to fish kills when conditions occur is one thing this Plan could list as a goal. An example of a tool would be MDA's Runoff Risk Advisory tool which all partners in the WinLaC could share on their websites. Other tools could be developed by Local and State partners and would take a coordinated effort. Because of this, the Partnership is encouraged to add the following task to the Action Table on Page 5-23 (could be categorized as Water Quality): a. Continue to develop and discuss tools and information needed to reduce the risk of future fish kills. • Output: 2 meetings/year • Focus area: watershed-wide • Lead and Partners: SWCD, County, MPCA, DNR, MDA, MDH • Timeline: All years • Funding level: 2 or 3 • Estimated cost: ??	x			Y	Fish kill language added to trout factsheet as recommended. Action item added to 5-24 as specified below, with resource defined as "Streams". Action added: Continue to develop and discuss tools and information needed to reduce the risk of future fish kills. • Output: At least 1 regional meeting/year • Focus area: Trout Stream Priority Subwatersheds • Lead and Partners: **MPCA**, DNR, MDA, MDH, County (Emergency Management), SWCDs • Timeline: All years • Funding level: 3
MPCA	11	4		Water storage is an important goal in the Plan (10,000 acre-feet). PTMApp scenarios ran estimate 167 acre-feet of storage, and the Plan indicates that the remaining 9,833 acre-feet of storage will come through capital improvement projects (CIPs). For ease of tracking, it is recommended that the Plan capture this storage goal for CIPs somewhere in the Plan (perhaps within the CIP table on Page 5-27 or under the short-term goal on Page 4-14 adding under "Indicator: Acre-feet of storage added": a. Approximately 167 acre-feet of targeted practices b. Approximately 9,833 acre-feet from CIPs	x			Y	Revised as suggested, and also included "flood control structures"
MPCA	12	5		The groundwater and surface water reduction goals listed for Garvin Brook Planning Region (Page 5-10 and 5-11, respectively) do no match the PTMApp outputs listed on Page 8 of Appendix G (Plan TN reduction: 58,869 lbs/yr v. PTMApp TN reduction: 50,548 lbs/yr, Plan TP reduction: 2,311 lbs/yr v. PTMApp output: 2,304 lbs/yr, Plan Sediment reduction: 6,059 T/yr v. PTMApp: 6,029 T/yr). Should these values be identical? a. Also, double check the reduction goal values listed for Whitewater and La Crescent planning areas (appear to be off from PTMApp values by one digit).		x		Y	Numbers revised for consistency
MPCA	13	5		It was discussed during the Plan's internal review that Gorman Creek (Small Tributaries Planning Regions) would be changed in priority from medium to high. The map on Page 5-19 has yet to be updated to show this change in priority.		x		Y	Map revised as suggested
DNR	1	General		Issue: Excessive Sediment Loading The implementation table includes an action to identify problem stream erosion sites. We believe this action could be expanded to include an evaluation of sediment sources. Sediment sources in the WinLaC planning area have not been studied, except in the Whitewater River system. A DNR study there found that on average, in-channel sources are contributing 72% of the sediment in the Whitewater system. The DNR could work with partners to conduct similar evaluations elsewhere in the planning area to identify areas to target for sediment load reductions. Consider adding the following to the implementation table: Work with DNR Central Region clean water staff to conduct subwatershed sediment sourcing studies and implement projects to address in-channel sediment loading.	x			Y	Language added to 4-16 about in-channel sources from WARSSS Add action as recommended on Page 5-24 with: Action: Work with DNR Central Region clean water staff to conduct subwatershed sediment sourcing studies and implement projects to address in-channel sediment loading. Resource: Streams Output: Annual meeting Lead: DNR Funding Level 2
DNR	2	General		Issue: Streams We believe the goal of restoring two miles of channel is too low and recommend increasing the goal. There are many opportunities to collaborate on channel and habitat restoration projects that would greatly benefit both water quality and flood reduction. DNR staff and Trout Unlimited can help partners prioritize and target projects and guide their implementation. We understand that projects of this type are expensive and would likely not be funded by Watershed Based Implementation Funding. Additionally, there are many Aquatic Management Areas on trout streams in the planning area that provide angler access and allow for habitat improvements to be considered. Consider adding the following to the implementation table: Work with DNR staff and Trout Unlimited to complete channel and habitat restoration projects on five miles or more of stream in locations most beneficial to achieving water quality and habitat goals.	x			N	Local partners recognize the value in partnering with entities such as DNR and Trout Unlimited in streambank restoration projects. Goal is designed to be attainable in the 10-year plan. Action item "Provide support to landowners to maintain and/or enhance shorelines and streambanks; enhancement or repair of buffers (e.g., enhanced buffers; willow staking)" lists DNR and Trout Unlimited as partners, with streambanks prioritized during the planning process with local and agency knowledge.

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DNR	3	General		Issue: Water Storage There has been a recent statewide emphasis on increasing water storage to reduce flooding. The plan offers multiple potential actions that will support the goal of adding 10,000 acre-feet of water storage. We suggest adding more clarity regarding how capital improvement projects would help achieve this goal. The DNR supports the use of wetlands and floodplain reconnection for reducing peak flows, but we are concerned about the potential use of on-channel flood retention structures. We also suggest adopting minimal impact design standards for water storage in new land development projects. The Capital Region Watershed District provides an excellent design standard example. Additional information is also available from the DNR's minimum impact design standards website. Consider adding the following to the implementation table: Adopt minimal impact design standards for water storage in new land development projects.	x			Y	See response to MPCA Comment #11
DNR	4	General		Issue: Nitrogen Nitrates are a major concern for drinking water protection and an increasing concern for surface water resources in the planning area. The Root River Field to Stream Partnership determined that up to 85% of nitrogen loss occurs by leaching. The plan's short-term goal for overland nitrogen loss is a 4% annual reduction (pages 4-2 and 4-8) but reducing nitrogen leaching would appear to be more effective in addressing nitrogen loss and resulting contamination. We believe the plan would be improved with the addition of a nitrogen reduction goal for leaching loss since this is the largest contributor of nitrogen to surface and groundwater. A goal for leaching loss could be established by applying the above-mentioned 85% leaching loss estimate to the overall goal of reducing nitrogen loss by 4% (390,300 lbs/yr). Consider adding the following to the implementation table: Reduce leaching loss of total nitrogen by 331,755 lbs. annually by implementing cover crops, converting marginal agricultural land to perennial cover, and nutrient management planning.	x			N	See response to MPCA Comment #2. Actions are already included in the plan for cover crops, perennial cover, and nutrient management planning, which will accrue multiple benefits toward multiple issues and goals.
DNR	5	General		Issue: Fish Kills Three major fish kills have occurred in the planning area since 2015. Another significant kill occurred on Rush Creek in 2022, which was just outside the boundary of the planning area. These kills are most often caused by runoff of land applied manure or agricultural chemicals. The MDA Runoff Risk Advisory Forecast is a tool developed to help farmers determine when it is safe to apply manure. This tool is easily accessible and simple to use. The plan should promote the use of this tool and illustrate how goals related to manure management and runoff reduction will help reduce the occurrence of fish kills. We recommend adding the following action to the implementation table: Promote the use of the MDA Runoff Risk Advisory Forecast as a tool to reduce the risk of fish kills.	x			Y	See response to MPCA Comment #10.
MDH	1	General		MDH commends the plan partners for including drinking water as a priority concern.			x	N	Comment noted, with thanks
MDH	2	General		Comments below are in addition to those made during the plan development process. MDH staff shortages at the time the plan was being finalized resulted in our need to submit additional technical comments related to groundwater during this 60 day review period.			x	N	Comment noted, with thanks
MDH	3	General		Most flow in streams is the result of baseflow- both via seepage and focused (spring) discharge - surface water and groundwater are closely linked minimal overland flow is not sustained. Surface water bodies are largely limited to streams in valley bottoms			x	N	Comment noted for implementation
MDH	4	General		Layered (stacked) aquifer system produces baseflow with longer residence times moving west to east - to the east, response time in stream water quality to changes in land use practices on the bluffs will be typically longer (many decades) than the plans lifespan of ten years - conversely, uppermost aquifers will have a more rapid response, reflected in upper spring and seepage water quality			X	N	Comment noted for implementation
MDH	5	General		Much of the region is characterized by rapid infiltration due to thin sediment cover (typically less than 50 feet) over permeable bedrock. The majority of water entering the uppermost aquifers is via infiltration rather than overland flow to sinkholes			X	N	Comment noted for implementation
MDH	6	General		Although groundwater travel times in portions of uppermost, vulnerable aquifers can be as shoret as hours to days, average residence times in these same aquifers are ten years or longer, and average residence times in deeper aquifers are many decades longer still. Given the ten year lifespan of this plan, aquifer-specific groundwater reduce management goals are recommended.	X			N	Comment noted for implementation. For purposes of this plan, groundwater management activities are prioritized in locations that overlay shallow aquifer resources.
MDH	7	ES	ES-7	The bullet points under Monitoring and Studies raises questions expected to be answered in the report. For water quality monitoring will this include streams, wells, springs, etc.? For groundwater trend analysis will this apply to both quality and quantity and how close are those trends measured?		x		Y	These are example actions. Text prior to figure and figure caption revised to clarify that specific actions are included in Section 5 action tables.

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MDH	8	2	2 and 3	Consider including a timeline of agricultural production (output per some spatial metric): dairy, livestock, crop type from 1950 to present, and covers residence time for upper aquifers (1990 too present for upper-most vulnerable aquifers). This could be helpful in understanding the changes in water quality to both upper and lower aquifers over time.	X			N	Comment noted but text unchanged
MDH	9	2	4	As a general comment mentioned above, streamflow is primarily from sustained seepage (baseflow) and focused (spring) discharge, rather than overland flow. - edit 4th paragraph, last sentence, to: " The upper reaches of these creeks and their confluences with the Mississippi River are not designated trout streams; however, the main creek stems are all either trout streams or trout stream tributary designations *due to baseflow contributions from lower aquifers* - edit 6th paragraph, first sentence, to: "Due to *shallow depth-to-bedrock conditions, significant relief, and highly permeable (karsted) bedrock geology* , there are very few lakes within the WinLaC watershed." In shallow bedrock conditions, water entering the subsurface through rapid infiltration below the root zone predominates over the landscape and greatly exceeds overland flow through sinkholes.		X		Y	Text revised as suggested
MDH	10	2	7	Edit last sentence, in reference to DWSMAs - "These boundaries provide an opportunity to prioritize specific geographic areas for *public* drinking water.."		X		Y	Text revised as suggested
MDH	11	2,4	-7,2-8, 4-	MDH recommends language be added that "No water supply is ever completely free of contaminants. Drinking water standards protect Minnesotans from substances that may be harmful to their health. Some contaminants, such as arsenic and manganese, occur naturally in our environment. Other contaminants enter our water supplies as a result of our own behaviors. Fertilizer and pesticides in run off from lawns and farm fields, cleaners and personal care products that go down household drains, and industrial leaks or improper waste disposal can all lead to water contamination." Source: https://www.health.state.mn.us/communities/environment/risk/guidance/gw/index.html	X			Y	Paragraph added to Page 2-8
MDH	12	2,4	-7,2-8, 4-	MDH also recommends adding language about human health impacts from nitrate and groundwater contamination. Suggested language includes: "Consuming too much nitrate can affect how blood carries oxygen and can cause methemoglobinemia (also known as blue baby syndrome). Only recently has scientific evidence emerged to assess the health impacts of drinking water with high nitrate on adults. A growing body of literature indicates potential associations between nitrate/nitrite exposure and other health effects such as increased heart rate, nausea, headaches, and abdominal cramps." Source: https://www.health.state.mn.us/communities/environment/water/contaminants/nitrate.htmlhttps://www.health.state.mn.us/communities/environment/water/contaminants/nitrate.html	X			Y	Paragraph added to paragraph one on Page 4-2 and LWRN to include language about ESRI hub from Olmsted for nitrate remediations, Drinking Water Standard, and public health impacts.
MDH	13	2	8	Edit text to "It shows the areas on the landscape most sensitive to potential groundwater pollution ~~based on water table depths and soil textures~~. Karst ~~features~~ *areas* have the highest ranking for pollution sensitivity *due to shallow depth-to-bedrock conditions* . ~~with bedrock being the lowest ranking due to relative impermeability.~~" As a comment, the statement as written in the plan may be true for most of the state, but not in Southeastern Minnesota, where the water table is generally deep and soil textures are more permeable. Shallow depth-to-bedrock conditions and karsted bedrock are the primary reasons for sensitive map unit assignment.		X		Y	Text revised as suggested
MDH	14	2	2-8, J--4	Update Altura Drinking Water Supply Management Area (DWSMA) to match the other maps in the plan that contain the updated DWSMA.		X		Y	Map revised as suggested
MDH	15	2,4	2-8, 4-3	The plan references the vulnerability of the public water supply DWSMAs. It would also be useful if the plan references which public water suppliers have increasing nitrate levels under the Groundwater Protection Rule. The Minnesota Department of Agriculture determines the mitigation levels for community water supply wells and their DWSMAs that have MCL midpoint and increasing levels of nitrate-nitrogen. Consider including information from this website in the plan: https://www.mda.state.mn.us/mitigation-level-determination	X			Y	The website will be included as a reference in the plan.
MDH	16	4	2	MDH would like to echo comments made by the Minnesota Pollution Control Agency and Board of Water and Soil Resources regarding PTMApp estimates for nitrate reduction in groundwater. The MDH initial priority concerns letter also referenced the limitation of PTMApp for groundwater. In the plan targets are evaluated using PTMApp (model predictions). In regard to the application of PTMApp to layered aquifer systems they are catchment-based. Lower aquifers, in particular, do not correspond with watershed boundaries which could result in the model producing flux estimate errors. As an example, model-predicted results from bluffland land use changes in eastern Winona County will not be consistent with water quality in valley-bottom streams, where baseflow contributions come from lower aquifers with longer residence times. Alternatively, springs at different layers (shallow and deeper stratigraphic intervals) are ideal monitoring spots because they integrate flow and water quality over springshed extent, providing comprehensive and continuous monitoring potential from short term response to precipitation events, to longer term response to land use and climate change	x			Y	Language will be added to the plan to address PTMApp's limitations and use as a surrogate for vertical leaching. See response to MPCA Comment #2.

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MDH	17	4	2	The desired future condition is "Decreasing nitrate trends for all tested public drinking water supplies and private wells above 3 parts per million (ppm)." MDH would like to emphasize that understanding the residence times of shallow and deep aquifers in this watershed, along with historic land use, helps frame expectations for reaching this desired condition. The uppermost aquifers (Galena and Prairie du Chien) have widespread nitrate concentrations greater than 10 ppm. This condition has been decades in the making and will take longer than this ten-year plan lifespan to reverse. Many of the public water supplies completed in deeper aquifers and that are showing a slow steady increase in nitrate concentrations will take even longer to reverse.			X	N	Comment noted. The Desired Future Condition goal describes the desired future condition of a resource that planning partners would like to see, without a given time constraint.
MDH	18	4	6	Edit third paragraph to "Because the surface/groundwater interaction is difficult to predict, and groundwater can be impacted readily by surface contamination, it is very important to address and minimize contamination ~~around sinkholes and springs that have direct connections between the surface and groundwater systems~~ *in shallow depth-to-bedrock areas. Much of the area is less than 50 feet to bedrock. Therefore priority areas are widespread and are shown on Figure 2-6, Pollution Sensitivity of Near-Surface Materials within the WinLaC as High- Karst. "* MDH would like to emphasize that while it is important to minimize contamination everywhere, springs are groundwater discharge features so they may be less impactful to groundwater quality than recharge areas.		X		Y	Text revised as suggested
MDH	19	4	22	The short term goal is that five additional springsheds are mapped. MDH recommends including DNR Groundwater Atlas program to Table 7-4 Implementation programs and related funding sources for the WinLaC watershed. Also please note that the Groundwater Technical Analysis Workgroup can be a partner in the springshed mapping efforts. Groundwater Technical Analysis Work Group | Minnesota DNR (state.mn.us)	X			Y	Program added to Table 7-4 and workgroup noted for implementation efforts
MDH	20	4	23	Work to be done includes "Improve understanding of groundwater connectivity to streams." MDH would like to note that the Department of Natural Resources Fisheries and the University of Minnesota have data on cold water reaches that correspond well with County Geologic Atlas bedrock maps – showing geologic contacts where preferential baseflow is known to occur. Baseflow is the dominant contributor to streamflow; as streams incise deeper into bedrock valleys they access baseflow with longer residence times. This impacts the response time of stream water quantity and quality to changes in land use and climate.			X	N	Comment noted for implementation with thanks
MDH	21	5	23	Consider edits to the first action to "Provide ~~annual well testing workshops or~~ outreach opportunities to all communities with MDH approved Wellhead Protection Plans (WPPs). BMP technical assistance for all public water suppliers (PWS) in moderate and highly vulnerable DWSMAs." Private well testing workshops are covered in the next action. MDH greatly appreciates the plan partners willingness to work closely with the public water suppliers on implementation of the Wellhead Protection Plans.	X			Y	Action revised as suggested
MDH	22	5	23	For the action related to water conservation in peoples' homes and businesses the primary goal is related to ensuring sustainable groundwater supplies. In terms of the action lead the counties and cities should be lead and MDH and DNR can be partners.	X			Y	Lead roles revised as suggested
MDH	23	5	23	Consider edits to the action "Promote and where possible, fund private well water upgrades and improvements that impact health, including well softener systems *or home water treatment* for contaminants of emerging concerns (e.g., radium, arsenic)." Water softeners may be an option, but they also have drawbacks (e.g., chlorides); additionally, softeners by themselves are not an effective treatment approach for arsenic.	X			Y	See BWSR Comment #4. Revised language to "water treatment systems" instead of water softeners , with an output of 7 / year
MDH	24	Appendix K		Please consider adding the following references to Appendix K. References. o Department of Natural Resources (DNR), 2021: Groundwater Atlas of Winona County, County Atlas Series C-34, part B – Hydrogeology: https://files.dnr.state.mn.us/waters/groundwater_section/mapping/cga/c34_winona/w inona_report.pdf o Minnesota Department of Agriculture (MDA), 2021: Southeast Minnesota Groundwater Resources – text and videos. https://www.mda.state.mn.us/segwresources. o Runkel, A.C., Steenberg J.R., Tipping, R.G., and Retzler, A.J., 2014a, Geologic controls on groundwater and surface water flow in southeastern Minnesota and its impact on nitrate concentrations in streams. Minnesota Geological Survey, Open-File Report 14- 02, 154 p. https://conservancy.umn.edu/handle/11299/162612 o Wall, D.B., Evenson, M.G., Regan, C.P., Magner, J.A., and Anderson W.P. Understanding the Groundwater System: the Garvin Brook Experience, Minnesota Pollution Control Agency – Water Quality Division, Proceedings of National RCWP Symposium, 1992, p. 59-70. https://books.google.com/books?hl=en&lr=&id=_mB3kkgNdYYC&oi=fnd&pg=PA59&dq =Garvin+Brook&ots=_ZIocOKK42&sig=obo-uJP5IMsF8M6O-hXWeecd4oU#v=onepage&q=Garvin%20Brook&f=false	x			Y	Added under title: Additional Resources
MCEA		The 1W1P Should More Comprehensively Address Public Health Concerns Over Nitrate Groundwater Contamination and Goals Set Forth by							

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MCEA	1			A. The draft plan should give more explicit guidance to the local government units for how to account for public health concerns in the implementation of this plan. To achieve this, we recommend the plan provide a more explicit framework for how local government units tasked with implementation of this plan can coordinate with MDH and MDA to evaluate success towards goals and desired future conditions related to public health. - The Draft Plan should therefore provide a framework for how MDH, MDA, and BWSR can work together with local government units and public water systems to address urgent public health concerns around the contamination of drinking water supplies from nitrate, pesticides, and other chemical contaminants.	X			N	Additional language about health impacts of nitrate contamination added to Page 4-2 per MDH Comment #12. Actions are included in Plan Section 5 that include MDA, MDH, and BWSR as lead and partners in order to address contamination of drinking water supplies from nitrate, pesticides, and other chemical contaminants. Local collaboration with these entities will continue in plan implementation as summarized on Page 7-2.
MCEA				B. The Draft Plan should further address the problems caused by agricultural tile drainage as well as the need to include more water treatment and water storage in drainage improvement projects in this highly vulnerable area. - The Draft Plan should address drainage projects as part of the work for BWSR and the Technical Advisory teams to take into consideration in efforts to remediate current and future pollution.	X			N	See Action #11 on Page 5-24: Where applicable, promote drainage management and multipurpose drainage management projects through existing programs. For storage, see Action #5 in planning region tables: Implement projects to increase headwater storage and/or reduce peak flow rates and sediment loading at priority locations (e.g., WASCOBS)
MCEA				C. We recommend that the Draft Plan consider higher percent reductions in nitrogen to fully comply with state nutrient reduction strategies. Specified evaluation benchmarks, greater nutrient reductions, and detailed mechanisms for both edge-of-field and in-field practices, such as rates of manure and fertilizer applications under nutrient management plans, will help ensure the achievement of short-term goals and maximize the effectiveness of implementation funds secured under the plan.	X			N	Goals are drafted to be achievable in the next ten years based on the funding available. If additional funds and resources are available, implementation activities and benefits of them would increase. MPCA is the lead agency involved in the state nutrient reduction strategy, and will be engaged in summarizing progress toward that strategy during implementation.
MCEA				D. We recommend that the Draft Plan promote a risk management approach instead of the current reactive approach to concerns with public health. - The Minnesota Runoff Risk Advisory Forecast model from MDA is an example of a proactive model that MPCA could follow to provide information about risky conditions before fish kills occur, rather than simply investigating afterward	X			Y	See response to MPCA Comment #10.
MCEA		**The 1W1P Should Protect DWSMAs Boundaries and Leverage the Groundwater Protection Rule More Explicitly**							
MCEA	2			A. The Draft Plan should include clear direction to maintain current DWSMA boundaries in this watershed as a critical spatial unit in drinking water protection efforts. - As pollution or drought threatens water supplies, communities may decide to dig deeper wells. As this occurs, the Draft Plan should make clear that the respective DWSMAs must not shrink within the 10-year implementation period of the plan, unless there has also been a corresponding change to the Source Water Protection Plan. - The Draft Plan should encourage public water suppliers in the planning area, especially those located within DWSMAs, to develop localized source to-tap risk assessment and water safety plans that include emergency response plans (Minnesota Groundwater Association White Paper 2022). - For private well owners who often fall outside of DWSMA boundaries, the Draft Plan should consider targeted efforts to protect source water quality for recharge areas to aquifers that supply water to broad areas of private drinking water wells (Minnesota Groundwater Association White Paper 2022).	X			N	DWSMA boundaries are established and maintained by MDH, as is source water planning efforts.

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MCEA				B. Rather than rely solely on the voluntary adoption of BMPs by landowners within the watershed area, the Draft Plan should leverage the mandatory enforcement actions available under the Groundwater Protection Rule, currently in place in Minnesota under the authority of the Minnesota Department of Agriculture. - PTMApp ... may not be able to adequately assess impacts to groundwater given the vulnerable karst geology of the region. Therefore, we recommend that the Draft Plan allow for the sharing of DWSMA-scale data, such as land conservation information, between state agencies and local government units involved in drinking water protection in the planning area - Furthermore, the Draft Plan should cite both the voluntary and regulatory actions available under the Groundwater Protection Rule to ensure compliance with rule's prohibition against nitrogen fertilizer application in the fall and on frozen soils for farms within DWSMAs with vulnerable groundwater and high nitrate—categories which apply to many DWSMAs within this watershed area.	X			N	Local staff are partners in outreach and education in the Groundwater Protection Rule but are not the enforcing entity.
MCEA		The 1W1P Should Address Capacity and Enforcement Issues with Delegated Authority at the County Level and Within Local Government Units ("LGUs")							
MCEA	3			A. We recommend that the Draft Plan more fully address the capacity and enforcement challenges that the current feedlot inspection program faces to meet the short and longterm goals of the plan for bacteria and groundwater contamination. - However, under the delegated authority program, feedlot inspections are sparse (every 10 years or so) and there is no comprehensive system of surface or groundwater monitors in place to ensure compliance with the zero discharge requirements of the NPDES permit (MPCA Feedlot Update 2013). The Draft Plan identifies the need to "enforce feedlot compliance" but does not include any specifications as to how this will be done. Greater staff capacity in this program would allow for timely responses to complaints. Furthermore, dedicated resources for surface and groundwater monitoring would help to ensure compliance with the zero discharge requirements for facilities that do have NPDES permits.	X			N	Local staff recognize that local capacity resources are finite. As defined on Page 6-7: Counties, SWCDs, the City of Winona, and the watershed district will meet when applicable to discuss ordinances and notify each other of proposed ordinance amendments. These entities will also review similarities and differences in local regulatory administration to identify local successes and identify changes needed to make progress towards goals outlined in this plan.
MCEA				B. The Draft Plan should also target education and outreach to small and mid-size feedlots that are not required to have a nutrient management plan under a NPDES permit. - Many small and mid-sized feedlots in this watershed do fall within sensitive soil areas but are unregulated under the NPDES permit system. Furthermore, there are no current guidance documents from MPCA that describe summer manure application risks and implications to water quality - Given the extent and severity of the water pollution in this watershed, the Draft Plan should expand bacteria management efforts beyond regulated CAFOs to include smaller and mid-size feedlots that also operate on sensitive soils	X			N	Regulations and statutes still apply for smaller feedlots.
MCEA				C. Although this Draft Plan identifies lead local government units and partners for implementation actions, it should more explicitly address capacity concerns within LGUs to carry out this extensive work. - LGUs often do not have the staff capacity and tools necessary to fully adopt widespread implementation of effective BMPs, and the Draft Plan could be used to direct implementation funds to hire new staff people and/or increase LGU resources dedicated to this work. - In terms of risk management, we recommend that the Draft Plan identify dedicated local leadership to send concrete information to local residents in the event of incidents like fish kills - We further recommend that the Draft Plan allocate funds to adequately staff county offices and other LGUs to sufficiently respond to resident complaints, such as with feedlots	X			N	The 1W1P concept supports and fosters local partnerships. This collaborative work creates opportunities for addressing local capacity gaps through shared services among partners and with other agencies.

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MCEA	4			The current draft of the WinLaC One Watershed One Plan addressed many concerns and priorities for the included counties. However, the current Draft Plan does not fully account for some of the concerns expressed by the community, including both human health and environmental impacts. The issues expressed in our comment include full consideration of public health concerns in this Draft Plan, such as maintaining DWSMAs at their current size in the region and building greater capacity for feedlot inspection programs and other aspects of delegated authority in the counties. These omissions do not allow for a fully comprehensive review of the Draft Plan. Accordingly, MCEA strongly recommends (1) that the Draft Plan be revised to address the above-expressed concerns and (2) the comment period for this Draft Plan be extended to adequately account for the public's engagement and concerns.			X	N	Comment noted
Landowners	1	Acknowledgements		Who is representing Izaak Walton League?			X	N	Committee membership can be provided by request outside the plan formal review.
Landowners	2	Acknowledgements		Who is representing MN Forest Resources Council?			X	N	Committee membership can be provided by request outside the plan formal review.
Landowners	3	Executive Summary	2	What is a balanced ecosystem?			X	N	A sustainable, healthy ecosystem rather than one stressed by land use changes, invasive species, etc.
Landowners	4	ES	ES-2	Need to monitor/evaluate to know if working and course correct if necessary	X			N	Section 7 has an overview of the annual assessment/5 year evaluation process.
Landowners	5	1	5	Priority C. insert 'are'		X		Y	Revised as suggested
Landowners	6	1	6	Include pesticides	X			N	Plan issues were developed with input from the public, agencies, and advisory groups and are not able to be changed at this point in the process
Landowners	7	ES	12	Why increase staffing? Looking at organizations/groups/comittees. There are lots of staff. The need is coordinated effective delivery. Currently there is a lot of redundancy in groups and boards.			X	N	Comment noted. Staffing in relation to implementation and administration of the full plan.
Landowners	8	2	3	No mention of public land and recreation as #1 economy income			X	N	Plan includes information about economy if references exist. See Page 2-9.
Landowners	9	2	4	No mention of Richard J Doreer Memorial Hardwood Forest, Whitewater Wildlife Management Area	X			N	Summary lists example public areas and parks to provide context for the reader, and is not intended to be all-inclusive.
Landowners	10	2	4	No mention of streams north WW watershed listed			X	N	Streams are just listed here to provide context to the reader, and are not intended to be all-inclusive.
Landowners	11	2	6	Mention AIS funds and county positions	X			Y	Language added to describe county role in AIS management.
Landowners	12	2	7	Forests and the role they play in reducing runoff and more emphasis on reforestation, edge protection	X			Y	Language added to describe plumbing the landscape impacts from previous land uses like forest.
Landowners	13	2	10	State forest units not mentioned	X			Y	Text revised to include state forests
Landowners	14	3	2	What has WW watershed project accomplished in terms of: a. reduced flooding b. reucing soil, nutrients, pesticides, bacteria, etc. c. wildlife habitat improvement d. at what cost?	X			N	The Whitewater River Watershed Project is mentioned here solely to provide context to the planning region geography and jurisdictional features.
Landowners	15	3	2	Brewery creek? Is it in WinLaC?	X			N	Streams are just listed here to provide context to the reader, and are not intended to be all-inclusive.
Landowners	16	3	3	Does the plan encorage acquisition in the RJDMH, Wildlife Management Areas, Aquatic Management Areas, Trout Stream esatments, State Parks, etc?	X			N	The plan includes actions to: Protect land and implement permanent vegetative cover through perpetual conservation easements (e.g., RIM) in planning region action tables, Section 5.
Landowners	17	3	7	Acquisition/easements necessary to achieve some of Table 3-4, Priority C issues			X	N	Agreed. The plan includes actions to: Protect land and implement permanent vegetative cover through perpetual conservation easements (e.g., RIM) in planning region action tables, Section 5.
Landowners	18	4	1	How monitor/measure short term goals? Is there a monitoring plan?			X	N	See Table 6-1, various agencies and partners do water quality monitoring and their findings will be used to assess progress towards goals. Monitoring and studies is one of 5 programs in Figure ES-7.
Landowners	19	4	5	How many times have abandoned wells been inventoried? Suggestion to use a different photo		X		N	Inventory of abandoned wells is included as an action item on Page 5-23.
Landowners	20	4	6	More than Decorah Edge, see Jeff Green, Bob Tipping	X			N	Bob Tipping provided comments on the plan through MDH
Landowners	21	4	9	Forest mangement should include Forest Edge (top) buffer	X			N	Comment noted- See Section 5 for implementation actions related to forests and buffers. Forest edge also called out on Page 4-13.
Landowners	22	4	12	Will there be some sediment loading monitoring, climate change and rainfall intensity				N	Yes, MPCA, DNR, and MDA include sediment in their water quality monitoring. Climate trends/precipitation is monitored by the DNR and NWS across the state. https://climateapps.dnr.state.mn.us/index.htm

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Landowners	23	4	13	Forest edge buffer identified, include in 2-7	X			N	Page 2-7 is intended to summarize altered hydrology as a problem without comprehensively listing solutions.
Landowners	24	4	14	Nothing on soils. Provide example or organic matter	X			Y	Bullet point added on 4-15 to implement soil health practices as a means of adding temporary water storage.
Landowners	25	4	18	Should be coupled to savanna restoration a. Little to no native prairie is being grazed b. Short term goal is very modest	X			N	Goal is set to be attainable in the 10-year plan with the funding available.
Landowners	26	4	19	Please delete term marginal lands. Relegating grazing on land that is not farmed presents lots of challenges on ecologically sensitive lands		X		Y	Revised as suggested
Landowners	27	4	20	The aberration that E. coli remains high 'despite number reduction effots" suggests that what has been done doesn't work. What does this plan propose to do different?			X	N	Improve education, enforce feedlot compliance, and continue collaboration with partners to develop management plans, feedlot fixes, and animal waste storage.
Landowners	28	4	23	The major way to improve trout streams is to reduce runoff and increase infiltration that increases base flows. The bullet 'improve and … temperature' is too simple and universally understood to mean tree shade.	x			Y	Text revised as suggested
Landowners	29	4		General comment-Would like to see recognition of what has not worked. The construction of the plan is awkward: Prioirty Issues, Actions, Output, Program, Focus, Leads/Partners in different areas.			X	N	Plan content follows BWSR guidelines and focuses on future actions following best practices with what we know now, the plan scope doesn't cover what has not worked.
Landowners	30	4	28	How do you propose to inventory? Same as 40 years ago? Tether septic improvements to sale of property or transfer of ownership (e.g. relative or other)	x			N	MPCA leads SSTS inventory
Landowners	31	4	30	Why is fee acquisition not included?			X	N	List shows example actions, and is not intended to be all-inclusive. A full list of actions is shown in Section 5.
Landowners	32	4	32	Very modest short term goal			X	N	Noted, goals were developed based on what could be realistically achieved.
Landowners	33	5	4	Edit 1st 2 sentences under "Planning Region Chapters"		X		Y	Revised as suggested
Landowners	34	5	5	The Whitewater River Planning Region has been utilizing public resources for a long time. What are the results? Let's rethink voluntary.			X	N	The plan focuses on voluntary conservation action.
Landowners	35	5		General comment- very litte by way of upland terrestrial habitat improvement. By removing 0-15% of upand farmland from production, we could achieve a lot of water quality goals, sequester carbon, develop some habitat connectivity, crease a more visually appealing landscape, and create habitat for birds, mammals, pollinators, etc.			X	N	Comment noted for implementation
Landowners	36	5	28	Edit- remove redundant organizations, dissolve BALMM and Whitewater Watershed Board	X			N	Comment noted - language not included in the plan
Landowners	37	6	4	Acquisiton not mentioned			X	N	See "land protection" for temporary and permanent protection , Page 6-2.
Landowners	38	6	4	Is there monitoring in place and how will it be coordinated?			X	N	See Table 6-1, various agencies and partners do water quality monitoring and their findings will be used to assess progress towards goals. Monitoring and studies is one of 5 programs in Figure ES-7.
Landowners	39	General		General comments: A.How do you coordinate outreach to landowners?			X	N	SWCD have relationships with landowners in their districts
Landowners	40	General		B. Appears to be program driven. Couldn't some flexibility be introduced so that if a landowner has ideas that do not conform to program, can include if it can achieve outcomes			X	N	Any action a landowner takes that will reduce sediment/nutrients or increase storage/land protection is welcome even if it's not explicitly a part of the 1w1p plan actions
Landowners	41	General		C. Pesticides- need to be accounted for in the plan: reporting, monitoring, reduction	X			N	Monitoring is summarized in Table 6-1. Implementation actions addressing nutrients will also have ancillary benefits toward pesticides.
Landowners	42	General		D.Grassed waterways deliver a concewntrated flow of water. They would be more beneficials for water storage and upland habitat if they were wider, had some "pooling" capabilities, and larger/wider vegetated outlets. When used on slopes, back the outlet away from the field-woodland-bluff edge			X	N	Noted for implementation
Landowners	43	General		E. Wetland restoration efforts could be completed in upland swales that were farmed through wetlands or became grassed waterways. This would improve to upland water storage, reduce runoff, and improve upland habitat.			X	N	Noted for implementation
Landowners	44	General		F. Prairie strips- why? How different from other practice options? How will it be ensured that there isn't herbicide drift that affects insects and birds (e.g. fungicides)? Narrow bands will be sinks for ground nesting birds to be consumed by predators			X	N	Prairie strips are a recommended conservation practice by the NRCS that reduce sediment and nutrient loss. Your comments have been noted for implementation.
Landowners	45	7	1	Policy composition question- what are they assuring? Who comprises the policy committee?			X	N	Committee membership can be provided by request outside the plan formal review.

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MNWOO	1	General		Local Capacity and Staffing- See Comment Letter #1 and #4			x	N	Local staff recognize that local capacity resources are finite and see value in building partnerships. The 1W1P concept supports and fosters local partnerships. This collaborative work creates opportunities for addressing local capacity gaps through shared services among partners and with other agencies.
MNWOO	2	General		Formal Review and Adoption Schedule - See Comment Letters #3 and #5			x	N	Minnesota Statutes 103B.801 directs the Board of Water and Soil Resources (BWSR) to establish operating procedures for Plan development, which is followed by the WinLaC Partnership.
MNWOO	3	General		Groundwater Data and Prioritization - See Comment Letter #2, #3, #5, and #7			x	Y	Details of the subwatershed (HUC-12) prioritization process added to Appendix F of the final WinLaC Comprehensive Watershed Management Plan. For language pertaining to nitrate health hazards in water, see response to MDH Comment #12.
MNWOO	4	General		Goals and Desired Future Conditions - See Comment Letter #2 and #7			x	N	Desired Future Condition: Describes the desired future condition of a resource that planning partners would like to see, without a given time constraint. For language pertaining to nitrate short-term measurable goal, see response to MCEA Comment #1c.
MNWOO	5	General		Regulation/Policy Addressing Groundwater (Drinking Water) Protection - See Comment Letter #2, #3, and #6			x	Y	For language pertaining to fish kills, please see response to MPCA Comment #10. The vision of One Watershed, One Plan, and the watershed plans developed under this Program, includes a focus on voluntary actions that can be taken, rather than establishing new regulations.
MNWOO	6	General		Wellhead Protection - See Comment Letter #5			x	N	Extensive outreach and education can be used to provide well owners with information about their well, importance of monitoring their drinking water, and how to take steps to protect that water source.
Landowner	1	General		See Comment Letter #8			X	N	The WinLaC CWMP is a 10-year plan, comprehensive plan that addresses issues pertaining not only to groundwater, but also surface water, habitat, and land use / protection. The CWMP is intended to be a public-facing local plan, not a technical report. The CWMP was developed following BWSR's "One Watershed, One Plan Operating Procedures" (Version 2.00), with content of the plan following BWSR's "One Watershed, One Plan Content Requirements" (Version 2.1). One of the guiding principles of the One Watershed, One Plan is "One Watershed, One Plan is not an effort to change local governance." The resulting plan uses existing structures for collaboration and cooperation, and does not create a new regulatory entity. The Land and Water Resources Narrative is intended to be a brief and concise summary of land and water resources information to inform the planning process and support actions in the plan. For concerns related to the limitations of PTMApp, please see the response to MPCA Comment #2.
Landowner	2	General	2-5	See Comment Letter #8		x		Y	Text revised as suggested to avoid mentioning Lake Winona and Winona waste water NPDES in the same paragraph.
Landowner	3	General	2-6	See Comment Letter #8			x	Y	Reference added for the altered watercourses data layer
Landowner	4	General	3-1	See Comment Letter #8			x	N	Planning regions were created to divide a watershed into smaller subwatersheds, consistent with the vision of a watershed plan.
Landowner	5	General	2-8	See Comment Letter #8	x			Y	Explanation added for Conservation Opportunity Areas