

July 20, 2020

David Haler
Land Management Director
108 8th St S
St. James, MN 56081

Jill Sackett Eberhart
BWSR Board Conservationist
11 Civic Center Plaza, Ste 300
Mankato, MN 56001

RE: Minnesota Department of Agriculture (MDA) Comments Watonwan River One Watershed One Plan - 60 Day Public Plan Review

Thank you of the opportunity to comment on the Watonwan One Watershed One Plan (the plan). Also, thanks for including MDA in the plan development process and for the opportunity to provide input before the formal plan review process.

Page 3-9: Additional nitrate and pesticide testing of groundwater data are available for inclusion in the plan.

- It would be helpful for the second ‘nitrate’ bullet to be broken up since it contains different data sets (Note: check the plan for the use of the word ‘Nitrate’, it should be a singular word (in most cases) so consider using nitrate not nitrates).
 - It would be beneficial to the reader to add more detail for Figure 3.7 to minimize confusion with other nitrate monitoring (e.g. “ none of the tested drinking water wells had levels at or above the SDWA standard of 10 mg/L”}
 - MDA ambient monitoring well nitrate data should be itemized. Additional narrative would be helpful too, and perhaps a map illustrating these well locations.
- MDA township testing of private well for nitrate should be added here. (see detailed narrative below)
- MDA pesticide testing of private well results are available for select townships in Blue Earth County and others should be available in 2021. (see detailed narrative below)

MDA private well testing for nitrate in some townships in the Watonwan watershed.

Background: The MDA determines current nitrate-nitrogen concentrations in private wells, through the Township Testing Program. The MDA has identified townships throughout the state that are vulnerable to groundwater contamination and have significant row crop production. More than 90,000 private well owners have been offered nitrate testing in 344 townships since 2013. For more details see: <https://www.mda.state.mn.us/township-testing-program>. Each selected township is offered testing in two steps, the “initial” sampling and the “follow-up” sampling. In the initial sampling, all township homeowners using private wells are sent a nitrate test kit and the homeowner takes the sample.

- The Watonwan River Watershed has 7 townships in four counties (Cottonwood – Amboy, and Dale (both partially); Brown – Mulligan (partially); Watonwan – Riverdale (entirely in watershed); Blue Earth – Lincoln, Garden City, and Rapidan) that were selected to participate in the Township Testing Program (note that only a portion of some townships are in the Watonwan watershed). All four counties have completed the initial sampling and the initial reports are posted online.
 - Brown - <https://wrl.mnpals.net/islandora/object/WRLrepository%3A3560/datastream/PDF/view>
 - Blue Earth - <https://www.mda.state.mn.us/sites/default/files/inline-files/blueearth2018initial.pdf>
 - Cottonwood - <https://www.mda.state.mn.us/sites/default/files/inline-files/cottonwood2018initial.pdf>
 - Watonwan - <https://wrl.mnpals.net/islandora/object/WRLrepository%3A3568/datastream/PDF/view>

If nitrate is detected in their initial sample, the homeowner is offered a follow-up nitrate test, pesticide test and well site visit (MDA analyzes and reviews information and data about well depth, age and construction, and site conditions). Once the follow-up sampling is completed, the MDA conducts an analysis of the results and prepares a final report for each county. Both Blue Earth and Cottonwood County have completed the follow-up sampling. The Blue Earth County final report is posted online and the Cottonwood Report will be posted online in 2020. The follow-up sampling will be completed in the selected townships in Brown and Watonwan County in 2020 and the final report will be available in 2021 and posted on the MDA website at: <https://www.mda.state.mn.us/township-testing-program>

The final results are available for Blue Earth County at:

<https://wrl.mnpals.net/islandora/object/WRLrepository%3A3594/datastream/PDF/view>

Pesticide testing of private wells information:

If nitrate is detected in their initial sample of township testing (as described above), the homeowner is offered a follow-up nitrate test, pesticide test and well site visit. Though limited sampling has been done in Blue Earth and Cottonwood Counties, there are some pesticide monitoring results available for private wells in the same townships that were tested for nitrate (note that some township results are outside the Watonwan watershed). The results in the table below are from: <https://www.mda.state.mn.us/private-well-pesticide-sampling-project-results-work-plans> .

County (years sampled*)	Number of Townships Sampled	Number of Wells Sampled	Total Wells with a Pesticide Detection	Detection Frequency	Total Pesticide & Pesticide Degradates Detected	Pesticide Health Reference Value Exceedances
Blue Earth (2019)	5	43	20	47%	13	0
Cottonwood (2019)	4	5	4	80%	8	0

It is anticipated that private well pesticide testing will be done in townships in Brown and Watonwan Counties this year.

(Note that private well nitrate or pesticide results are not public information, so results are combined on the Township basis).

Page 3-10: The source of this data should be contained in the legend; this appears to be well testing and hydro-geologic data?

It would be beneficial to include the township testing initial results map to illustrate where private well testing has occurred. This could be incorporation into figure 3.7, figure 4.3 or 4.4 or as a standalone map?

This illustration could help support overall targeting and prioritization identified in the plan.

Page 3-11: MDA developed (and will soon be implementing through the Groundwater Protection Rule) vulnerable area criteria and mapping that could be included here. See:

<https://www.mda.state.mn.us/chemicals/fertilizers/nutrient-mgmt/nitrogenplan/mitigation/wrpr/wrprpart1/vulnerableareamap>

These areas with vulnerable groundwater areas are where nitrate can move easily through soil and into groundwater, contaminating drinking water sources, and includes coarse textured soils, and shallow to bedrock and karst geology. The MDA will use this vulnerable area map starting September 1, 2020 to identify vulnerable areas where nitrogen fertilizer application in fall and on frozen soil is prohibited. Area in the Watonwan watershed that are subject to this fall and frozen soil restriction can be found at:

<https://mnag.maps.arcgis.com/apps/webappviewer/index.html?id=47a342afe6654640b935c8e76023da92> (shapefiles are available on the MN Geospatial Commons website). An illustration of vulnerable areas could help support targeting identified in the plan such as for outreach with farmers on nitrogen management. Depending how this complements targeting and prioritization in the plan the vulnerable area map and associated narrative could be combined or compared with figure 3.7, figure 4.3 or 4.4 or as a standalone map, as well as narrative in this section or narrative or goals on pages 5-21 or 5-22. Since this map illustrates fall and frozen soil nitrogen fertilizer restrictions, we suggest the narrative in the legend simply state that “Restrictions refer to MDA restrictions on the use of nitrogen fertilizer in the fall and on frozen soil. (Note exceptions apply; see: <https://www.mda.state.mn.us/part-1-groundwater-protection-rule>)

Page 4-13, Fig. 4.3: This figure illustrating water table aquifer vulnerability (this appears to be modified from MN Geospatial Commons data?) indicates MDA as the source, which is correct, however DNR originally created this dataset. The plan should be clear on the use of “Vulnerable area” to not create confusion with the vulnerable area mapping discussed above, and additional narrative may be needed depending how vulnerable area mapping discussed above is incorporated in the plan.

Section 5 – many terms in this section (and perhaps others as well) would benefit from providing a definition, so clear meaning is given and so that goals can be better evaluated. Some examples include: multipurpose drainage management,

conservation practices, BMPS, soil health, and others. This is especially important if the term is included in an issue statement, so that goals can be better measured.

Page 5-3: The wording of the issue “‘Level of multipurpose drainage management utility’ to reduce downstream peak flows and flooding, reduce erosion and sedimentation, and protect or improve water quality” should be clarified so it is understandable to readers. Does this mean that multipurpose drainage management implementation should be increased? Narrative should be added to clarify the difference between issue SW 1.1 and SW 1.2 (page 5-4). Is SW 1.1 implementation activities within and adjacent to the drainage system, while SW 1.2 is throughout the watershed?

Page 5-4: The short term goal is to “identify” (conservation practices). If the goal is to “implement” as well this should be itemized into separate action item and metrics provided.

Page 5-15: Three practices seems pretty limited, and it is unclear what would qualify as a ‘practice’. It would be beneficial to provide additional narrative to specify additional practices and the unit of measure that applies (Ex. feet of stream; # of gullies, tons of soil...)

Page 5-17: The first short term bullet states ‘Implement and maintain 7.5% vegetative cover’. How much existing vegetative cover exists right now? If it's greater than equal to 7.5% currently, does that mean no implementation needs to happen?

More narrative may be needed to explain the short term goals. Will a reader understand how increase vegetative cover and ‘soil health’ reduce peak flows rates?

Page 5-21: Depending on inclusion, prioritizing and targeting related to township testing results, and vulnerable areas as discussed above, additional narrative could be needed here.

Page 5-22

- The first bullet states “maintain existing land cover”; should this be maintain vegetative cover?
- The second bullet uses alternative management tools which is from the Nitrogen Fertilizer Management Plan (NFMP)? This is the first time (and only time?) this term is used in the plan, so explain to reader what this means or modify the narrative.
- The fourth bullet proposes nitrate clinics for irrigation water only; are drinking water wells not intended to be included?

Page 5-23

- The opening paragraph shows the reference as “(MDH 2018)”. Should this be or MDA 2018, since the document being referenced is probably from here: <https://www.mda.state.mn.us/pesticide-fertilizer/water-monitoring-reports-resources> ?
- The last two sentences of the opening paragraph are related to nitrate in groundwater (“Further, fall fertilizer application restrictions are in place in some areas throughout the WRW. More can be found at <https://www.mda.state.mn.us/chemicals/fertilizers/nutrientmgmt/nitrogenplan/mitigation/wrpr/wrprpart1/vulnerableareamap>”). These may fit better under GW 1.1?

Page 5-24: The narrative may wish to note the U MN - Extension irrigation specialist here, who may be able to provide assistance with irrigation goals. See: <https://www.mda.state.mn.us/node/1313>

Page 5-32: Consider including the MDA pest information website here: <https://www.mda.state.mn.us/pest-information>

Page 5-35:

- The issue would benefit for additional narrative to clarify the goal statement “comprehensive site visits”. Does this include rural and urban areas; does this mean ‘whole farm planning’, will these address all resources concerns?
- The short & long term goals both include 100 comprehensive site visits. Is this intended to be new site visits or follow-up to the short term site visits?
- Since comprehensive site visits are what they do, and this was discussed as an existing activity ‘across county boundaries’ (i.e. watershed wide), consider adding information on the Minnesota Agricultural Water Quality Certification Program (MAWQCP) here. (MAWQCP information could be added elsewhere in the plan as well where

resource concerns and staffing are discussed). See: <https://www.mda.state.mn.us/environment-sustainability/minnesota-agricultural-water-quality-certification-program-1>

Page 5-39

- It would be beneficial to discuss in the narrative that the intent is to 'measure' soil health through implementation of practices. Specifically, the narrative should discuss practices that have been shown to benefit soil health and those practices that may be applicable to the watershed.
- The short term goal states 5 soil health practices/planning region? Since soil health practices are variable this measure does not adequately relate the potential activity(ies) or scale of the goal, it would be beneficial to provide additional metrics here such as practice type(s) (agronomic, nutrient and residue management) or practice area such as acres.

Page 5-41: Should the narrative specify 'nutrient management' as well as manure management so that it is clear that managing the nutrient content of the manure is intended as well?

Section 6:

- The planning region overview sheets (starting on page 6-8) do a nice job of identifying priorities and specific sediment, phosphorus and nitrogen reductions and associated number of practices to address them. At the beginning of this section it would be useful to discuss how targeting will begin, the prioritization process, and resource limitations (funding, staff, local interest, etc.).
- The tables in section 6-3 (beginning on page 6-39) indicate these are watershed wide activities, although some of these appear to overlap with targeted watershed areas (Ex. How does CI-2 (page 6-40) differ/compare to SW 3.4 (page 5-15). Additional narrative would be helpful to clarify these two sections.
- Several of the timelines for implementing these actions are listed as "ongoing." It would be beneficial to assign these timelines timeframes to clarify the plan and so progress can be evaluated.

Page 6-41:, action # RM-5 (NFMP) - MDA could be added as a partner here.

Page 6-42: action # RM-8— MDA could be added as a partner here. See: <https://www.mda.state.mn.us/plants-insects/noxious-invasive-weed-program>

Page 7-4:— Should the township testing monitoring activities as discussed above be noted here?

Page 8-4: Table 8-2 on page 8-4 lists the AgBMP loan as a source of funding through MDA. The MAWQCP should be listed there also as a source of financial and technical assistance, and provides resources for 'structural and management practices' and 'education and outreach'

Appendixes: A Table of contents, including content and page numbers would be helpful.

Thank you for the opportunity to review the plan. Please let me know if you have questions or comments regarding this plan review.

Regards,



Jeff Berg
Water Policy Specialist
Pesticide and Fertilizer Management Division
Minnesota Department of Agriculture

CC via email:

Amanda Strommer, MDH
Shaina Keseley, BWSR
Katie Wigen, DNR Brooke Hacker, DNR
Paul Davis, MPCA