



Pesticide Management Plan Committee

Member Comments

2022

Minnesota Department of Agriculture
Pesticide and Fertilizer Management Division

July 18, 2022

Commissioner Thom Petersen
Minnesota Department of Agriculture
625 Robert Street North
St. Paul, MN 55155

RE: Meeting of the Pesticide Management Plan Committee, June 2022

Dear Commissioner Petersen:

Thank you for the opportunity to participate in the Minnesota Department of Agriculture's (MDA) Pesticide Management Plan Committee (PMPC) meeting on June 21, 2022. My staff and I have reviewed the meeting materials, including the 2021 Water Quality Monitoring Report, and are happy to provide the following comments.

Specific to the responsibilities of the PMPC, the MDA has asked for members to consider two questions:

"As a result of your review of pesticides and water quality, is there a need for:

- 1) New determinations that would trigger development of pesticide water quality Best Management Practices or related actions for groundwater or surface water?
- 2) Pesticide product restrictions to protect water quality as a condition for registration?"

The Minnesota Pollution Control Agency (MPCA) commends the annual work of the MDA to monitor and report pesticides detected in surface and groundwater throughout the state. We strongly support MDA's efforts to maintain both its monitoring efforts and analytical capabilities; these are critical to all our ongoing work to protect human health and the environment from any adverse impacts of pesticides. At this time, we do not see a need for new determinations of common detection pesticides or surface water pesticides of concern.

We look forward to the continued collaboration between our two agencies on pesticide concerns. Two areas include chlorpyrifos and neonicotinoids. The MPCA will look into approaches for delisting of chlorpyrifos impairments following the recent change in use of the pesticide for agricultural food crops. We anticipate that the topic of delisting will be discussed during the next impairment listing cycle next year. The MPCA also understands that the MDA will continue to monitor for chlorpyrifos detections and track what pesticide products may be used to replace chlorpyrifos in the field.

Neonicotinoid pesticides may be one group considered to replace chlorpyrifos, and the MPCA remains concerned about the increased detection in surface waters of these pesticides, both individually and as a class. The MDA's decision in 2020 to designate imidacloprid and clothianidin as "pesticides of concern" for surface water provides an important route to address the increased detections of these chemicals. These neonicotinoid pesticides have similar modes of action and are likely additive in their toxicity to aquatic life. MPCA is updating its review of existing toxicity information for neonicotinoids including imidacloprid and clothianidin and has assigned staff to consider possible WQS development. The ongoing monitoring work done by MDA to evaluate the occurrence and trend of these neonicotinoid in surface water will be an important element in prioritizing WQS development for them.

Commissioner Thom Petersen

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The MPCA also looks forward to the release of the revised Pesticide Monitoring Plan. We look forward to continuing to work with you on coordinating pesticide monitoring activities; and assessing surface water detections to determine waters that should be listed as impaired and considerations for delisting impairments; and on needed benchmarks or water quality standards for pesticides of concern, for both their impacts on human health and aquatic life.

Thank you again for the opportunity to comment. If you have any questions about our comments, please contact me at (651) 757-2607 or catherine.neuschler@state.mn.us

Sincerely,



This document has been electronically signed.

Catherine Neuschler
Manager, Water Assessment Section
Environmental Analysis and Outcomes Division
Minnesota Pollution Control Agency

CN:cbg

cc: Kate Hall (kathleen.hall@state.mn.us)



David Flakne
Syngenta Crop Protection LLC
Head, US State Affairs
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August 5, 2022

Commissioner, Thom Peterson
Minnesota Department of Agriculture
625 Robert Street North
St. Paul, MN 55155

Re: MN Pesticide Management Plan Committee (PMPC) 6/21/22 – Comments & Recommendations.

Syngenta would like to thank the MDA staff for hosting this year's "virtual" PMPC meeting to review the 2021 Water Quality Monitoring Report (WQMR). This annual review to solicit comments from stakeholders continues to be an extremely valuable process. The Minnesota Department of Agriculture continues to have one of the most robust groundwater and surface monitoring programs in the nation. We sincerely appreciate the leadership of MDA management and staff concerning monitoring, programs and education to protect MN's water quality. These annual monitoring reports continue to demonstrate the success of the MDA's pesticide management and prevention efforts. Concentrations detected in MN Ground Water and Surface Water are generally very low relative to standards and concentration trends are generally stable or show slight fluctuations at very low concentrations relative to water quality standards. MDA data dating back into the 1990's clearly shows long term declines associated with the pesticides in Common Detection. More recently, newly registered products when detected can be expected to have an increasing detection trend. These trends will inevitably level as has been the case with compounds monitored over the longer term. In addition, MDA's analytical ability has improved significantly over time and MDA now routinely detects concentrations in the parts per trillion. Therefore, any detection must be put into context with the established water quality standards. We also wanted to thank MDA staff who presented the 2021 GW and SW monitoring results. During their presentations staff made specific reference to the established water quality standard and in most cases just how low these detected concentrations were relative to the standard. The data clearly demonstrates that pesticide, when detected, are generally found at concentrations that are very low relative to established standards. This is in large part due to the success of MDA's prevention efforts and the voluntary BMP education that has been promoted by the MN Dept of Agriculture, University of Minnesota Extension, the pesticide registrants and the entire agricultural industry.

The 2021 monitoring data documented a notable decline in detected concentration which, were attributed in part to the drought conditions throughout Minnesota in 2021. This resulted in fewer runoff events and more samples collected from base flow conditions. The detections as mentioned above continue to be very low relative to established standards with very few exceptions. The detections of concern for chlorpyrifos can be expected to decline significantly going forward, as use on food crops was restricted by US EPA prior to the 2022 use season.

Committee members were asked to respond with our comments and recommendations to the Commissioner of Agriculture. MDA staff specifically asked committee members to address the following two questions:

1. Is there a need for: "New MDA determinations (Common Detection for Groundwater or Surface Water Pesticide of Concern determinations using the listing criteria articulated in statute and in the MN Pesticide Management Plan) that would trigger development of pesticide water quality BMP's or related actions for groundwater or surface water?"

2. Is there a need for: “pesticide product restrictions to protect water quality as a condition of registration?”

As noted above, the success of the MDA’s pesticide management efforts and the implementation of generic and pesticide specific BMP education, as part of the MN PMP, have been well documented and very effective. These efforts have resulted in detected concentrations of pesticides which are generally very low relative to water quality standards in both groundwater and surface water. Furthermore, trend analysis over the longer term has shown that concentrations have declined or remain relatively stable at very low levels. The MN Department of Agriculture, pesticide registrants and MN farmers should be commended for continued efforts to protect MN water resources. The current voluntary BMP education and outreach efforts are clearly working and should remain targeted toward the most vulnerable soils and geographic regions of the state.

Based on the monitoring data shared at the 6/21/22 PMP Advisory Committee meeting there is no need for additional declarations of “Common Detection” in ground water or “Surface Water Pesticide of Concern” determinations for surface water. Furthermore, given the continued success of the current BMP educational efforts there is no need or justification for further restrictions as a condition of registration for any of the pesticides reviewed. MDA should continue to evaluate any newly added analytes and detections over time relative to relevant HRL’s and appropriate WQ Standards. In addition, MDA should request development of a HRL or Acute and Chronic Aquatic Life Criteria when detections justify. The less refined and very conservative RA (Rapid Assessment) values or Benchmarks values should be used only as an initial indicator and more refined standards should be developed for longer term evaluation of water quality.

The MDA should continue to promote both voluntary Generic & Pesticide Specific BMP’s which have proven effective at minimizing detected concentrations in both groundwater and surface water. Furthermore, the MDA should continue to look for opportunities to communicate the success of the MN PMP efforts with producers, dealers, and the public including key policy makers. It is important that the public understands how the agricultural industry and MN farmers continue to be good stewards of our land and water resources as they continue to produce a safe and abundant food supply.

Thanks again for the opportunity to comment and for the continued transparency and collaboration with stakeholders to ensure the continued availability of these important production tools.

Sincerely,

David Flakne

Head, US State Affairs



CC: Kathleen Hall, Josh Stamper, MDA, Dan Stoddard, MDA
Warren Formo, MAWRC, Amber Glaeser, MFB, Patrick Murray, MCPR, Adam Birr, MN Corn, Tom Slunicka & David Kee MN Soy, Tamara White, MN AgriGrowth, Riley Titus, CLA



Protecting, Maintaining and Improving the Health of All Minnesotans

July 29, 2022

Kathleen Hall, Ph.D.
Minnesota Department of Agriculture
625 N. Robert Street
St. Paul, Minnesota 55155

RE: Meeting of the Pesticide Management Plan Committee, June 2022

Dear Dr. Hall:

Thank you for the opportunity to review and comment on the 2021 monitoring information provided to the Pesticide Management Plan Committee (PMPC) on June 21, 2022. I prepared the following responses to the Minnesota Department of Agriculture's (MDA's) charge questions on behalf of the Minnesota Department of Health (MDH).

I. Groundwater

Charge Question 1: Is there a need for new Minnesota Department of Agriculture (MDA) determinations (i.e., Common Detection) that would trigger development of pesticide water quality best management practices (BMPs) or related actions for groundwater?

To answer this question, I reviewed the previous two years of groundwater data (2020 and 2021) for pesticides (and/or their degradates) that do not have a "common detection" designation using the guidelines provided by MDA for common detection status evaluation (Attachment 1). The criteria included: 1) frequency of detections (using lower limits of $\geq 15\%$ and $\geq 25\%$ overall or in specific pesticide monitoring regions (PMRs)); 2) magnitude of the concentration (using >1000 ng/L as a minimum value) 3) increasing trends in detection frequency and concentration (based on statistical trend analysis, which was only provided to the PMPC for PMR 4); and 4) magnitude of use and whether the detections are a result of normal use (based on the pesticide's sales/use profile). I also considered whether the pesticide has been found in groundwater at levels $\geq 10\%$, $\geq 25\%$, or $\geq 50\%$ of a health-based guidance value (HBGV) even though MDA's guidelines for common detection status evaluation do not suggest making comparisons to HBGVs. Cyanazine and its degradates are discussed separately.

The results of this assessment are presented in Table 1 on page 5 of this letter. Some limitations are noted in the table. For example, no statistical trend tests were conducted for 4-hydroxychlorothalonil or fomesafen because they are newer analytes in the monitoring program. Also, sales data are not the best indicator of "magnitude of use" for chlothianidin and thiamethoxam since seed treatment is not tracked by MDA. However, treating seed with these neonicotinoids is known to be common for major Minnesota crops such as corn and soybeans.

Based on the guidelines provided to the PMPC and the findings in the table, I recommend that MDA:

- *Consider placing bentazon, clothianidin, dimethenamid, fomesafen, and thiamethoxam in Common Detection status.*
- *Update PMPC members about 4-hydroxychlorothalonil when the new HBGV is finalized by MDH. MDH is on track to complete its review by fall 2022. Depending on the HBGV, there may be a need to solicit PMPC member recommendations at this time. As part of its update, MDA should characterize its level of confidence in the validity of the measured 4-hydroxychlorothalonil concentrations considering the challenges with the analytical method noted in the monitoring report.*

The MDA has been a leader in its efforts to monitor for cyanazine and its degradates in Minnesota's waters. More data on cyanazine in private wells became available in 2021 as part of the Private Well Pesticide Sampling Project. Higher detection frequencies, concentrations, and more HBGV exceedances of cyanazine+chlorotriazine degradates are found in private wells compared to the shallow monitoring wells sampled in MDA's ambient groundwater program. Of particular concern, 24 of 207 private wells sampled in northern Goodhue county (12%) exceeded the HBGV for cyanazine+degradates. While cyanazine is no longer registered for use in Minnesota, I recommend that MDA:

- *Collaborate with MDH and local governments to determine appropriate guidance, risk mitigation options, and communication strategies for communities in cyanazine-impacted areas, such as northern Goodhue County. As the only agency with access to the sampled private well addresses, MDA should lead this effort.*

Charge Question 2: Is there a need for pesticide product restrictions to protect groundwater quality as a condition for registration?

Atrazine and its chlorotriazine degradates continue to have the highest groundwater concentrations in PMR 9 (Southeast Minnesota). Didealkylatrazine contributes the most to total atrazine+degradate concentration, and statistical trend analysis finds that both detection frequency and 90th percentile concentrations of this degradate continue to increase in PMR 9. The 90th percentile concentration of atrazine+degradates is currently over 10% of the HBGV of 3,000 ng/L in PMR 9. I recommend that MDA:

- *Assess the merit and feasibility of converting the Southeast Minnesota-specific BMP on annual maximum pounds of atrazine applied per acre into a label requirement for this region.*

II. Surface Water

Due to widespread drought conditions in 2021, fewer surface water samples were collected overall and there were fewer sampling events during storm flow. An MDA presentation to the PMPC ("Impact of Drought on 2021 Surface Water Quality Monitoring Results") demonstrated that the drought resulted in lower surface water pesticide detection frequencies and concentrations compared to previous years. Since droughts, flooding, and heavy precipitation events are expected to continue and increase in the future, providing context to annual monitoring results in relation to extreme weather conditions is important and useful to the PMPC.

Charge Question 1: Is there a need for new Minnesota Department of Agriculture (MDA) determinations (i.e., surface water pesticide of concern) that would trigger development of pesticide water quality best management practices (BMPs) or related actions for surface water?

MDA's guidance to the PMPC for responding to this question focus on trends and concentrations of pesticides in surface water and comparison of detected concentrations to existing water quality standards or guidelines (Attachment 1). I relied on the key findings in Section 3.5 of the 2021 Annual Monitoring Report ("Screening of pesticide detections in surface water $\geq 10\%$ of an applicable numeric reference value, 2017 through 2021") to respond to Charge Question 1.

As shown in Figure 3-16 and Table 3-17 of Section 3.5, MDA has applied the "surface water pesticide of concern" designation to the pesticides that have the most detections $\geq 10\%$, $\geq 50\%$ and above the reference value. Beyond the five current surface water pesticides of concern (acetochlor, clothianidin, imidacloprid, atrazine, and chlorpyrifos), detections above reference values are relatively rare. Of pesticides not currently designated as surface water pesticides of concern, metolachlor had the most detections $\geq 10\%$ of its lowest reference value from 2017-2021 (n=162), but only one result has been above the reference value (without consideration of the duration component of the reference value). I do not see a need for new MDA determinations of "surface water pesticides of concern" at this time.

While clothianidin and imidacloprid were designated by MDA as "surface water pesticides of concern" in 2020, MDA has not yet released neonicotinoid BMPs that focus on protecting surface water. Therefore, I recommend that MDA:

- *Make the publication and dissemination of neonicotinoid BMPs to protect surface water a top priority.*

Charge Question 2: Is there a need for pesticide product restrictions to protect water quality as a condition for registration?

I considered the need for product restrictions to protect water quality for the pesticides that are currently designated as "surface water pesticides of concern". The U.S. Environmental Protection Agency revoked all chlorpyrifos food tolerances in February 2022. As a result, there is no need to consider product restrictions at the state level.

From 2007-2011, 4% of samples had acetochlor concentrations $>50\%$ of the reference value or over the reference value. Of greater concern during this time period, 21% of samples had clothianidin concentrations $>50\%$ of the reference value or over the reference value and 18% of samples had imidacloprid concentrations $>50\%$ of the chronic aquatic life standard or over the standard. The extent of harm to aquatic life is likely underestimated by assessing concentrations of these neonicotinoids individually instead of as a class since their toxic effects are considered additive. Levels of these neonicotinoids in surface water may increase even further in future years if they became replacements for chlorpyrifos.

I commend MDA for requesting that the Minnesota Pollution Control Agency develop water quality standards for clothianidin and imidacloprid. The current lack of state water quality standards means that no waters of the state can be listed as impaired, which would trigger actions to restore them. However, lack of standards should not impede MDA from considering actions to address the current levels of contamination. I recommend that MDA:

- *Adopt the use of total neonicotinoid aquatic life reference values.*
- *Use available information to estimate the contribution of pesticide products versus seed coatings to clothianidin and imidacloprid reference value exceedances. This will allow MDA to determine best approaches to ensure clothianidin and imidacloprid concentrations do not continue to exceed aquatic life reference values. MDA should then prepare a plan with targeted strategies to address exceedances that could include both non-regulatory and regulatory options.*

MDH commends MDA on its rigorous monitoring program which continues to be valuable in identifying water quality concerns and protecting Minnesota's water resources. Thank you for the opportunity to provide comments. If you have questions about the comments, please contact me at (651) 201-4922 or deanna.scher@state.mn.us.

Sincerely,



Deanna Scher, Ph.D.
Environmental Surveillance & Assessment Section
Environmental Health Division

cc: James Kelly, Manager, MDH Environmental Surveillance and Assessment Section

Table 1. Evaluation of Need for New Common Detection Designations Based on 2020 and 2021 Data

	Conc. > 1000 ng/L	>10% HBGV ¹	>25% HBGV ¹	>50% HBGV ¹	>15% detect. freq. ²	>25% detect. freq. ²	Increasing trend in detect. freq. ³	Increasing trend in conc. ³	Ranked in top 20 for lbs. sold ⁴	Use on major MN crop ⁵
Bentazon	√	√	√		√	√	√	√	√	√
Bromacil	√	√								
4-hydroxychlorothalonil	√	√	√	√	√	√	Trend test not conducted (2 yrs of data)	Trend test not conducted (2 yrs of data)	√	√
Clothianidin	√				√	√	√	√	Unable to assess (seed treatment)	√
Dimethenamid ESA	√				√	√	√	√	√	√
Fomesafen	√	√			√	√	Trend test not conducted (4 yrs of data)	Trend test not conducted (4 yrs of data)	√	√
Thiamethoxam	√				√	√	√	√	Unable to assess (seed treatment)	√
Sulfentrazone	√						Trend test not conducted	Trend test not conducted	√	√
Imazamox					√					√

¹ Based on maximum reported concentrations from 2020 and 2021. HBGVs resulting from MDH full chemical review (promulgated or non-promulgated) are available for bentazon, clothianidin, dimethenamid ESA, fomesafen, and thiamethoxam.

² Based on 2020 and/or 2021 data for all samples or in a specific PMR.

³ Statistically significant increasing trend based on 2-sided Mann-Kendall test. Trend tests for pesticides not in common detection status were only provided to the PMPC for PMR 4

⁴ Based on crop chemical pounds sold in 2020 from MDA pesticide sales database search: http://www2.mda.state.mn.us/webapp/lis/chemsold_default.jsp

⁵ Major crops include corn, soybean, spring wheat, dry edible beans, oats, potato, hay, alfalfa, and sugarbeet.

Pesticide Management Plan Committee

Comment Guidance

Pesticide Management Plan Committee (PMPC) members are invited to submit supplemental letters or materials to the Commissioner to elaborate on specific points or recommendations following the PMPC meeting.

Comments are due **July 21st**. Please send comments by email to Kate Hall at Kathleen.Hall@state.mn.us. Comments will be carefully reviewed and presented to the Commissioner.

Questions

In preparing your comments, we ask that you consider the following questions. Additional comments are also always welcome.

As a result of your review of pesticide and water quality data,

1. Is there a need for new Minnesota Department of Agriculture (MDA) determinations (i.e., common detection or surface water pesticide of concern) that would trigger development of pesticide water quality best management practices (BMPs) or related actions for groundwater or surface water?
2. Is there a need for pesticide product restrictions to protect water quality as a condition for registration?

Guidelines

The following guidelines are provided to help respond to the above questions.

Question 1

To answer Question 1, refer to the criteria to be considered in making “common detection” status determinations for groundwater and “surface water pesticide of concern” status determinations for surface water outlined in the [Pesticide Management Plan](#), Chapter 9 “Evaluation,” pp. 61-66 (summarized below).

Common Detection Status in Groundwater

Consider the language in [Minn. Stat. § 103H](#) regarding common detection:

Common detection. ‘Common detection’ means detection of a pollutant that is not due to misuse or unusual or unique circumstances, but is likely to be the result of normal use of a product or a practice. [‘Pollutant’ means a chemical or substance for which a health risk limit has been adopted.]

Evaluation of Detection of Pollutants. Subdivision 1. Methods. (a) The commissioner of agriculture for pollution resulting from agricultural chemicals and practices and the Pollution Control Agency for other pollutants shall evaluate the detection of pollutants in groundwater of the state. Evaluation of the detection may include collection technique, sampling handling technique, laboratory practices, other

quality control practices, climatological conditions, and potential pollutant sources. (b) If conditions indicate a likelihood of the detection of the pollutant or pollutant breakdown product to be a common detection, the commissioner of agriculture or the Pollution Control Agency must begin development of best management practices and continue to monitor for the pollutant or pollutant breakdown products.

The Pesticide Management Plan also offers the following guidelines for common detection status evaluation:

Consider...

1. The scientific validity of the data upon which the evaluation is based.
2. The frequency of detections and concentrations reported in the groundwater monitoring data and any associated trends over time.
3. The extent of use and general use profile of the pesticide.
4. The existence of a Health Risk Limit (HRL) for the pesticide or breakdown product set by the Minnesota Department of Health. In the absence of an HRL, an analysis will be conducted to request an HRL, if one has not already been requested.
5. All other associated land use factors which may be considered unique or unusual such as agronomic, meteorologic, or hydrologic events.
6. If conditions indicate a likelihood of the detections of the pollutant or pollutant breakdown product to be a common detection as defined in [Minn. Stat. § 103H.005 subd. 5](#) (i.e., detections are not due to misuse of unusual or unique circumstances).
7. If a pesticide found in groundwater which is not a pollutant (i.e., it does not have an HRL) would be determined to be a common detection if an HRL existed.

Surface Water Pesticide of Concern Status in Surface Water

As with common detection status in groundwater, the Pesticide Management Plan offers the following guidelines for evaluation for determination of surface water pesticides of concern:

Consider...

1. The scientific validity of the data upon which the recommendations are based.
2. The extent of use and general use profile and the anticipated status of registration of the pesticide.
3. The existence of a water quality standard, water quality criterion, or water quality guideline for the pesticide or breakdown product set by the Minnesota Pollution Control Agency. In the absence of a standard, an analysis will be conducted to determine whether to request a standard, if one has not already been requested.
4. Trends and concentrations of the pesticide in surface waters and the relationship of the detected concentrations relative to a water quality standard, water quality criterion, or water quality guideline.
5. All other associated land use factors which may be considered unique or unusual such as agronomic, meteorologic, or hydrologic events.

Question 2

To answer Question 2, refer to the [Pesticide Management Plan](#), Chapter 10 “Mitigation,” pp. 79-80 (summarized below) and [Minn. Stat. § 18B.26 subd. 5.](#):

(a) The commissioner may not deny the registration of a pesticide because the commissioner determines the pesticide is not essential.

(b) The commissioner shall review each application and may approve, deny, or cancel the registration of any pesticide. The commissioner may impose state use and distribution restrictions on a pesticide as part of the registration to prevent unreasonable adverse effects on the environment.

(c) The commissioner must notify the applicant of the approval, denial, cancellation, state use or distribution restrictions.

(d) The applicant may request a hearing on any adverse action of the commissioner within 30 days after being notified.

(e) The commissioner may exempt pesticides that have been deregulated or classified as minimum risk by the United States Environmental Protection Agency from the requirement of registration.

“Unreasonable adverse effects on the environment” are defined in [Minn. Stat. § 18B.01 subd. 31.](#):

“Unreasonable adverse effects on the environment” means any unreasonable risk to humans or the environment, taking into account the economic, social, and environmental costs and benefits of the use of any pesticide.



July 21, 2022

Kathleen Hall
Minnesota Department of Agriculture
625 Robert Street North
St. Paul, MN 55155
Kathleen.Hall@state.mn.us

Re: MN Pesticide Management Plan (PMP) Committee– Comments & Recommendations

Thank you for the opportunity to participate in the PMP process and the invitation to provide comments regarding the pesticide management and the MDA's 2021 Water Quality Monitoring Report. As in recent years, the data were well organized and presented, allowing for constructive evaluation and discussion of the results. The annual monitoring report demonstrates the success of the voluntary BMP education that has been promoted by the MDA, Extension, pesticide registrants and farm organizations.

I encourage the MDA to continue to promote voluntary BMP's, which have proven effective at minimizing detected concentrations in both groundwater and surface water. I also encourage the MDA to expand its communication efforts to make this important information more readily available. The MDA's pesticide monitoring program is a tremendous success story. It is important that the public and policy makers understand the extent to which the agricultural community continues to practice good stewardship of land and water resources, and the MDA's oversight role.

Committee members were specifically asked to address the following two questions:

1. Is there a need for: "New MDA determinations (Common Detection for Groundwater or Surface Water Pesticide of Concern determinations using the listing criteria articulated in the MN PMP) that would trigger development of pesticide water quality BMP's or other related actions for groundwater or surface water?"

Based on the monitoring data shared at the recent PMP Advisory Committee meeting there is no need for additional declarations of "Common Detection" in ground water or "Surface Water Pesticide of Concern" determinations for surface water.

I also encourage the MDA to consider removing alachlor, which is no longer in use, from the common detection list. Again in 2021, detections were far below reference values and no PMR showed an increasing trend for either alachlor or its degradates. In other words, trends for both concentration or detection frequency are for either decreasing or flat, and concentrations are very low relative to reference values.

2. Is there a need for: "pesticide product restrictions to protect water quality as a condition of registration?"

Given the continued success of the current BMP educational efforts there is no need or justification for restrictions as a condition of registration for any pesticide reviewed.

Once again I would like to thank the MDA for providing an extensive and thorough analysis of pesticide monitoring data, and for the opportunity to participate in the process.

Sincerely,

A handwritten signature in black ink that reads "Gary L. Prescher". The signature is written in a cursive style with a large initial "G" and "P".

Gary Prescher
PMPC farmer representative
Delavan, MN



Jason Garms, Agricultural Program Liaison
DNR Government Relations Unit
500 Lafayette Road
Saint Paul, MN 55155

July 21, 2022

Commissioner Thom Petersen
Minnesota Department of Agriculture
625 Robert Street North
Saint Paul, MN 55155

Dear Commissioner Petersen,

The Minnesota Department of Natural Resources (DNR) appreciates the opportunity to provide comments on the Minnesota Department of Agriculture's (MDA) 2021 Water Quality Monitoring Report. We would also like to acknowledge the significant effort that goes into monitoring Minnesota's ground and surface waters for agricultural chemicals. Understanding and managing the potential risks to Minnesota's water resources is essential for the quality of life for all who live, work, and enjoy the outdoors in this state.

The DNR would like to support the ongoing implementation of the State Pesticide Management Plan. To that end, there are a couple areas of collaboration worth noting:

- 1) Recognizing that couple of DNR observation wells where added as monitoring sites in 2020, and several DNR fish hatchery springs are being sampled, there may be additional opportunities to share resources. The DNR is allows open to considering how DNR observation wells and other DNR administered resources can contribute to MDA's network of sampling locations.
- 2) In recent years, neonicotinoid insecticides have garnered significant attention due to the implications for pollinators and other wildlife. With responsibilities for monitoring the health of Minnesota's wildlife, DNR researchers have been collecting data on potential neonicotinoid exposure to certain avian species and white-tailed deer. As the DNR continues to explore the potential impacts of neonicotinoids, and other pesticides, it may behoove our agencies to occasional share status updates. I would be more than willing to coordinate such updates when the opportunity and interest presents itself.

I will be completing the application to renew my seat on the PMPC shortly and appreciate the opportunity to continue in that capacity. As always, I am available to help coordinate any collaborative efforts between the DNR and MDA.

Sincerely,

Jason Garms

DNR Agricultural Program Liaison



July 13, 2022

Kathleen Hall, Ph.D.
Pesticide and Fertilizer Management Division
Minnesota Department of Agriculture
Via email
Re: Meeting of the Pesticide Management Plan Committee, June 2022

Dear Kate,

Thank you for the opportunity to comment on the information presented to the June 2022 Pesticide Management Plan Committee and in the 2021 Water Quality Monitoring Report. The Minnesota Department of Agriculture's (MDA) monitoring program is comprehensive and ambitious. The following are my comments on MDA's current pesticide activities.

Cyanazine

Let me express my gratitude for the MDA's current efforts to evaluate and address the detection of cyanazine degradates in Minnesota. MDA's work in this area is much appreciated, and we look forward to learning the results of the 2022 Private Well Pesticide Sampling (PWPS) program to be conducted in Dakota County.

As you know, the risk factors associated with a private well having elevated cyanazine degradates are not yet fully understood. I am particularly concerned that, in Dakota County, elevated cyanazine degradates have been found in private wells that do not have detectable nitrate, so using nitrate as a screening tool may leave out some number of at-risk households. I hope that MDA will continue to sample private wells around the state until the occurrence and persistence of these compounds are comprehensively characterized and the health risks to the households in question have been communicated.

Clothianidin

The neonicotinoid clothianidin is an insecticide surface water Pesticide of Concern. In groundwater, the 90th percentile concentrations show a statistically significant increasing trend. In surface water, there are a high number of detections above the USEPA OPP chronic benchmark, and the detections appear to be increasing. Although it is a challenge that clothianidin is widely used as a coating on commercial crop seeds, I urge MDA to increase its efforts to work with seed suppliers to decrease the levels of clothianidin that are introduced to the environment.

Urban sampling data gap

In 2019, I raised the issue that MDA and the Minnesota Pollution Control Agency's (MPCA) joint groundwater monitoring strategy in Pesticide Monitoring Region 10, the Twin Cities Metropolitan Area (TCMA), created a data gap regarding agricultural chemicals in the "rural fringe" of the TCMA. Now, in 2021-22, MDA and Dakota County are working together to establish a network of monitoring wells in rural Dakota County. MDA's wells are

in within the Hastings Drinking Water Supply Management Area and the county's wells are in the other high-nitrate groundwater areas of the county. While these wells are being installed to monitor nitrate and chloride for the most part, I hope that MDA will consider also sampling them for pesticides and pesticide degradates. The county's wells are available for MDA's sampling, if wanted.

Thank you for your consideration of my remarks.

Sincerely,

Jill V. Trescott

Senior Environmental Specialist, Groundwater Protection

Dakota County Environmental Resources

14955 Galaxie Avenue

Apple Valley, MN 55124

Jill.trescott@co.dakota.mn.us

Cc: Valerie Grover, Groundwater Protection

From: [David Kee](#)
To: [Hall, Kathleen \(MDA\)](#)
Subject: RE: PMPC Comments, Membership, and Survey
Date: Thursday, August 4, 2022 2:27:56 PM

4 August 2022
Kathleen Hall, Ph.D.
Research Scientist
Pesticide and Fertilizer Management Division
625 Robert Street North
Saint Paul, MN 55155-2538

Hello Kate,

Thank you for the important work you and your team conduct.

You asked me, and the other committee members, to respond with our comments and recommendations to the Commissioner of Agriculture. MDA staff specifically asked us to address the following two questions:

1. Is there a need for: "New MDA determinations (Common Detection for Groundwater or Surface Water Pesticide of Concern determinations using the listing criteria articulated in statute and in the MN Pesticide Management Plan) that would trigger development of pesticide water quality BMP's or related actions for groundwater or surface water?"
2. Is there a need for: "pesticide product restrictions to protect water quality as a condition of registration?"

For both requests the answer, currently, is not yet. The was collected in one of the most severe droughts in Minnesota history.

I feel the work your team does impacts all interested parties. Recommendations should be based on solid, defensible information. The drought severely impacted movement of all chemical compounds, both naturally occurring and manmade, in the hydrologic system.

There is work to be done. The report is a beast to consume; highly technical and time consuming to read. The reference levels used vary with project (monitoring wells versus precipitation). The authors should spend more effort describing the changes in reference levels used, and why the changes are appropriate. The report needs to be understood by the average individual, or at least the average farmer.

I also recommend your office work with the commodity organizations and UMN Extension to educate the farmer population on the importance of the program, how the tests are conducted, why

the effort is required, and why the effort is important to agriculture. As an old country song once stated, "You can't be a beacon if your light don't shine". Let it shine.

Regards,

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From: [Shawn Murphy](#)
To: [Hall, Kathleen \(MDA\)](#)
Subject: PMPC comments
Date: Thursday, June 23, 2022 1:13:06 PM

Kathleen

Comments from Shawn Murphy

Questions 1 – Is there a need for new MDA determinations that would trigger development of pesticide water quality BMPs?

NO

Question 2 – Is there a need for pesticide product restrictions to protect water quality as a condition for registration?

NO (I believe the product restrictions are there already, the question I might have is are they followed all the time)

General Comments

The meeting, materials and presentation was excellent.

Although there are pesticides to keep monitoring, I feel like the data supported my answers to both questions above

My main comment/concern would be in relation to some wording in the executive summary section of the report.

The first sentence states “... water quality monitoring is conducted ... for the purpose of evaluating the impact from ***routine*** application of agriculture chemicals ***on groundwater and surface water...***”

According to the label for Atrazine: “Do not apply directly to water, to areas where surface water is present...”

According to the label for Acetochlor: “Do not apply directly to water, or to areas where surface water is present...”

Since the label is the law, it would NOT be “routine” to apply agriculture chemicals on surface water. “Routine” application of agriculture chemicals on groundwater AND surface water would seem to be a violation of the law.

In the “Ambient Surface Monitoring” section it states that “...the detection(s) [of a pesticide] is not the result of misuse or unusual or unique circumstances”. I would argue that if a pesticide gets applied to a surface body of water IT IS misuse, even if unintentional or through drift.

Those are my comments, thanks

Shawn Murphy

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