Minnesota Pollution Control Agency

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October 29, 2013

Minnesota Department of Agriculture
Ms. Annie Felix-Gerth
Pesticide and Fertilizer Management Division
625 Robert Street North
St. Paul, MN 55155-2538

RE: Comments on Draft Nitrogen Fertilizer Management Plan

Dear ~~Ms. Felix-Gerth~~ Annie:

Thank you for the opportunity for the Minnesota Pollution Control Agency to participate on the Nitrogen Fertilizer Management Task Force and to comment on the draft plan. Our comments on the draft plan are noted in the attachment. Please contact Byron Adams or Dave Wall if you would like further explanation of any of these comments.

Sincerely,

Glenn Skuta
Section Manager, Environmental Analysis & Outcomes
Surface Water Monitoring

GS/DW:kb

Attachment

Overall statements:

- Given the extent of nitrogen contamination in some parts of the state, the plan needs to place a high priority on first addressing those areas that have the highest potential to impact human and ecological health.
- As discussed in the recent Water Governance Report, the plan should note that the use of certain nitrogen reducing practices (e.g. cover crops) will also have the added benefit of improving soil health.

Page 18 – Delete the words "lead" and "arsenic" as being associated with nitrate. Arsenic is primarily a natural contaminant and lead is rarely detected and not necessarily associated with nitrate.

Page 22 – delete "Lake Winnipeg" in reference to hypoxia. This lake has eutrophication problems, but oxygen levels may not go low enough to fit the term "hypoxia."

Page 53 – Third bullet. We recommend specifically listing cover crops in the list of alternative cropping systems which can help reduce nitrate leaching.

Page 57 – The reference to a 9-15% decrease in wells exceeding the HRL seems potentially misleading. The decrease does not necessarily represent a trend in nitrate levels, but only shows the fact that during 2008, a higher than normal percent of wells exceeded the HRL. It would be more defensible to state "the annual percentage of wells exceeding the HRL for each sampling round ranged between 9.3 and 14.6 percent."

Page 64 – It is clear how the NFMP allows response to high nitrate at the local scale, but more explanation is needed regarding how the plan responds to nitrogen contamination on a "regional or state basis" as stated in the 2nd paragraph. It would be good to state how the plan addresses nitrogen contamination issues at larger scales.

Page 64 – Bottom paragraph. While it states that prevention activities focus on protecting groundwater, it should also state that prevention also protects tile drainage waters, as is noted on page 16. We believe that the prevention of high nitrate loads exiting tile drainage lines should be an important outcome of the education and promotion efforts. Also, is the "Education and Promotion Team" the same thing as the "Prevention Team" referred to earlier in the report? If so, it would be helpful to use consistent terminology.

Page 65 – 2nd to last paragraph. Does the statewide monitoring plan of paralleling the MPCA's watershed assessment also mean that wells will be routinely sampled in the more natural areas and geologically protected areas of Minnesota? While some limited monitoring in such areas may be useful, the monitoring should focus on areas of the state where groundwater nitrate contamination is more likely.

Page 69 – It is not clear how the very important "Alternative Management Tools" will be used. Education and promotion should also include alternative management tools, in addition to education on the more traditional BMPs.

The plan could potentially benefit in the monitoring-related discussions by:
Combining Figure 16 and Table 4 on pages 55 and 56 so the results are shown on the map

- Including, or clearly reference, Figure 4 from "The Condition of Minnesota's Groundwater 2007-2011" (map of nitrate concentrations in wells)
- Including, or clearly referencing, Table 1 from "The Condition of Minnesota's Groundwater 2007-2011" (median nitrate levels for different land uses)
- While the plan is clearly focused on groundwater, it does make several references to surface water, and surface water-groundwater interaction. As such, it might be useful to include or clearly reference Figure 1 in chapter B1 of "Nitrogen in Minnesota Surface Waters." The contrast between figures 4 and 1 could help support one of the points the plan makes – that groundwater nitrate is a bit more complex than surface water nitrate.

Page 74 – The discussion on page 74 about unintended consequences should be deleted. The MPCA is not aware of any situations where we would want to trade-off reducing nitrate so that another impairment can be addressed. We don't see this as an issue that needs to be highlighted in this strategy, and it may mislead people in thinking that we need to make trade-offs with nitrate and other contaminants.

Page 79 – 4th item. Consider adding monitoring wells to the private wells, as the way to assess changes over time. We recognize the increased costs, but in some cases monitoring wells will likely be needed.

Page 84 – Activities to consider under phase 3. In the 4th item for phase 3, change to end with "and/or" rather than "or," recognizing that each item listed has a different objective and more than one approach may be necessary.

Page 84 – Evaluating phase implementation. We agree that consideration of lag time is important for evaluating BMP adoption, but it should also be noted that phase implementation can also be based on lack of BMP adoption alone. The evaluation of BMP adoption can be accomplished in a shorter timeframe than is sometimes inherent with groundwater monitoring and response lag times.

Pages 86-87 - The MPCA has various levels of rigor and analysis details in TMDLs, and in some cases the TMDLs can be approached in a more generic way than is described on pages 86-87. Please delete the last half of the last paragraph starting on page 86 beginning with "In order to be meaningful..."

Page 88 – several references are made of the term "ineffective" BMPs. Normally the term "ineffective" means that the BMPs do not work – they technically do not do the job. But in the case of the strategy, the term "ineffective" appears to mean that the BMP promotional activities are ineffective, such that

the BMPs proven to be effective at protecting groundwater are not being adopted. This needs to be more clearly stated/defined in the strategy.