MINNESOTA POLLUTION CONTROL AGENCY

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MEMORANDUM

DATE: June 15, 2017

TO: MPCA Staff

FROM: John Linc Stine, Commissioner

SUBJECT: **Chloride Water Quality Standard and NPDES Permit Implementation Guidance**

Water quality data demonstrate an increasing trend of chlorides in Minnesota's water resources. Wintertime deicing activities and municipal wastewater treatment plant (WWTP) discharges (primarily due to loading from home water softeners) are the main sources of chlorides to our state's waters.

To address the increasing chloride problem from municipal wastewater discharges, I convened a Chloride Working Group to represent municipal interests. The goal in forming the Working Group was to consider permitting options to address chloride in wastewater discharges in a manner that facilitates environmental progress and innovation while recognizing current economic constraints. The Chloride Working Group, comprised of eight municipal wastewater representatives and two consultants, recently presented a series of recommendations that I now direct Minnesota Pollution Control Agency (MPCA) staff to implement into practice.

These recommendations follow several months of studying the challenge of implementing the chloride water quality standard in municipal wastewater NPDES/SDS permits in order to protect aquatic life from toxic levels. This Working Group met from December 2016-April 2017. Represented by David Lane, environmental manager for the Rochester Water Reclamation Plant, the group made its recommendations to me on April 18, 2017, where I also took feedback from the MPCA Advisory Committee.

I affirm the work of the Chloride Working Group and direct MPCA staff to implement their recommendations for a municipal NPDES/SDS permits, as follows:

- Use a decision tree developed by the Working Group to decide whether the agency will assign a chloride limit in a WWTP's NPDES/SDS permit with an associated schedule of compliance, or consider a variance to allow time to determine a solution.
- Factors in the decision tree should include:
    - Is a reduction in chloride needed?
    - Is the facility close to meeting the standard?
    - Is construction needed to meet the chloride limit?
    - Is the solution economically feasible?
- For variances, municipalities should use the MPCA-developed streamlined application tool (that includes a spreadsheet calculator to determine affordability).
- Allow variances when the cost of treatment is too high.
- Waive the current variance application fee of $10,850 if municipalities use the MPCA-developed streamlined application tool.
    - Reissue variances when permits are reissued if there are no changes in the economics of the situation.

- Use best management practices to minimize a WWTP's discharges of chloride. (For example, some plants may be able to use different products for phosphorus removal that will also lead to lower chloride concentrations.)
- WWTPs with a variance must include alternative limits in their permits to prevent "backsliding" or making chloride levels higher.

Regarding the variance application fee, it is not necessary, as the MPCA has already done much of the work for municipal variance applications through the development of a streamlined variance process, which includes:

- A spreadsheet tool to assess each municipality's variance eligibility in a way that places minimal burden on the municipalities by significantly reducing up-front costs, and;
- An alternatives analysis comprehensive enough to satisfy the U.S. Environmental Protection Agency requirement for a variance, including demonstration that the permit limit would cause "substantial and widespread negative economic and social impacts."

With these key elements in place, there is little need to recover the cost associated with the variance application as the streamlined process significantly reduces the work of the MPCA.

The Chloride Working Group has proposed a sensible implementation strategy to a very complicated problem. The thought and deliberation behind this effort is commendable. I appreciate the Working Group's assistance in developing this path forward.

Additional resources:

- "The Challenge of Meeting Water-Quality Based Permit Limits: A Working Group Proposal to Address Chloride from Municipal Wastewater Treatment Facilities," memo from Shannon Lotthammer, Environmental Analysis and Outcomes Division Director, to MPCA Advisory Committee members (www.pca.state.mn.us/sites/default/files/p-ac-17-04b.pdf)
- "Chloride Work Group Policy Proposal for Minnesota: Recommendations for addressing chloride in municipal wastewater effluent" (www.pca.state.mn.us/chloride-and-water-quality)
- "Alternatives for addressing chloride in wastewater effluent" (www.pca.state.mn.us/chloride-and-water-quality)