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July 12, 2017

Mr. Justin Wagner
Utilities Manager
City of Northfield Utilities
1101 College Street
Northfield, MN 55057

RE: Wastewater Treatment Facility
NPDES Permit

Dear Mr. Wagner:

Bolton & Menk, Inc. has reviewed the June 30, 2017 letter that you received from the Minnesota Pollution Control Agency (MPCA) regarding the reissued NPDES permit for the Wastewater Treatment Facility (WWTF) and we have the following comments.

The existing Northfield WWTF is designed for an Average Wet Weather (AWW) flow of 5.2 mgd and an effluent phosphorous concentration of 1.0 mg/l and a calendar yearly mass limit of 7,174 kg.

The new permit is proposing the following new phosphorous limits:

- 6,223 kg/year mass limit (a 13 percent reduction) (0.87 mg/l at 5.2 mgd)
- 41.33 kg/day calendar month average for October – May (2.10 mg/l at 5.2 mgd)
- 24.80 kg/day calendar month average for June – September (1.26 mg/l at 5.2 mgd)

While the proposed calendar monthly averages are very reasonable and actually higher in concentration than the current yearly mass limit (19.65 kg/day) the City will need to be considerably lower than the calendar monthly averages (17.05 kg/day) in order to meet the proposed yearly mass limit of 6,223 kg/year.

The revised permit language also contains language “that the Northfield WWTF will have to average 11.81 kg/day as a long-term average to comply with the 24.80 kg/day monthly average limit.” The 11.81 kg/day calendar month average equates to an effluent phosphorous concentration of 0.60 mg/l. As noted above the facility is designed to meet a 1.0 mg/l phosphorous limit at 5.2 mgd.

The City should indicate to the MPCA that the facility was designed to meet a 1.0 mg/l phosphorous limit at 5.2 mgd and cannot guarantee that it will meet the proposed limits. The City likely will be able to meet the proposed limits for some time until the flow increases, however, there is no guarantee the facility can meet these limits as flow increases. If the

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proposed limits are incorporated into the new permit the City will need to evaluate the system and potential improvements to meet the proposed phosphorous limits as flow increases to the facility.

We appreciate the opportunity to provide our comments to you regarding the proposed limits. If you have any questions regarding the above please do not hesitate to contact me at (612) 803-5223.

Sincerely,

Bolton & Menk, Inc.



Seth A. Peterson, PE
Project Engineer

cc: Rich Kucera, Wastewater Plant Supervisor