MOORHEAD
MINNESOTA

February 21st, 2020

International Joint Commission
U.S. Section
1717 H Street Northwest, Suite 835
Washington, DC 20006

RE: Preliminary assessment of potential cost impact for the City of Moorhead, MN.

Dear Commissioners:

My name is Andy Bradshaw, the Operations Manager for the City of Moorhead Wastewater Treatment Facility (MWWTF). The MWWTF is regulated pursuant to a National Pollutant Discharge Elimination System (NPDES) permit and discharges to the Red River of the North. The proposed nutrient concentration objective and load targets, if enforced by the Minnesota Pollution Control Agency ("MPCA") or U.S. EPA, could require the MWWTF to make significant investments in process changes and/or infrastructure upgrades.

Cities like Moorhead are on the forefront of protecting the Red River of the North and we take water quality concerns about the Red River and downstream Lake Winnipeg very seriously. Over the last several years, the MWWTF has made significant efforts to reduce our phosphorus contribution to the Red River (over 50% reduction). We are also currently participating in the stakeholder process led by the Red River Basin Commission to work with other cities, agricultural groups, and the MPCA to develop strategies to reduce phosphorus in the Red River. The goal of this process is to find ways to reduce phosphorus (offsets within the Basin) that provide greater benefit at less cost than expensive permit limits. We support the IRRB's effort to develop a phosphorus load target designed to protect Lake Winnipeg and we urge the IJC to focus its effort on building consensus around the appropriate phosphorus load target for the Red River.

The potential financial costs of complying with the proposed phosphorus and nitrogen concentration objectives for the City and similarly situated communities are substantial. The MWWTF is a mechanical facility with a service population just over 48,000 people. We are currently working on a facility plan to evaluate several improvements, including the potential for nutrient removal. A preliminary analysis was requested from our engineering firm regarding the cost for the MWWTF to meet potential limits resulting from phosphorus and nitrogen concentration objectives. Given the uncertainty related to how the concentration objective would apply to our specific facility, we assumed that our facility would be required to comply with both

a total phosphorus (TP) limit of 1.0 milligram per liter (mg/L) and total nitrogen (TN) permit limit ranging from 15.0 mg/l to 10.0 mg/L.

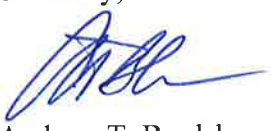
Based on a preliminary evaluation, the cost to comply with a TP limit of 1.0 mg/L is $10 million (U.S.). Adding a TN limit ranging between 15.0 mg/L to 10.0 mg/L increases the total nutrient removal cost to $24-36 million (U.S.). Presently, the MWWTF's TP load to the Red River averages 50 pounds/day and the TN load is 800 pounds/day (0.11% and 0.15%, respectively, of the average daily Lake Winnipeg load[1]). If the MWWTF were to meet a TP limit of 1.0 mg/l and TN limit of 10.0 mg/l, the load reduction would be approximately 20 pounds/day and 500 pounds/day, respectively. This is a significant cost for a very small load reduction to the system.

Not only would the MWWTF incur a significant cost for a very small load reduction to the system, this cost would be in addition to the cost to complete other wastewater system improvements important to protecting public safety, public health, and the environment. Among other needs, the MWWTF is currently in design, or planning for, significant and costly improvements to aging sewers and facility infrastructure, wastewater disinfection, reuse of biosolids, and increasing renewable power usage of digester gas.

Given the significant concerns identified by Minnesota cities and municipal groups, and the potential economic consequences of treatment upgrades, we believe that it is unreasonable for the IJC to accept the IRRB's proposed concentration objectives for phosphorus and nitrogen and the load target for nitrogen at this time. Instead, we urge the IJC and IRRB to focus its efforts on the development of a phosphorus load target for the Red River designed to protect Lake Winnipeg, and to work with all stakeholders to develop a strategy to meet that target.

Thank you for your time and consideration.

Sincerely,



Andrew T. Bradshaw
Operations Manager
Wastewater and Stormwater Services Division
City of Moorhead, MN Engineering Department

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[1] Average load to Lake Winnipeg from all sources is more than 7,350 tonnes/year (phosphorus) and more than 91,175 tonnes/year (nitrogen). *See* Lake Winnipeg: Nutrients and Loads – A Status Report, Manitoba Sustainable Development, February 2019.