



December 27, 2019

Manitoba Conservation and Climate  
Environmental Stewardship Division  
Environmental Approvals Branch  
1007 Century Street  
Winnipeg, MB R3H 0W4

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Our Files Nos: S-1146, S-972, EMS  
020-17-08-11-00  
020-17-08-11-9N

Attention: Siobhan Burland Ross, M. Eng., P. Eng., Director (The Environment Act)

**RE: Progress Report for Activities Regarding the North End Sewage Treatment Plant (NEWPCC)**

The City of Winnipeg, Water and Waste Department (City) acknowledges receipt of the December 5, 2019 letter from Manitoba Conservation and Climate.

The following is a progress report of activities to date. This report provides supplemental information (to December 31, 2019) to the North End Sewage Treatment Plant Upgrade Progress Report submitted on December 6, 2019.

The total estimated cost for the North End Sewage Treatment Plant Upgrade project is \$1.789 billion.

In February 2019, the North End Sewage Treatment Plant (NEWPCC) Upgrade Project was divided into three projects in order to manage risk, scope and cost of a large complex project and is being initiated in order of process criticality:

- NEWPCC Upgrade: Power Supply and Headworks Facilities - \$408 million
- NEWPCC Upgrade: Biosolids Facilities - \$553 million
- NEWPCC Upgrade: Nutrient Removal Facilities - \$828 million

Power Supply and Headworks Facilities

City Council has approved this project to proceed to construction.

The Power Supply Project will provide the needed power to run processes associated with the planned headworks, biosolids, and nutrient removal facilities. The design is 98% complete and construction of the power transformers is ongoing; total performance is expected by the fourth quarter of 2020.

The Headworks Facilities Project will provide new pumping, screening, and grit removal for the plant. The project definition report, preliminary design, and cost report are complete. A third party review of the project cost estimates was completed, as well as an independent audit of the project costs. A request for qualifications (RFQ) was issued and proponents have been pre-selected to bid on the next phase, a request for proposals (RFP). The RFP will be issued to the proponents by the first quarter of 2020. Total performance for this project is expected by the fourth quarter of 2026.

In September 2019, City Council approved the Headworks Facilities Project for Federal and Provincial funding applications under the Investing in Canada Infrastructure Program. This application has been submitted and is pending Provincial and Federal review.

### Biosolids Facilities

City Council has approved this project to proceed to construction subject to Federal and Provincial funding.

The Biosolids Master Plan, approved by Manitoba Conservation and Climate in 2016, recommended new sludge treatment facilities to provide growth, nutrient removal and recovery, and maximum biosolids reuse. Since 2016, the City has pre-selected critical technologies, through a competitive bid process, to ensure maximum recovery and reuse:

- Ostara has been preselected to harvest struvite, a phosphorous-based mineral, from the new facility
- CAMBI, a sludge pre-treatment technology, has been preselected to provide the necessary pathogen reductions to meet a Class A Biosolids designation.

The project definition report, preliminary design, and cost report are complete. A third party review of the project cost estimates was completed, as well as an independent audit of the project costs.

As with the Headworks Facilities Project, in September 2019, the Biosolids Facilities Project was approved by Council for Federal and Provincial funding applications under the Investing in Canada Infrastructure Program. The application has been submitted and is pending Provincial and Federal review.

In December 2019, the City of Winnipeg released a prioritized list of infrastructure projects in its City of Winnipeg 2020 Infrastructure Plan. The Biosolids Facilities Project was ranked as the first priority for the City of Winnipeg.

### Nutrient Removal Facilities

The project has not been approved to proceed by City Council at this time.

This project will provide the facilities for biological nutrient removal and will result in full licence compliance with respect to ammonia, biological phosphorous removal, nitrogen removal, as well as the revised limits for carbonaceous biological oxygen demand (cBOD), and total suspended solids (TSS) removal.

The preliminary design and a third party review of project costs has been completed.

### Interim Phosphorous Removal and Notice of Alteration Request

In January 2019, Manitoba Climate and Conservation required the City to submit a Notice of Alteration request as the City was not able to meet the NEWPCC Licence compliance date for nutrient removal and commissioning of the upgraded plant. As part of that request the City was required to evaluate interim phosphorous removal options.

The City hired AECOM to conduct a review of possible interim phosphorous removal options. The review evaluated seven options and compared these options to a base case 'no change' scenario. The review concluded that none of the options would remove phosphorous to 1 mg/L but that some scenarios should be evaluated further for partial phosphorous removal.

The City submitted the Notice of Alteration on July 30, 2019 and began the process for studying interim phosphorous removal further. Relevant project management documents were completed and public presentations to the City's Standing Policy Committee on Water and Waste, Riverbank Management, and Environment were provided in September and October 2019. A request for proposal (RFP) was issued to select a consultant to complete the recommended testing of identified options and closed on December 19, 2019. The City is currently reviewing submitted proposals and plans to award a consultant contract by January 31, 2020.

#### Project Steering and Advisory Committees

On December 5, 2019, the City was informed that its Notice of Alteration request was denied. Two project committees were commissioned and are co-chaired by Manitoba Conservation and Climate and the City. Since this time the City has fully participated as a member of the Project Steering Committee and Project Advisory Committee.

The Project Steering Committee met on December 16, 2019 to introduce members and review the terms of reference for the committee. A project update was provided by the City to committee members. On December 18, 2019 the Project Advisory Committee met to introduce members, review terms of reference, and receive a project status update from the Project Steering Committee.

The City is fully committed to reducing nutrients to Lake Winnipeg and improving river quality and will fully participate in the Committees established by Manitoba Conservation and Climate, with further updates on activities being shared through the respective committees.

Should you have any questions regarding this report please contact myself at 204-986-4477 or by email at [gpatton@winnipeg.ca](mailto:gpatton@winnipeg.ca).

Yours truly,

*"Original signed by G. K. Patton, P. Eng."*

Geoff Patton, P. Eng.  
Manager of Engineering Services Division

Attachment: Relevant Links with Further Information

April 28, 2014: North End Master Plan:

<https://www.gov.mb.ca/sd/eal/registries/1071.1/master.plan.pdf>

May 29, 2014: Request for Proposals for Professional Engineering Consulting Services for the NEWPCC Power Supply Upgrade

[https://www.winnipeg.ca/MatMgt/FolderContents.asp?FOLDER\\_NAME=40-2014&YEAR=2014](https://www.winnipeg.ca/MatMgt/FolderContents.asp?FOLDER_NAME=40-2014&YEAR=2014)

September 29, 2014: Biosolids Master Plan:

[https://www.gov.mb.ca/sd/eal/registries/963.2/city\\_of\\_winnipeg\\_biosolids\\_masterplan.pdf](https://www.gov.mb.ca/sd/eal/registries/963.2/city_of_winnipeg_biosolids_masterplan.pdf)

July 15, 2015: Request for Proposals for Professional Engineering Consulting Services for the North End Sewage Treatment Plant (NEWPCC) Upgrade:

[https://www.winnipeg.ca/MatMgt/FolderContents.asp?FOLDER\\_NAME=182-2015&YEAR=2015](https://www.winnipeg.ca/MatMgt/FolderContents.asp?FOLDER_NAME=182-2015&YEAR=2015)

January 28, 2016: Request for Qualification for Design Build of the City of Winnipeg's North End Sewage Treatment Plant Power Supply Upgrade Project

[https://www.winnipeg.ca/MatMgt/FolderContents.asp?FOLDER\\_NAME=599-2015\\_A&YEAR=2015](https://www.winnipeg.ca/MatMgt/FolderContents.asp?FOLDER_NAME=599-2015_A&YEAR=2015)

June 5, 2019: Request for Qualification Design Build of North End Sewage Treatment Plant (NEWPCC) Upgrade: Headworks Facilities

[https://www.winnipeg.ca/MatMgt/FolderContents.asp?FOLDER\\_NAME=659-2018\\_A&YEAR=2018](https://www.winnipeg.ca/MatMgt/FolderContents.asp?FOLDER_NAME=659-2018_A&YEAR=2018)

July 30, 2019: Initial Phosphorous Interim Options Review (AECOM Report):

<https://winnipeg.ca/waterandwaste/pdfs/sewage/NoticeOfAlterationNEWPCC.pdf>

October 3, 2019: Standing Policy Committee Motion to Further Investigate Interim Phosphorous Removal:

<http://clkapps.winnipeg.ca/dmis/ViewDoc.asp?DocId=18366&SectionId=&InitUrl=>

November 15, 2019: Request for Proposals to Study Pre-Selected Interim Phosphorous Removal Options

[https://www.winnipeg.ca/MatMgt/FolderContents.asp?FOLDER\\_NAME=1179-2019&YEAR=2019](https://www.winnipeg.ca/MatMgt/FolderContents.asp?FOLDER_NAME=1179-2019&YEAR=2019)

December 5, 2019: NEWPCC NOA Submission and Response:

<https://www.gov.mb.ca/sd/eal/registries/1071.1/2684rrrllicence.pdf>

December 2019: City of Winnipeg 2020 Infrastructure Plan:

<https://www.winnipeg.ca/infrastructure/pdfs/Infrastructure-Plan-2020.pdf>

City of Winnipeg Information on Phosphorous Loads to Lake Winnipeg:

<https://winnipeg.ca/waterandwaste/sewage/ProtectingOurWaterways/index.stm>

Manitoba Registry for Submissions Regarding the North End Sewage Treatment Plant:

<https://www.gov.mb.ca/sd/eal/registries/1071.1/index.html>

[North End Sewage Treatment Plant Upgrade Project Updates](#)

<https://www.winnipeg.ca/waterandwaste/sewage/wstp/NorthEndUpgrade.stm>

MP/ctk

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