

**Minutes – Standing Policy Committee on Finance – November 20, 2014**

**REPORTS**

**Minute No. 20      North End Water Pollution Control Centre (NEWPCC) Biological  
Nutrient Removal Upgrade Financial Status Report No. 1 for the  
Period from January 1, 2014 to September 30, 2014**

**STANDING COMMITTEE DECISION:**

The Standing Policy Committee on Finance concurred in the recommendation of the Winnipeg Public Service and received the report as information.

**Minutes – Standing Policy Committee on Finance – November 20, 2014**

DECISION MAKING HISTORY:

Moved by Councillor Gillingham,

That the recommendation of the Winnipeg Public Service be concurred in.

Carried

David Sanders, submitted a presentation dated November 20, 2014, with respect to North End Water Pollution Control Centre (NEWPCC) Biological Nutrient Removal Upgrade Financial Status Report No. 1 for the Period from January 1, 2014 to September 30, 2014.

## ADMINISTRATIVE REPORT

**Title:** NORTH END WATER POLLUTION CONTROL CENTRE  
(NEWPCC) BIOLOGICAL NUTRIENT REMOVAL UPGRADE  
FINANCIAL STATUS REPORT NO. 1 FOR THE PERIOD FROM  
JANUARY 1, 2014 TO SEPTEMBER 30, 2014

**Critical Path:** THE STANDING POLICY COMMITTEE ON FINANCE

### AUTHORIZATION

Author	Department Head	CFO	CAO
G. K. Patton, P. Eng. Manager of Engineering Services	D. P. Sacher, P. Eng. Director, Water and Waste Department	M. Ruta	D. Joshi A/CAO

### RECOMMENDATIONS

That this report be received as information.

### REASON FOR THE REPORT

At its meeting held on December 16, 1999, City Council adopted a policy whereby all capital projects with a total estimated cost of \$10 Million or more be submitted by the associated Civic Department to the Standing Committee on Fiscal Issues (now the Standing Policy Committee on Finance) for review and recommendation prior to any bid solicitation being issued.

Administrative Directive No. FM-004 requires quarterly reporting to the Standing Committee on Fiscal Issues (now the Standing Policy Committee on Finance).

### IMPLICATIONS OF THE RECOMMENDATIONS

- A project design build procurement methodology is currently under consideration by the Department. Funds will be adjusted to reflect project consolidation in the proposed 2015 capital budget submission. This will allow for the consideration of a design build project award and the costs associated with a design-build delivery method.
- The NEWPCC Upgrade will include a digestion facility, therefore integration of a portion of the Biosolids – Alternative Disposal Delivery and Management System budget into the NEWPCC - Nutrient removal/Upgrade is being considered.
- There are tight project constraints associated with the installation/removal of high voltage lines into the plant that can only be carried out by Manitoba Hydro in the fall or spring due to high power demands in the summer and winter.

## HISTORY

In 2003 Clean Environment Commission Hearings on the City's wastewater collection and treatment systems, Manitoba Conservation and Water Stewardship (the Regulator) notified the City that it intended to issue a licence for the North End Water Pollution Control Centre (NEWPCC) that would require control of nutrients discharged to the Red River.

Between 2004 to 2014, Council has approved \$43,214,000.00 for the Nutrient Removal/upgrade at the NEWPCC.

On May 16, 2007, Council authorized the Chief Administrative Officer to finalize the terms and conditions of a contribution agreement with the Government of Canada and the Province of Manitoba for funding of wastewater treatment plant upgrades under the Canada Strategic Infrastructure Fund.

On November 19, 2008, City Council authorized the Winnipeg Public Service to:

- begin the procurement of a strategic partner that could bring private sector experience to the design, construction, finance and potentially the operation of the North and South End Sewage Treatment Plants as well as potential operation of the West End Water Sewage Treatment Plant, and;
- authorize the Chief Administrative Officer to approve and issue the Request for Expressions of Interest followed by a Request for Qualifications and the Request for Proposals.

On May 6, 2009 the Environment Act Licence (EAL) No. 2684 RRR was issued for the NEWPCC.

On May 19, 2010 Council:

- directed the Chief Administrative Officer to approve and issue a Letter of Notification to Veolia in order to immediately begin design and construction of the South and North End sewage treatment plant upgrades and expansion and biosolids handling facility.
- delegated the authority to the Chief Administrative Officer to "approve contract awards for upcoming South and North End sewage treatment plant capital projects where the value of each contract does not exceed \$30 Million and there are sufficient funds in a budget approved by Council.

On June 16, 2011, the Save Lake Winnipeg Act amending sections of the Water Protection Act (Act) came into effect. Section 4.2(3) of the amended Act requires the City to submit a plan that details how the City will comply with subsections 4.2(1) and (2).

The NEWPCC Upgrading Plan was submitted to the Regulator in compliance with Section 4.2(3) of the amended Water Protection Act on June 15, 2012. The Regulator approved the Upgrading Plan on October 2, 2012. The Department submitted the NEWPCC Master Plan and the revised NEWPCC Master Plan on September 27, 2013 and April 28, 2014 respectively. The Master Plan was approved by the Regulator on May 29, 2014.

## **DISCUSSION:**

### **1. MAJOR CAPITAL PROJECT STEERING COMMITTEE**

Administrative policy for projects with capital cost exceeding \$10 million requires formation of Major Capital Project Steering Committee. The Committee has been formed and its members are:

Deepak Joshi, Acting Chief Administrative Officer  
Michael Ruta, Chief Financial Officer  
Diane Sacher, Director of Water and Waste  
Moira Geer, Manager of Finance and Administration, Water and Waste  
Jackie Veilleux, Project Director, Winnipeg Sewage Treatment Program, Water and Waste

The Committee has reviewed this report and recommended that the report be sent to the Standing Policy Committee on Finance.

### **2. DESCRIPTION OF PROJECT**

The Project objective is to upgrade the NEWPCC to meet anticipated Licence limits while accommodating year 2037 forecasted influent flows and loads. The Regulator advised that the current Licence will be amended after the NEWPCC Master Plan and the Biosolids Master Plan have been approved. An updated Environment Act licence for NEWPCC is anticipated in 2015. The Project design will also consider future regulatory trends and long term planning to year 2067 to facilitate effective process or facility modifications should they be required.

A new power sub-station is required at the NEWPCC due to the additional power demand of the upgrades at the facility. The power supply upgrade is being delivered as a separate project. The objective is to upgrade the NEWPCC Power Supply before the future NEWPCC BNR Upgrades.

The delivery method for NEWPCC Power Supply Project is design build (DB).

During performance of the Project works including construction, impact to the current facility treatment capability will be minimized to the greatest extent possible. The expanded and upgraded facility is to have an economical whole life cost and be an efficient and safe workplace for operational personnel.

The digestion facility at the NEWPCC is proposed to be upgraded as part of the NEWPCC Upgrade Project to reduce the risks associated with the phasing of the tie-ins and process commissioning, to improve the biosolids implementation schedule and to facilitate a more optimized plant layout.

### **3. RISKS AND RISK MITIGATION STRATEGIES**

An ongoing risk management strategy has been implemented for the NEWPCC Power Supply Project. It includes a proactive process of identifying, performing qualitative and quantitative risk analyses, response plan strategies and risk control.

Formal risk and opportunity analyses of the project are scheduled to be performed by the Winnipeg Sewage Treatment Program (WSTP), the design consultant and key City stakeholders

during conceptual and preliminary design. Since detailed design and construction will be carried out through a design build contract; the WSTP will be transferring as much risk as possible to the design builder through the design build contract.

A project risk register will be kept throughout the project and will be updated by formal analyses. The project will also incorporate structured Hazard and Operability Analysis and Construction Hazard Assessment Implication Review.

#### **4. CURRENT PROJECT STATUS**

The WSTP has developed design flows and loads for the NEWPCC and has selected the Biological nutrient removal (BNR) with integrated fixed film activated sludge (IFAS) as the principal treatment process to be employed.

The NEWPCC Master Plan was submitted to the Regulator and was approved in May, 2014. The WSTP is in the process of finalizing the NEWPCC Facility Plan.

A Request for Proposal (RFP) for Professional Engineering Consulting Services for the NEWPCC Power Supply Project was posted on Materials Management's website on April 30, 2014. The RFP closed on June 12, 2014, and is being evaluated by the evaluation committee. It is anticipated that the project will be awarded in October, 2014.

The WSTP is developing the procurement strategy for the future NEWPCC Upgrade for approval by the Major Capital Project Steering Committee.

#### **5. ISSUES/RISKS REQUIRING FURTHER ATTENTION**

##### **Cost risk**

The project preliminary budget is based on Class 5 cost estimate with an expected accuracy range of between -20% and + 50%. It is anticipated that the cost will be refined based on cost estimates from design consultants for the NEWPCC Power Supply and the NEWPCC upgrade projects. The design consultants will be directed to provide cost estimates for the projects at the completion of the conceptual design and preliminary design phase. These estimates will be used as a basis for future budget assessments.

The recent increase in the Manitoba Retail Sales Tax rate from 7% to 8% together with Manitoba Retail Sales Tax Act clarifications affecting Engineering Design Services is anticipated to have an additional cost impact to the project in excess of \$14 Million.

##### **Schedule**

The Regulator approved the NEWPCC Master Plan on the condition that the City must complete the work as described in the plan on or before December 31, 2019.

Project schedules for the NEWPCC Power Supply and BNR upgrades will be included in future reports when design commences.

##### **Sewage Treatment Program Funding**

In 2007, the Province of Manitoba committed funds to the sewage treatment program in the amount of \$206 Million, beyond the \$25 Million under the CSIF Program and \$3.8 Million under the 2004 UCPA Program, bringing the total commitment to \$234.8 Million.

Funding for the NEWPCC and the WSTP is outlined in Appendix 1.

## **6. WINNPEG SEWAGE TREATMENT PROGRAM (WSTP)**

Under the WSTP, Veolia is to provide advice to the City of Winnipeg in the design and construction of the NEWPCC project. As indicated in the WSTP Annual Report (tabled at City Council on June 26, 2013), Veolia is delivering value to the City of Winnipeg. In this project, the City of Winnipeg is benefitting from:

- Savings from reduced rates in consulting services.
- Provision of expert advice on NEWPCC Power supply upgrade and procurement strategy of the future NEWPCC upgrade.
- Share in the risks of the capital project delivery.

## **7. FINANCIAL ANALYSIS**

Financial analysis of tenders is not yet applicable. The status of current Requests for Proposal and Bid Opportunities are as follows:

<b>RFP or Bid Opportunity</b>	<b>Description</b>	<b>Current Status</b>
40-2014	Request for Proposal for professional engineering consulting services for the NEWPCC Power Supply Upgrade	Proposals under evaluation

## **8. PROJECT FUNDING**

The approved capital and current projected budget are as follows:

<b>YEAR</b>	<b>CAPITAL PROGRAM</b>	<b>ACTUAL + PROJECTED CASH FLOWS</b>	<b>CUMULATIVE CAPITAL BUDGET REMAINING</b>
Up to 2014	43,214,000	2,440,000	40,774,000
2015	100,000,000	2,867,000	137,907,000
2016	130,000,000	15,580,000	252,327,000
2017	130,000,000	15,575,000	366,752,000
2018	106,236,000	11,170,000	461,818,000
2019	38,000,000	143,792,000	356,026,000
Beyond 2019		356,026,000	0
Total	547,450,000 <sup>1</sup>	547,450,000	

<sup>1</sup>Capital budget and forecast approved by Council.

A summary of the budget to forecast comparison is included in Appendix 2.

Project funding sources are as follows:

This project will receive \$195 Million in Provincial funding. The balance of \$271 Million will be funded using a combination of cash, Environmental Projects reserve and debt funding. Each of these sources is internally funded by rates as forecast in the Council approved rate report.

## FINANCIAL IMPACT

### **Financial Impact Statement**

**Date: October 27, 2014**

#### **Project Name:**

**NORTH END WATER POLLUTION CONTROL CENTRE (NEWPCC) BIOLOGICAL NUTRIENT REMOVAL UPGRADE FINANCIAL STATUS REPORT NO. 1 FOR THE PERIOD FROM JANUARY 1, 2014 TO SEPTEMBER 30, 2014**

#### **COMMENTS:**

As this report is submitted for informational purposes only, there is no financial impact associated with this recommendation.

*"Original signed by M. L. Geer, CA"*

Moira L. Geer, C. A.

Manager of Finance and Administration

## CONSULTATION

**In preparing this report there was consultation with: N/A**

## SUBMITTED BY

Water and Waste Department  
Engineering Services Division  
Prepared by: R. Y. Adedapo, P. Eng.  
Date: October 28, 2014  
File No.: S-972



**Funding: North End Water Pollution Control Centre (NEWPCC) and Winnipeg Sewage Treatment Program  
(WSTP)**

**Appendix 1**

1) Funding for the NEWPCC is as follows:

<b>NEWPCC Nutrient Removal/Upgrade (in \$millions)</b>	<b>Total Cost</b>	<b>Funded to Date</b>		<b>Funding Pending</b>		<b>Total Funding</b>		<b>City Share of Costs</b>
		<b>Canada</b>	<b>Manitoba</b>	<b>Canada</b>	<b>Manitoba</b>	<b>Canada</b>	<b>Manitoba</b>	
Provincial Funding								
Environment Act Licence Drive	\$ 466.00		\$ 20.34		\$ 174.66	\$ -	\$ 195.00	\$ 271.00
Other	81.45							81.45
<b>Estimated Program Costs</b>	<b>\$ 547.45</b>	<b>\$ -</b>	<b>\$ 20.34</b>	<b>\$ -</b>	<b>\$ 174.66</b>	<b>\$ -</b>	<b>\$ 195.00</b>	<b>\$ 352.45</b>

2) Funding for the Winnipeg Sewage Treatment Programs is as follows:

<b>WSTP All Projects (in \$millions)</b>	<b>Total Cost</b>	<b>Funded to Date</b>		<b>Funding Pending</b>		<b>Total Funding</b>		<b>City Share of Costs</b>
		<b>Canada</b>	<b>Manitoba</b>	<b>Canada</b>	<b>Manitoba</b>	<b>Canada</b>	<b>Manitoba</b>	
WEWPCC Biological Nutrient Removal	\$ 33.00	\$ 5.07	\$ 8.19			\$ 5.07	\$ 8.19	\$ 19.74
NEWPCC Centrate and UV Disinfection	52.00	5.59	14.54			5.59	14.54	\$ 31.87
SEWPCC Nutrient Removal/Expansion	273.00	0.29	6.07	42.05	11.00	42.34	17.07	213.59
NEWPCC Nutrient Removal/Upgrade	547.45		20.34		174.66	-	195.00	352.45
<b>Estimated Program Costs</b>	<b>\$ 905.45</b>	<b>\$ 10.95</b>	<b>\$ 49.14</b>	<b>\$ 42.05</b>	<b>\$ 185.66</b>	<b>\$ 53.00</b>	<b>\$ 234.80</b>	<b>\$ 617.65</b>

Notes:

- WEWPCC Biological Nutrient Removal and NEWPCC Centrate and UV Disinfection have been completed.

**NEWPCC BNR UPGRADE  
WATER AND WASTE DEPARTMENT - ENGINEERING DIVISION  
APPENDIX 2  
As at September 30, 2014**

Components	Approved Budgeted To Date <sup>1</sup>	Costs Incurred up to last report	COSTS		Total Costs Incurred to Date (per G/L) 30-Sep-14	PROJECTED COSTS TO COMPLETE				Total Costs Remaining to Complete	TOTAL Total Project Cost	VARIANCE Variance from Budget ( Unfavourable )
			Costs submitted this report	Total Costs		2014	2015	2016	2017			
			<b>A PROFESSIONAL<sup>2</sup> SERVICES</b>	<b>54,715,000</b>		<b>0</b>	<b>2,088,000</b>	<b>2,088,000</b>	<b>203,000</b>			
<b>B CONSTRUCTION</b>	<b>492,735,000</b>	<b>0</b>	<b>102,000</b>	<b>102,000</b>	<b>47,000</b>	<b>1,900,000</b>	<b>8,677,000</b>	<b>8,677,000</b>	<b>473,357,000</b>	<b>492,760,000</b>	<b>0</b>	
<b>TOTALS</b>	<b>547,450,000</b>	<b>0</b>	<b>2,190,000</b>	<b>2,190,000</b>	<b>250,000</b>	<b>2,867,000</b>	<b>15,580,000</b>	<b>15,575,000</b>	<b>510,988,000</b>	<b>547,450,000</b>	<b>0</b>	
<b>Percentage Complete</b>				<b>4%</b>								

1 Total budget of \$547.45 Million for the NEWPCC Upgrading Project and Distribution of costs to Components A) and B) was done by the Water and Waste Department. These are estimates and will be revised as the project progresses.

2 Professional Services include Professional Engineering Services, other expert design and cost review, overhead and administration charges