Minutes - Standing Policy Committee on Finance - January 11, 2019

REPORTS

Item No. 5 South End Sewage Treatment Plant (SEWPCC) Upgrading and Expansion

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 – January 11, 2019

DECISION MAKING HISTORY:

Moved by Councillor Gilroy,

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

Carried

ADMINISTRATIVE REPORT

Title: South End Sewage Treatment Plant (SEWPCC) Upgrading and

Expansion,

Project ID: 20320002EL, 2032000207 and 203210002B,

Quarterly Project Status Report No. 19 For the Period Ended September 30, 2018

Critical Path: Standing Policy Committee on Finance

AUTHORIZATION

Author	Department Head	CFO	CAO
G.K. Patton, P. Eng., Manager of Engineering Services	M. L. Geer, CPA, CA, Director, Water and Waste Department	B. D'Avignon, Acting for M. Ruta	D. McNeil

EXECUTIVE SUMMARY

Project On Schedule: Yes ☑ No □ Project On Adopted Budget: Yes ☑ No □

Percent of Schedule Complete: 62% Percent of Adopted Budget Spent: 37%

Bid Opportunity 682-2012, an over expenditure report for the estimated additional cost to provide the longer term Contract Administration services has been issued for approval by the Department.

Contract 1 - Legal Services has filed a Statement of Defence in response to the Subcontractor's Statement of Claim.

Bid Opportunity 1089-2015, Manitoba Hydro has installed the majority of the new 66kV line components.

Contract 3 - construction activity is continuing behind schedule. The Contractor attained Substantial Performance as at July 30, 2018. The Contractor is forecasting to achieve Total Performance in October 2018. Appeal reports are in various stages of development, approval and submittal to the Chief Financial Officer.

Contract 4 - construction activity is continuing. Three appeal reports are being prepared by the Department.

The Advisory Committee has reviewed this report and recommends that the report be

sent to the Standing Policy Committee on Finance.

RECOMMENDATIONS

That the financial status of the South End Sewage Treatment Plant (SEWPCC) Upgrading and Expansion, as contained in this report, be received as information.

REASON FOR THE REPORT

The Asset Management Administrative Standard FM-004 requires all projects with a total estimated cost of \$22 million (2018) or more report quarterly to the Standing Policy Committee on Finance. This threshold is adjusted annually for construction inflation as part of the annual Capital Budget approval. The Standing Policy Committee on Finance may also request reporting on any capital project.

IMPLICATIONS OF THE RECOMMENDATIONS

No implications.

HISTORY/DISCUSSION

See Appendix C – Key Project Events (History)

Construction (Update from last report)

RFP 682-2012 (Professional Consulting Services)

- The Consultant continues to provide Contract Administration (CA) services.
- The project schedule requires a longer duration for the provision of Contract Administration services than originally proposed by the Consultant in their response to RFP 682-2012. An over expenditure report for the estimated additional cost to provide the longer term Contract Administration services is forthcoming.

RFP 871-2013 (Supply and Delivery of Free-Moving Media)

 Identified deficiencies on the aeration piping components and IFAS screens that were delivered to site are being corrected by the Contractor.

RFP 873-2013 (Supply and Delivery of High Rate Clarification Equipment)

- Delivery of HRC equipment to the site has been made.
- Identified deficiencies on the HRC centrifugal pumps are being corrected by the Contractor.

Materials Management Reference 1089-2015 (Single Source Negotiation for Manitoba Hydro Works Associated with the South End Sewage Treatment Plant (SEWPCC) Nutrient Removal/Expansion Project)

- Manitoba Hydro has installed the majority of the new 66kV line components.
- The remaining above ground work will be completed once the new substation is suitably advanced by the C4 Contractor.
- Below grade crossings of perimeter highway have been scheduled by Manitoba Hydro to be installed in Q1 of 2019 to suit SEWPCC project requirements.

Bid Opportunity 333-2014 (Contract C1 – Site Preparation Works)

- Contract achieved Total Performance February 17, 2016.
- Legal Services has filed a Statement of Defence in response to the Subcontractor's Statement of Claim.

Bid Opportunity 601-2015 (Contract C2 – High Rate Clarifier and Grit Removal Concrete and Miscellaneous Works)

- Contract achieved Total Performance March 10, 2017.
- The Contractor has appealed the assessment of liquidated damages for failure to meet the contract dates for Substantial and Total Performance.
- The Contractor has not responded to the CFO's letter of April 28, 2018 concerning their appeal.

Bid Opportunity 899-2015 (Contract C3 – Bioreactors, Blower Building and Secondary Clarifiers Structural Concrete & Miscellaneous Work)

- The contract work continues behind schedule. The Contractor achieved Substantial Performance as of July 30, 2018.
- The contract required Total Performance date was January 10, 2018. The Contractor is forecasting Total Performance in October of 2018.
- Contractor has appealed over 20 determinations made by the Contract Administrator. The majority of the appeals are on schedule related determinations. Associated appeal reports are in various stages of development, approval and submittal to the CFO's office.

Bid Opportunity 976-2016 (Contract C4 – Sitewide Mechanical, Electrical, Concrete and Site Works)

- Contractor is proceeding with the contract work. Current primary items under construction are the Chemical/Electrical building, the Grit and Screening building and the Substation. The contract is currently considered to be on schedule.
- The Contractor has appealed three determinations made by the Contract Administrator. Associated appeal reports are being prepared by the department.

Table 1 – Contracts

			Contracts					
Bid Opportunity #	Company Name	Description	Original Contract Award Value (GST & MRST extra as applicable)	E (Ove	otal Approved Over- expenditures er-Expenditure mount only)	Date of Award	Date of Total Completio n	Estimated % Complete
682-2012	CH2M Hill Canada Ltd.	Professional Consulting Services for SEWPCC Upgrading and Expansion	\$ 25,350,419	\$	6,233,179	4/29/2013		87
57-2016	Associated Engineering (Sask) Ltd.	Professional Consulting Services for an independent review and alternative schedule analysis	\$ 92,360	\$	-	1/28/2016	2/28/2017	100
871-2013	Veolia Water Technologies Canada Ltd.	Procurement of Free-Floating Media and Associated Appurtenances	\$ 7,750,588	3 \$	-	12/11/2014		38
873-2013	Veolia Water Technologies Canada Ltd.	Procurement of High Rate Clarification Equipment	\$ 2,052,500	\$	107,300	7/10/2014		10
333-2014	PCL Constructors Canada Ltd.	Contract 1 - Site Preparation Works	\$ 22,646,510	\$	-	9/4/2014		98
353-2014	Hanscomb Ltd.	Construction Cost Consulting Services for SEWPCC Upgrading and Expansion	\$ 50,700	\$	•	9/4/2014	8/6/2015	100
572-2014	B&B Rentals Inc.	Provision for the Purchase or Lease of a Trailer for Office Space	\$ 184,000	\$	-	9/4/2014	3/18/2015	100
1067-2014	Manitoba Hydro	Manitoba Hydro Load Interconnection Study	\$ 60,000	\$	-	11/14/2014	10/31/2015	100
343-2015	Praxair Canada	Relocation of Lox Tank	\$ 62,715	5 \$	-	6/3/2015	8/28/2015	100
498-2015	Western Waste Management	Asbestos Abatement	\$ 24,950	\$	-	8/13/2015	11/9/2015	100
601-2015	Graham Construction and Engineering LP	Contract 2 - High Rate Clarifier and Grit Removal Concrete and Miscellaneous Works	\$ 9,549,100	\$	•	10/20/2015		98
899-2015	NAC Constructors Ltd	Contract 3 - Bioreactors, Blower Building and Secondary Clarifiers Structural Concrete & Miscellaneous Work	\$ 39,756,000	\$	-	5/3/2016		98
797-2016	Manitoba Hydro	Relocation of existing primary electrical service cables	\$ 71,754	\$	-	9/7/2016	1/16/2017	100
976-2016	NAC Constructors Ltd.	Contract 4 - Sitew ide Mechanical, Electrical, Concrete and site Works	\$ 179,997,000)		10/4/2017		12
1089-2015	Manitoba Hydro	Manitoba Hydro Works Associated with the South End Sew age Treatment Plant (SEWPCC) Nutrient Removal/Expansion Project	\$ 1,827,280			1/15/2018		70
		Total	\$ 289,475,87	6 \$	6,340,479			

Upcoming Procurements:

Description	Anticipated Award Date

Schedule (Update from last report)

n/a

Table 2 - Milestones

	Milestones												
	Deliverable	Original Targeted Completion Date	Revised Targeted Completion Date	Actual Completion Date	Estimated % Complete								
1	Project Definition Report	2013 Q4	2014 Q2	2014 Q2	100%								
2	Preliminary Design Report	2014 Q2	2014 Q4	2014 Q4	100%								
3	Detailed Design	2014 Q4	2017 Q3	2017 Q3	100%								
4	Construction of Site Preparation and Piling (Contract 1)	2014 Q2	2016 Q1		98%								
5	Construction of High Rate Clarifier and Grit Removal Structural and Misc. Works (Contract 2)	2016 Q3	2017 Q1		98%								
6	Construction of Major Concrete Works (Contract 3)	2017 Q4	2018Q3		98%								
7	Construction of Remaining Works (Contract 4)	2021 Q4			12%								
8	Commissioning of interim BNR configuration	2016 Q4	2020 Q3		0%								
9	Commissioning of all project components ¹	2021 Q3			0%								

Manitoba Sustainable Development Notice of Alteration dated September 12, 2017 - City of Winnipeg South End Water Pollution Control Centre (SEWPCC) - Environment Act Licence No. 2716 RR identifies that the construction and commissioning of the upgraded wastewater treatment plant shall be completed before December 31, 2021.

Risk (Update from last report)

Risk

A quarterly construction risk review was held on June 28 2018.

The next quarterly construction risk review is scheduled for October, 2018.

Table 3 – Significant Risks and Mitigations Strategies

Significant Risks and	Mitigation Strategies
Risk Statement and Explanation	Risk Mitigation Management Plan
New:	
Ongoing:	
Contract 3 construction takes longer than	Liquidated damages applied as per contract.
planned increasing the cost to the project.	
Actual Contract 4 construction performance	Key construction milestone dates with linked
takes longer than planned.	liquidated damages incorporated into Contract 4.
Mitigated:	
Rushed design to meet schedule resulting in	Detailed review of the 100% design and bid
a lower design quality and higher frequency of	opportunity document was performed using
contract change orders.	both internal and external resources.
Construction schedule was aggressive and	3rd party review of project schedule was
actual construction takes significantly longer	undertaken. Recommended schedule
than planned.	extension was implemented. Detailed
	monitoring of the construction contract
	progress implemented.
Limited countrywide contractor awareness of	Advance notice of C4 bid opportunity was
Contract 4 bid opportunity resulting in limited	posted on Materials Management website
number of bidders.	and MERX.
Unknown existing conditions are encountered	Shutdown and interior inspection of existing
during construction causing schedule delays	high purity oxygen reactor was performed in
and additional costs. Internal condition of high	February 2018.
purity oxygen reactors is unknown.	

<u>Financial</u> (Update from last report)

For further information, refer to Appendix B – Financial Forecast.

The current remaining project contingency allowance is less than typical for a project of this size. The ongoing SEWPCC Upgrading and Expansion project costs and contingency allowance will be reviewed as the project progresses.

<u>Funding</u> (Update from last report)

n/a

Table 4 – Project Funding Forecast and Receivable

Funding Forecast and Receivable											
Funding Source	Adopted Budget (in millions)	Amended Budget (in millons)	Committed (in millions)								
Class of Estimate	Class 3	Class 3									
City of Winnipeg Total Retained Earnings External Debt	298.18 75.82 222.36	276.18 75.82 200.36	276.18 75.82 200.36								
Province of Manitoba	6.08	17.08	17.08								
Government of Canada	31.34	42.34	42.34								
Tota	\$ 335.60	\$ 335.60	\$ 335.60								

Property Acquisition (Update from last report)

n/a

<u>Stakeholder Engagements/Communications</u> (Update from last report)

n/a

Subsequent Events after Report Period End Date

As of the writing of this report, Contract 3 has not achieved Total performance.

FINANCIAL IMPACT

Financial Impact Statemen Date: November 27, 2018

Project Name:

South End Sewage Treatment Plant (SEWPCC) Upgrading and Expansion, Project ID: 20320002EL, 2032000207 and 203210002B, Quarterly Project Status Report No. 19 For the Period Ended September 30, 2018

COMMENTS:

Financial forecast for the SEWPCC Upgrade and Expansion project can be found in Appendix B.

"Original signed by L. Szkwarek, CPA, CGA"
Lucy Szkwarek, CPA, CGA
Manager, Finance and Administration

CONSULTATION

This Report has been prepared in consultation with:

n/a

OURWINNIPEG POLICY ALIGNMENT

01-3 Prosperity Direction 1: Provide efficient and focused civic administration and governance. This report supports demonstration of accountability through service performance measurement and reporting.

02-2 Environment: The SEWPCC Upgrade and Expansion will reduce the environmental impact of our citizens on the Red River and the downstream lakes and rivers. It is in collaboration with the Regulatory Licence requirements issued by the Province of Manitoba.

SUBMITTED BY

Department: Water and Waste

Division: Engineering ServicesPrepared by: Neil Harrington P. Eng.Date: November 30, 2018

File No.: 020-17-08-25-01, S-926

Appendices

Appendix A – Key Project Facts

Appendix B – Financial Forecast

Appendix C – Key Project Events (History)

Appendix D - Funding

Appendix A - Key Project Facts

Appendix A – Ke	ey Project Facts					
Project Name Business Owner (Department) Project ID Project Sponsor Department Responsible for Project Delivery Consultant Engineer (Company Name) Adopted Budget Class of Estimate (Adopted) Range of Estimate (Adopted)	South End Sewage Treatment Plant (SEWPCC) Upgrading and Expansion					
Business Owner (Department)	Water and Waste					
Project ID	20320002EL, 2032000207 and 203210002B					
Project Sponsor	Director of Water and Waste					
Department Responsible for Project Delivery	Water and Waste					
Consultant Engineer (Company Name)	CH2M Hill Canada Ltd.					
Adopted Budget	\$335,600,000					
Class of Estimate (Adopted)	3					
Range of Estimate (Adopted)	-20% to +30% \$268,500,000 to \$436,300,000.					
Amended Budget	\$335,600,000					
Class of Estimate (Amended)	3					
Project Name Business Owner (Department) Project ID Project Sponsor Pepartment Responsible for Project Delivery Consultant Engineer (Company Name) Edopted Budget Class of Estimate (Adopted) Emended Budget Class of Estimate (Amended)	-20% to +30% \$268,500,000 to \$436,300,000.					

Project Scope

The project is to expand the capacity of the SEWPCC for expected 2031 flows and upgrade the process to meet new effluent limits for nitrogen and phosphorous. The project design is based on the lowest life cycle cost (Net Present Value, or NPV). In addition, the plant must operate continuously during the work and meet current effluent limits to the greatest extent possible.

Major Capital Projects Advisory Committee Membership:

Doug McNeil, Chief Administrative Officer

Dave Wardrop, Chief Transportation and Utilities Officer, Chief Administrative Office

Georges Chartier, Chief Asset and Project Management Officer

Moira Geer, Director of Water and Waste

Lucy Szkwarek, Manager of Finance and Administration, Water and Waste

Jackie Veilleux, Project Director Winnipeg Sewage Treatment Program

Appendix B – Financial Forecast

Appendix B - Project SEWPCC Upgrading & Expansion Financial Forecast
As at September 30, 2018

	Budget (in 000's)							Expenditure Forecast (in 000's)										S	Surplus			
Project Component Deliverables ¹		dopted Budget	Ą	proved Budget		Actual Costs To Sept 30/18		Projected Cos 2018 2019 2020					То					2022	Total Forecaste Costs		d (Deficit) From Amended Budget	
Engineering, Design and Other	\$	45,351	\$	-	\$	45,351	\$	40,906	\$	1,514	\$	3,884	\$	1,141	\$	1,512	\$	-	\$	48,957	\$	(3,606)
Construction	\$	257,242	\$	-	\$	257,242	\$	83,927	\$	30,673	\$	64,287	\$	69,903	\$	28,449	\$	-	\$	277,239	\$	(19,997)
Land Acquisition	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
Internal Financing/Overhead Costs	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
Contingency	\$	33,007	\$	-	\$	33,007	\$	-	\$	-	\$	-	\$	-	\$	9,404	\$	-	\$	9,404	\$	23,603
Total Project Budget	\$	335,600	\$	-	\$	335,600	\$	124,833	\$	32,187	\$	68,171	\$	71,044	\$	39,365	\$	-	\$	335,600	\$	-

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\$ (3,606)	\$ -
\$ (19,997)	\$ -
\$ -	\$ -
\$ -	\$ -
\$ 23,603	\$ -
\$ -	\$ -

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				_
% of Project Budget Spent				1
(Actual Costs to Date / Adopted & Amended Budget)	37%		37%	

¹ Total budget of \$335.60 Million for the SEWPCC Upgrading and Expansion Project and Distribution of costs for Components was done by the Water and Waste Department. These are estimates and will be revised as the project progresses.

² Adopted and Amended budget, and actual costs to date have been agreed to the City's general ledger and Monthly Capital Expenditures Report, actual cost variance equals spending from closed budget years of \$10.918M. See below.

Project ID	Project Year	Adopted Budget	Costs to Date
20320002EL ¹	2002	\$222,752	\$222,752
2032000207 ¹	2007	\$10,695,000	\$10,695,000
203210002B	2012-2015	\$324,682,248	\$113,915,267
Total Proj	ect Budget	\$335,600,000	\$124,833,019

¹Does not appear in the Capital Expenditures Monthly Report as the funds have been expended and it is designated as a closed Project ID.

Appendix C – Key Project Events (History)

HISTORY

1. THE PROJECT

The goal of this project is to expand the capacity of the SEWPCC for expected 2031 flows and upgrade the process to meet new effluent limits for nitrogen and phosphorous. The project design is based on the lowest life cycle cost (Net Present Value, or NPV). In addition, the plant must operate continuously during the work and meet current effluent limits to the greatest extent possible.

As a result of the 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 South End Water Pollution Control Centre (SEWPCC) that would require control of nutrients discharged to the Red River.

Between 2001 to 2010, Council has approved \$203,250,000.00 for the Nutrient Removal Upgrade/Expansion at the SEWPCC.

On January 9, 2006, the Chief Financial Officer concurred with the recommendation to authorize an assignment to Stantec Consulting Ltd. for preliminary and conceptual engineering services related to the South End Water Pollution Control Centre upgrading and expansion at an estimated cost of \$3,250,000.00.

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.

In late 2007, the Winnipeg Public Service was directed to initiate an assessment of alternate project delivery methods for the SEWPCC upgrade and expansion. Consequently, the assignment to Stantec was suspended after the conclusion of the conceptual and preliminary engineering work.

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 June 19, 2009 the Regulator issued a revised Environment Act Licence No. 2716 R for the SEWPCC.

On November 25, 2009, the Chief Financial Officer approved an award to Taillieu Construction Ltd. for SEWPCC Installation of Outfall Pipe, Effluent Sampling Facility and Associated Works, Contract No. 2 at an estimated cost of \$4,884,450.00.

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 September 6, 2011, the City submitted to the Regulator, an engineering plan for the upgrading and expansion of the SEWPCC in accordance with Environment Act Licence No 2716 R.

On April 18, 2012, the Regulator issued a revised Environment Act Licence No. 2716 RR for the SEWPCC effective May 1, 2012.

On October 5, 2012, the City submitted to the Regulator a revision to the engineering plan wherein the main treatment process was revised from Biological Aerated Filter to a Fixed-film Activated Sludge process.

On April 25, 2013, the Chief Administrative Officer approved a recommendation to award a contract to CH2M Hill Canada Ltd. to provide Professional Consulting Services for SEWPCC Upgrading/Expansion Project at an estimated cost of \$25,350,419.00. On March 13, 2014, the Standing Policy Committee on Finance recommended that the South End Water Pollution Control Centre Financial Status reports and future reports pertaining to the North End, South End or West End Water Pollution Control Centre, include:

- The total amount of federal and provincial funding received to date as well as the balance of outstanding for Winnipeg ratepayers;
- Clarification of the cost estimates as a result of the regulatory requirements that have changed and the potential impact on the final budget; and
- A summary of the entire program in terms of funding from all levels of government.

RISKS AND RISK MITIGATION STRATEGIES

The project has proceeded on a fast-track basis with construction contracts proceeding completion of the design. The detailed design is now complete with the largest and last construction contract, Contract 4 tendered. The cost estimate for Contract 4 (C4), which has an identified accuracy range of -10% to + 10%, is higher than the project allocation for this work. The current project budget of \$335.6 million was based on a Class 3 cost estimate which had an AACE expected accuracy range of -20% to +30% or \$268.5 million to \$436.3 million.

An ongoing risk management strategy has been implemented for the project encompassing a proactive process of identifying and assessing project risk, defining appropriate risk handling strategies and plans, and monitoring those actions to completion.

Formal risk and opportunity analyses of the project are scheduled to be performed by the WSTP, the design consultant and key City stakeholders at the following project milestones:

- End of Project Definition design stage this analysis has been completed
- End of Preliminary Design phase this analysis has been completed
- At 60% and 90% completion of Detailed Design these analyses have been completed
- Prior to the start of construction and quarterly during construction Ongoing
- Prior to the start of, and again at the end of, commissioning

A project risk register is being kept throughout the project and is updated by the above formal analysis.

Appendix D - Funding

Funding: South End Sewage Treatment Plant (SEWPCC) and Winnipeg Sewage Treatment Program (WSTP)

1) Funding for the SEWPCC is as follows:

SEWPCC Nutri	SEWPCC Nutrient Removal/Upgrade		Funded to Date Funding Pendin				g Pending	Total I	City Share of					
(ir	n \$millions)	То	tal Cost	С	anada	Ma	nitoba	Canada	Manitoba	Canada	Manitoba		Costs	
Environment Ac CSIF GIF	t Licence Driven Funding BNR Wet Weather Flow Other	\$	147.0 60.0 128.6	\$	20.77 4.83	\$	6.08 7.15	\$ 10.57 6.17	3.85	\$ 31.34 11.00	\$ 6.08 11.00		109.58 38.00 128.60	
Estimated Prog	ram Costs	\$	335.60	\$	25.60	\$	13.23	\$ 16.74	\$ 3.85	\$ 42.34	\$ 17.08	\$	276.18	

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

WSTP All Projects		Funded to Date		Funding Pending		Total Funding		City Share of
(in \$millions)	Total Cost	Canada	Manitoba	Canada	Manitoba	Canada	Manitoba	Costs
WEWPCC Biological Nutrient Removal	\$ 33.23	\$ 5.07	\$ 8.19			\$ 5.07	\$ 8.19	\$ 19.97
NEWPCC Centrate and UV Disinfection	52.08	5.59	14.54			5.59	14.54	31.95
SEWPCC Nutrient Removal/Expansion	335.60	25.60	13.23	16.74	3.85	42.34	17.08	276.18
NEWPCC Nutrient Removal/Upgrade	795.59		33.54		161.46	-	195.00	600.59
Estimated Program Costs	\$ 1,216.50	\$ 36.26	\$ 69.50	\$ 16.74	\$ 165.31	\$ 53.00	\$ 234.81	\$ 928.69

Notes:

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