

Presented To:	Operations Committee
Presented:	Monday, Sep 16, 2013
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Type:	Presentations

Request for Decision

Infrastructure Services 2014 Capital Budget - Water Wastewater Services

Recommendation

That the Operations Committee accept the report dated September 5, 2013, from the General Manager of Infrastructure Services regarding the draft Water & Wastewater Services 2014 Capital Budget and the 2015 to 2018 Capital Forecast.

Background

The total base capital budget for Water and Wastewater Services for 2014 is \$32.7 million. The proposed funding is the base capital envelopes calculated in accordance with the Capital Budget Policy for 2014 of \$12.0 million for water and \$15.7 million for wastewater for a combined total of \$27.7 million as well as funding from Federal Gas Tax (\$1.96 million), and future capital envelopes (\$3.0 million).

During the 2013 budget deliberations Council approved the phase in of \$1.3 million in additional annual funding over the 2013 to 2015 period required to fund the annual debt repayments and operating and maintenance costs related to the Biosolids Project. This amount has been added to the 2014 wastewater base capital envelope.

Wastewater

The 2014 Wastewater Facilities program reflects the City's commitment to the environment through major initiatives such as the Biosolids treatment facility and Sudbury WWTP Head House Upgrades. Other important priorities include energy reduction improvements to contain operating costs.

In the Collection System (linear) envelope we continue to align our program as closely as possible with the Roads priority projects to coordinate efforts. We have emphasized a significant condition assessment component to target future sewer lining and other remedial efforts in specific areas of concern in the systems where they will yield the greatest return.

We plan to continue to use trenchless technologies where it is appropriate to do so to take advantage of the lower costs as well as the lower socio-economic impacts of trenchless projects such as less disruption to traffic and customers.

Signed By

Report Prepared By

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Recommended by the Department

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Water

The 2014 Water Facilities program highlights several key initiatives including Phase II of the Upgrades to the Wanapitei Water Treatment Plant and also upgrades to the Well facilities.

The Distribution System (linear) priority projects also reflect a high degree of integration with the roads priority projects as we attempt to coordinate renewal efforts to the most practical extent.

Strategic Initiatives

An important strategic capital initiative that is currently underway is the Water & Wastewater Services Master Plan. This project has been underway since 2012 and will continue through 2014. It is reviewing current and future infrastructure needs to ensure that Greater Sudbury's Water and Wastewater infrastructure will be in place to provide sustainable services to the community for the next 25 years. When complete it will influence future capital planning efforts significantly ensuring that capital funds are allocated in a coordinated and tactical manner.

Improvements and renewal of components of the Supervisory Control and Data Acquisition (SCADA) system project and the SCADA Master Plan will commence in 2014 to ensure that CGS operators can utilize production data and other operational information necessary for effective monitoring and control of the water supply and distribution facilities and wastewater treatment and conveyance facilities essential for the public health of our community.

We are also investigating use of the Roads Dayton software asset management software to improve the coordination of Water & Wastewater projects with roads based on asset condition. The proposed Asset Management Plan will be the tool used by Water and Wastewater Services for making the best possible decisions regarding building, operating, maintaining, renewing, replacing and disposing of infrastructure assets. The objective is to maximize benefits, manage risk, and provide satisfactory levels of service to the public in a sustainable manner.

SUSTAINABLE CAPITAL ASSET MANAGEMENT POLICY:

During the 2012 budget deliberations, Council adopted the following revised Sustainable Capital Asset Management Policy (SCAMP) for Water and Wastewater Services.

"The City's sustainable capital asset management program shall be continued, for the purpose of financing the renewal of water and wastewater infrastructure systems. The Water and Wastewater capital allocation for this purpose shall be increased in accordance with the City's "Financial Plan for Water and Wastewater Services" (dated March 1, 2011 and updated and approved by Council as required but no less than every five years) until such time as capital contributions for Water and Wastewater equal 2% of the Water and Wastewater infrastructure replacement value."

Although the recommended policy sets out that the annual budget allocation required in order to achieve financial sustainability be prepared in accordance with the Financial Plan dated March 3, 2011, Council has the opportunity through the annual budget process to review, change and approve the budget.

The WWW Financial Plan recommended that a smoothed annual rate increase of 7.4% over 10 years would provide for financial sustainability of the water and wastewater services. Staff will prepare an option that would provide for additional capital funding should Council wish to consider an overall rate increase of 7.4% for 2014. This option will be presented as part of the overall water and wastewater budget and rate setting process scheduled for November.

A detailed summary of the 2014 Capital Budget as well as the 2015 – 2018 capital forecast has been appended to this report in support of the following recommendation:

That the Operations Committee accept the report dated September 5, 2013, from the General Manager of Infrastructure Services regarding the draft Water & Wastewater Services 2014 Capital Budget and the 2015 to 2018 Capital Forecast.



Water Summary

CATEGORY DESCRIPTION (For detailed project listing see attached)	2014 REQUEST	2015 OUTLOOK	2016 OUTLOOK	2017 OUTLOOK	2018 OUTLOOK
Previous Council Approvals	\$ 1,840,520	\$ 1,004,618	\$ 670,000	\$ 542,615	\$ -
Water Distribution					
Condition Assessment - Watermains	\$ -	\$ -	\$ 100,000	\$ 100,000	\$ 100,000
Watermain Replacement / Rehabilitation	\$ 1,000,000	\$ 200,000	\$ 800,000	\$ 700,000	\$ 700,000
Watermain Priority Projects	\$ 2,464,402	\$ 5,096,508	\$ 5,342,143	\$ 4,323,692	\$ 3,894,185
Network Looping	\$ 325,000	\$ 325,000	\$ 1,250,000	\$ 1,050,000	\$ 1,450,000
Distribution System - Other	\$ 340,000	\$ 400,000	\$ 350,000	\$ 450,000	\$ 250,000
Water Plants					
Plants - Water Treatment Plants	\$ 6,580,000	\$ 1,250,000	\$ 2,200,000	\$ 175,000	\$ 10,125,000
Plants - Wells	\$ 900,000	\$ 922,691	\$ 1,087,135	\$ 1,412,135	\$ 1,104,635
Plants - Reservoirs / Tanks / Booster Stations	\$ 155,000	\$ 75,000	\$ 5,575,000	\$ 75,000	\$ 75,000
Plants - System Wide	\$ 780,000	\$ 800,000	\$ 385,000	\$ 500,000	\$ 375,000
Water Works - Strategic Initiatives	\$ 2,607,500	\$ 1,382,500	\$ 1,242,500	\$ 1,122,500	\$ 1,132,500
PROJECT COSTS	\$ 16,992,422	\$ 11,456,317	\$ 19,001,778	\$ 10,450,942	\$ 19,206,320
PROJECT FINANCING					
Reserves: Capital	\$ -	\$ -	\$ -	\$ -	\$ -
Reserves: Gas Tax	\$ (1,960,000)	\$ -	\$ -	\$ -	\$ -
Capital Envelopes: Future Years or Debt Financing	\$ (3,000,000)	\$ 816,753	\$ (6,483,247)	\$ 2,317,960	\$ (6,182,040)
CAPITAL ENVELOPE (WWW User Fees)	\$ 12,032,422	\$ 12,273,070	\$ 12,518,531	\$ 12,768,902	\$ 13,024,280

Priority Setting:

Watermain priority projects are determined based on a review of:

- Condition: The database of watermain breaks is ranked according to number and frequency of breaks per section of pipe. This ranking is combined with the pipe age, material and diameter to determine priority sections for replacement, either as a watermain priority project or in conjunction with a roads priority project
- Capacity / Security of Supply: Fire flows and pressures are analysed for anticipated future developments, as well as opportunities for looping or upsizing the watermains, to improve the security of supply.

When a roads or sanitary sewer priority project is identified, all of the above criteria are reviewed to determine if associated watermain replacement / upgrades are required.

The following is the criteria considered for Prioritizing Water and Wastewater Facilities :

- Legislation / Compliance
- Health & Safety
- Protecting Public Health
- Maintenance / Renewal / Replacement of Existing Capital Assets
- Enhancing Productivity
- Protection of the Environment

Water Detail

PROJECT DESCRIPTION	PROJECT TYPE R (Renewal) E (Expansion) N (New)	2014 REQUEST	2015 OUTLOOK	2016 OUTLOOK	2017 OUTLOOK	2018 OUTLOOK
PREVIOUS COUNCIL APPROVALS						
Repayment: Leveack Water Supply Loan Repayment over 5 years (2010 - 2015)	R,E,N	\$ 1,145,520	\$ 309,618			
New Valley Wells (2 Wells) (Internal Financing - \$3,500,000 from 2013 to 2018)	N	\$ 670,000	\$ 670,000	\$ 670,000	\$ 542,615	
Computerized Maintenance Management Systems (CMMS) Contribution - Corporate Initiative	N	\$ 25,000	\$ 25,000			
SUBTOTAL PREVIOUS COUNCIL APPROVALS		\$ 1,840,520	\$ 1,004,618	\$ 670,000	\$ 542,615	\$ -
Condition Assessment - Watermains						
Condition Assessment (Leak Detection and Analysis)	R	\$ -	\$ -	\$ 100,000	\$ 100,000	\$ 100,000
SUBTOTAL - Condition Assessment - Watermains		\$ -	\$ -	\$ 100,000	\$ 100,000	\$ 100,000
Watermain Replacement / Rehabilitation						
Watermain Rehabilitation (Lining)	R	\$ 1,000,000		\$ 500,000	\$ 500,000	\$ 500,000
Water Service Replacement	R		\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000
Watermain Valve Replacement	R		\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000
Watermain Air Release Valve Installation & Replacement	R			\$ 100,000	\$ 100,000	\$ 100,000
SUBTOTAL - Watermain Replacement / Rehabilitation		\$ 1,000,000	\$ 200,000	\$ 800,000	\$ 700,000	\$ 700,000
Watermain Priority Projects						
Dollard Avenue - Madison Avenue to End	R	\$ 550,000				
Elgin Street - Ste. Anne Road to Larch Street	R	\$ 550,000				
Ellen Street - St. Agnes Street to Laurier Street	R	\$ 450,000				
Afton Avenue - Hawthorne Drive to Gemmell Street	R	\$ 300,000				
System Improvements (Development Projects)	R	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000
MR15 / MR80 Intersection Improvements	R	\$ 75,000				
Charette Avenue Sewermain Project	R	\$ 50,000				
Preliminary Design for Subsequent Year Projects (Geotech, Surveys, Consultant Fees)	N,R	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000
Moonlight Avenue - Bancroft Drive to Kingsway	R		\$ 2,400,000			
Yale Street - Marcel Street to Regent Street	R	\$ 550,000				
Second Avenue (Coniston) - Hwy 17 to Balsam Street	R	\$ 350,000				
Lorne Street - Martindale Road to Logan Avenue	R,N	\$ 300,000		\$ 1,000,000		
Barry Downe Road - Westmount Avenue to Kingsway	R	\$ 250,000				
Davidson Street - College Street to Mackenzie Street	R	\$ 250,000				
MR15 from 1.6km West of Martin Road to 4.6 km West of Martin Road (Valve Installation)	N	\$ 200,000				
Barbara Street - Yale Street to Arnold Street	R	\$ 175,000				
Kelly Lake Road - Watermain with Culvert Replacement	R	\$ 100,000				

Water Detail

PROJECT DESCRIPTION	PROJECT TYPE	2014 REQUEST	2015 OUTLOOK	2016 OUTLOOK	2017 OUTLOOK	2018 OUTLOOK
	R (Renewal)					
	E (Expansion)					
	N (New)					
Various Watermain with Roads Priority Projects	R			\$ 1,050,000	\$ 3,125,000	\$ 2,670,000
MR 35 Widening - Notre Dame Avenue to Hwy 144	R			\$ 900,000		
Relocation of Backyard Watermains (Various Locations)	R			\$ 500,000	\$ 500,000	\$ 500,000
Gutcher Avenue - Mary Street to Irving Street	R			\$ 450,000		
Fairburn Street - Barry Downe Road to East End	R			\$ 450,000		
Replacement of 2 " Watermains (Various Locations)	R			\$ 250,000	\$ 250,000	\$ 250,000
Kingslea Court - Rinfret Street to Redfern Street	R			\$ 100,000		
Dundas Street - Hargreaves Avenue to 75 m South West	R	\$ 239,402	\$ 271,508	\$ 292,143	\$ 198,692	\$ 224,185
Contingency - Watermain Priority Projects	R					
SUBTOTAL - Watermain Priority Projects		\$ 2,464,402	\$ 5,096,508	\$ 5,342,143	\$ 4,323,692	\$ 3,894,185
Network Looping						
Whitefish Looping & Rechlorination Facilities - Rechlorination Project	N					
Flood Road - Burton Avenue to Shevchenko Avenue	N	\$ 325,000	\$ 325,000			
Valley Water System Looping - Construction (Four Contracts)	N			\$ 750,000		
Water System Looping (Various Areas)	N			\$ 500,000	\$ 800,000	\$ 1,200,000
SUBTOTAL - Network Looping		\$ 325,000	\$ 325,000	\$ 1,250,000	\$ 1,050,000	\$ 1,450,000
Distribution System - Other						
Distribution Support - Contract Support	R	\$ 200,000	\$ 200,000	\$ 150,000	\$ 200,000	\$ 100,000
Water Meter Replacement	R	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000
Distribution Health & Safety Equipment (Lock Out / Tag Out / Trench Box / Confined Space Entry / Depot Improvements)	N	\$ 40,000				
Distribution System Monitoring	R		\$ 100,000	\$ 100,000	\$ 150,000	\$ 50,000
SUBTOTAL - Distribution System - Other		\$ 340,000	\$ 400,000	\$ 350,000	\$ 450,000	\$ 250,000
Plants - Water Treatment Plants						
Wanapitei WTP - Phase 2 Construction	R	\$ 4,750,000				
Funding from Future Year Envelopes (Debt Financing from 2015 to 2018)		\$ (3,000,000)	\$ 816,753	\$ 816,753	\$ 816,753	\$ 816,753
Wanapitei WTP - Phase 2 - Financing in Budget Year		\$ 1,750,000	\$ 816,753	\$ 816,753	\$ 816,753	\$ 816,753
Wanapitei WTP - Various Plant Repairs / Equipment Replacement	R	\$ 85,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000
Wanapitei WTP - Phase 3 Design & Contract Administration / Inspection	R			\$ 1,800,000		
Funding from Future Year Envelopes				\$ (1,800,000)	\$ 900,000	\$ 900,000
Wanapitei WTP - Phase 3 - Financing in Budget Year				\$	\$ 900,000	\$ 900,000
Wanapitei WTP - Phase 3 Construction						\$ 10,000,000
Funding from Future Year Envelopes (Debt Financing from 2018 to 2032)						\$ (8,500,000)
Wanapitei WTP - Phase 3 - Financing in Budget Year						\$ 1,500,000

Water Detail

PROJECT DESCRIPTION	PROJECT TYPE	2014 REQUEST	2015 OUTLOOK	2016 OUTLOOK	2017 OUTLOOK	2018 OUTLOOK
	R (Renewal)					
	E (Expansion)					
	N (New)					
Ramsey Lake Outfall Structure Upgrades	R	\$ 300,000				
David Street WTP Upgrades (Membrane Replacement)	R	\$ 850,000	\$ 850,000			
David Street WTP Upgrades (HVAC)	R	\$ 250,000				
David Street WTP Upgrades (Containment Tank Coating Replacements - 2 Annually)	R	\$ 250,000	\$ 250,000	\$ 250,000		
David Street WTP - Various Plant Repairs / Equipment Replacement	R	\$ 95,000	\$ 75,000	\$ 75,000	\$ 100,000	\$ 50,000
SUBTOTAL - Plants - Water Treatment Plants		\$ 6,580,000	\$ 1,250,000	\$ 2,200,000	\$ 175,000	\$ 10,125,000
Plants - Wells						
Building Repairs / Upgrades - Design & Construction	R	\$ 500,000	\$ 622,691	\$ 887,135	\$ 1,062,135	\$ 954,635
Inspection / Rehabilitation	R	\$ 300,000	\$ 300,000	\$ 200,000	\$ 350,000	\$ 150,000
Onaping Wells - Install a Permanent Cautic Soda System	N	\$ 100,000				
SUBTOTAL - Plants - Wells		\$ 900,000	\$ 922,691	\$ 1,087,135	\$ 1,412,135	\$ 1,104,635
Plants - Reservoirs / Tanks / Booster Stations						
Storage Tank Inspection / Cathodic Protection - Various Tanks	R	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000
Azilada Storage Tank - Mixing System	R	\$ 50,000				
Kingsway Booster Station - Demolition	R	\$ 30,000				
Hammer Water Storage Tank and Piping (Construction)	N, E			\$ 5,500,000		
Funding from Future Year Envelopes (Debt Financing from 2015 to 2024)				\$ (5,500,000)	\$ 601,207	\$ 601,207
Hammer Water Storage Tank and Piping (Construction) - Financed in Budget Year				\$ -	\$ 601,207	\$ 601,207
SUBTOTAL - Plants - Reservoirs / Tanks / Booster Stations		\$ 155,000	\$ 75,000	\$ 5,575,000	\$ 75,000	\$ 75,000
Plants - System Wide						
SCADA, Controls & Instrumentation Systems Master Plan (50% W & WW)	R	\$ 250,000	\$ 250,000			
Annual SCADA / Communications Upgrades, All Facilities	R	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000
Operating Manuals & As-Builts	R	\$ 80,000	\$ 75,000	\$ 60,000	\$ 75,000	\$ 50,000
Health and Safety Inspections and Upgrades (Prestart Health & Safety Reviews)	R	\$ 75,000	\$ 50,000			
Security Improvements (Surveillance, Fencing, Alarms, Keys)	N	\$ 50,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000
Various Plant Repairs / Equipment Upgrades	R	\$ 50,000	\$ 200,000	\$ 100,000	\$ 200,000	\$ 100,000
Consultant's Procedural Manual For W & WW Facilities (50% W & WW)	R	\$ 40,000				
Facilities Design Manual (50% W & WW)	R	\$ 35,000				
SUBTOTAL - Plants - System Wide		\$ 780,000	\$ 800,000	\$ 385,000	\$ 500,000	\$ 375,000

Water Detail

PROJECT DESCRIPTION	PROJECT TYPE	2014 REQUEST	2015 OUTLOOK	2016 OUTLOOK	2017 OUTLOOK	2018 OUTLOOK
	R (Renewal)					
	E (Expansion)					
	N (New)					
Water Works - Strategic Initiatives						
AMR (Automatic Meter Reading) Water Meters	R,N	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
Bulk & Residential Water Filling Station Upgrades (5)	R	\$ 400,000				
AVL (Automatic Vehicle Locator) Software & Capital Equipment (W / WW - 40% / 60%)	N	\$ 300,000	\$ 20,000	\$ 20,000		
Plant Process / Energy Optimization Studies (Wanapitei WTP & David Street WTP)	R	\$ 200,000				
Operational Optimization Implementation Plan - Hydraulics	N	\$ 150,000	\$ 150,000			
Frobisher Depot Upgrades	R	\$ 150,000				
Asset Management Plan (Detailed) (50% W & WW)	N	\$ 100,000				
Asset Management Software (for Capital Project Planning)	N	\$ 75,000				
Source Protection Plan	N	\$ 50,000	\$ 30,000	\$ 40,000	\$ 40,000	\$ 50,000
GIS - Various Equipment & Software	N	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000
Trench Rescue Training	N	\$ 50,000				
Locates	N	\$ 50,000				
National W & WW Benchmarking Initiative (Collection & Distribution and Plants)	N	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000
Annual Contribution - Children's Water Festival	R	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500
Energy Saving Initiatives (Collection & Distribution and Plants)	R	\$ 100,000	\$ 100,000	\$ 100,000		
SUBTOTAL Waterworks - Strategic Initiatives		\$ 2,607,500	\$ 1,382,500	\$ 1,242,500	\$ 1,122,500	\$ 1,132,500
TOTAL - Water		\$ 16,992,422	\$ 11,456,317	\$ 19,001,778	\$ 10,450,942	\$ 19,206,320
Federal Gas Tax						
Watermain Rehabilitation (Lining)		\$ 680,000				
Dollard Avenue - Madison Avenue to End		\$ 350,000				
Eglon Street - Ste. Anne Road to Larch Street		\$ 350,000				
Ellen Street - St. Agnes Street to Laurier Street		\$ 300,000				
Afton Avenue - Hawthorne Drive to Gemmell Street		\$ 200,000				
MR15 / MR80 Intersection Improvements		\$ 50,000				
Charette Avenue Sewermain Project		\$ 30,000				
INCREMENTAL OPERATING BUDGET IMPACT:		\$ 1,960,000				
AVL Units		\$ 16,000				



Unfunded Capital Projects

Water

PROJECT DESCRIPTION	PROJECT TYPE	COST
	R (Renewal)	
	E (Expansion)	
	N (New)	
Wanapitei WTP Alternate Trunk Watermain - Multiple Phases	N	\$ 37,000,000
Well Building Repairs/Upgrades - Construction	R	\$ 10,600,000
Fielding Road Watermain Servicing	E	\$ 13,280,000
Maley Drive Extension - Watermain	E	\$ 4,800,000
Boland, Lancaster, Windsor Booster (Construction - will include Watermain Upgrades)	R, N	\$ 2,500,000
Ramsey Lake South Shore Servicing (Construction)	E	\$ 2,000,000
Valley Water Looping	N	\$ 2,000,000
Automated Meter Reading (AMR) Conversion Program	N	\$ 1,000,000
Kingsway Realignment	R	\$ 800,000
Falconbridge Water Tower Replacement Design / Contract Administration and Inspection	R	\$ 550,000
Implementation of Booster Station Evaluation	R	\$ 300,000
Depot Upgrades (Note 1)	R	TBD
TOTAL UNFUNDED		\$ 74,830,000

TBD - to be determined

Note 1 - Depot Needs Study that is planned to be completed will identify future needs with estimated costs for upgrades to various depots.



Wastewater Summary

CATEGORY DESCRIPTION

(For detailed project listing see attached)

	2014 REQUEST	2015 OUTLOOK	2016 OUTLOOK	2017 OUTLOOK	2018 OUTLOOK
Previous Council Approvals	\$ 6,811,965	\$ 10,344,485	\$ 6,789,055	\$ 6,820,217	\$ 6,903,002
Wastewater Collection					
Condition Assessment - Sewer System	\$ 700,000	\$ 725,000	\$ 925,000	\$ 725,000	\$ 925,000
Sewer System Rehabilitation	\$ 200,000	\$ 625,000	\$ 625,000	\$ 625,000	\$ 625,000
Sewer Priority Projects	\$ 3,256,325	\$ 11,206,234	\$ 3,811,207	\$ 1,623,711	\$ 1,586,416
Collection System - Other	\$ 288,816	\$ 210,829	\$ 210,000	\$ 210,000	\$ 250,000
Wastewater Plants					
Wastewater Treatment Plants - North	\$ 400,000	\$ 450,000	\$ 200,000	\$ 2,000,000	\$ 1,000,000
Wastewater Treatment Plants - South	\$ 1,100,000	\$ 625,000	\$ 5,020,000	\$ 18,650,000	\$ 100,000
Plants - Lift Stations	\$ 730,000	\$ 9,230,000	\$ 3,230,000	\$ 1,230,000	\$ 720,000
Plants - System Wide	\$ 1,190,000	\$ 1,600,000	\$ 870,000	\$ 595,000	\$ 555,000
Wastewater General					
Wastewater - Strategic Initiatives	\$ 1,045,000	\$ 455,000	\$ 185,000	\$ 65,000	\$ 25,000

PROJECT COSTS

	\$ 15,722,106	\$ 35,471,548	\$ 21,865,262	\$ 32,543,928	\$ 12,689,418
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PROJECT FINANCING

Reserves: Capital	\$ -	\$ (400,000)	\$ -	\$ -	\$ -
Reserves: Gas Tax	\$ -	\$ (1,960,000)	\$ (1,960,000)	\$ (1,960,000)	\$ (1,960,000)
Capital Envelopes: Future Years or Debt Financing	\$ -	\$ (15,775,000)	\$ (2,221,983)	\$ (12,546,983)	\$ 7,668,266

CAPITAL ENVELOPE (WWW User Fees)

	\$ 15,722,106	\$ 17,336,548	\$ 17,683,279	\$ 18,036,945	\$ 18,397,684
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Priority Setting:

Sanitary sewer priority projects are determined based on a review of:

- A) Condition: Camera inspections of the sanitary sewers are conducted to determine pipes that are in need of repair / replacement.
- B) Operational Issues: Groundwater Infiltration into aging infrastructure and sagged systems of sewer that require frequent maintenance are prioritized for repair / replacement.
- C) Capacity: Flow capacity is analysed for new and future growth conditions and upsizing is completed as required.

When a roads or watermain priority project is identified, all of the above criteria are reviewed to determine if associated sanitary sewer replacement / upgrades are required.

The following is the basis for prioritizing Water and Wastewater Facility Projects:

- Legislation / Compliance
- Health & Safety
- Protecting Public Health
- Maintenance / Renewal / Replacement of Existing Capital Assets
- Enhancing Productivity
- Protection of the Environment



Wastewater Detail

PROJECT DESCRIPTION		PROJECT TYPE		2014 REQUEST	2015 OUTLOOK	2016 OUTLOOK	2017 OUTLOOK	2018 OUTLOOK
		R (Renewal)	E (Expansion)					
		N (New)						
PREVIOUS COUNCIL APPROVALS								
Biosolids Management (Annual Debt Payment)		N		\$ 2,200,000	\$ 2,200,000	\$ 2,200,000	\$ 2,200,000	\$ 2,200,000
Bio Solids Phase - In (Construction)		N		\$ 2,626,000	\$ 3,978,520	\$ 4,058,090	\$ 4,139,252	\$ 4,222,037
Walden WWTP Expansion Upgrades (Design & Contract Administration / Inspection)		R		\$ 1,040,000	\$ 3,660,000			
Sudbury WWTP Upgrades - Headhouse Construction & Standby Power Design (\$4,000,000 Internal Financing 2014 to 2023)		N,R,E		\$ 480,965	\$ 480,965	\$ 480,965	\$ 480,965	\$ 480,965
Sudbury WWTP Upgrades - Standby Power (Design & Contract Administration / Inspection)		R,N		\$ 340,000				
Kingsway - Levesque Lift Station		E		\$ 100,000				
Computerized Maintenance Management System (CMMS) Contribution - Corporate Initiative		N		\$ 25,000	\$ 25,000	\$ 50,000		
SUBTOTAL PREVIOUS COUNCIL APPROVALS				\$ 6,811,965	\$ 10,344,485	\$ 6,789,055	\$ 6,820,217	\$ 6,803,002
Condition Assessment - Sewer System								
Sewer Inspection Program (Closed-Circuit Television, Zoom Camera, Cleaning)		R		\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000
Sanitary Rock Tunnel Inspections (Contribution to Reserve Fund)		R		\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000
Sewer Assessment in Proximity to Waterways		R		\$	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000
Inflow / Infiltration Assessment (Reduction)		R				\$ 200,000	\$ 200,000	\$ 200,000
SUBTOTAL - Condition Assessment - Sewer System				\$ 700,000	\$ 725,000	\$ 925,000	\$ 725,000	\$ 925,000
Sewer System Rehabilitation								
Sewer System Annual Repairs (Flushing Program Reduction)		R		\$ 200,000	\$ 125,000	\$ 125,000	\$ 125,000	\$ 125,000
Sewer Rehabilitation (Lining)		R			\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000
SUBTOTAL - Sewer System Rehabilitation				\$ 200,000	\$ 625,000	\$ 625,000	\$ 625,000	\$ 625,000
Sewer Priority Projects								
Gatchell Outfall Sewer - (Design, Contract Administration & Inspection)		R		\$ 1,000,000				
Gatchell Outfall Sewer - (Construction)		R			\$ 5,000,000			
Funding from Future Year Envelopes (2016 - 2025)					\$ (4,500,000)	\$ 541,086	\$ 541,086	\$ 541,086
Gatchell Outfall Sewer - Financing in Budget Year					\$ 500,000	\$ 541,086	\$ 541,086	\$ 541,086
Dollard Avenue - Madison Avenue to End		R		\$ 400,000				
Charette Avenue Sewers		R		\$ 350,000				
Ellen Street - St. Agnes Street to Laurier Street		R		\$ 325,000				
System Improvements (Development Related)		R,E		\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000
Second Avenue (Sudbury) - Donna Drive to 200 m North of Kenwood		R		\$ 200,000				
Combined Sewer Investigation		R		\$ 150,000	\$ 50,000	\$ 50,000	\$ 50,000	
Elgin Street - Ste. Anne Road to Elm Street		R		\$ 150,000				
Afton Avenue - Hawthorne Drive to Gemmill Street		R		\$ 125,000				
Preliminary Design for Subsequent Years		R		\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000
Lively Sanitary Sewer Upgrades - Construction		R			\$ 4,200,000			
Funding from Future Year Envelopes (2016 - 2017)					\$ (3,275,000)	\$ 1,775,000	\$ 1,500,000	
Lively Sanitary Sewer - Financing in Budget Year					\$ 925,000	\$ 1,775,000	\$ 1,500,000	
Development Projects (Valleyview) (Design, Contract Administration & Inspection)		N		\$	\$ 500,000			
Development Projects (Valleyview) (Construction)		N				\$ 2,000,000	\$ 1,000,000	\$ 1,000,000
Funding from Future Year Envelopes (2017 - 2018)						\$ (2,000,000)	\$ 1,000,000	\$ 1,000,000
Valleyview - Financing in Budget Year						\$	\$ 1,000,000	\$ 1,000,000



Wastewater Detail

PROJECT DESCRIPTION

PROJECT TYPE	2014 REQUEST	2015 OUTLOOK	2016 OUTLOOK	2017 OUTLOOK	2018 OUTLOOK
R (Renewal)					
E (Expansion)					
N (New)					
Moonlight Avenue - Bancroft Drive to Kingsway		\$ 500,000			
Yale Street - Marcel Street to Regent Street		\$ 175,000			
Second Avenue (Coniston) - Hwy 17 to Balsam Street		\$ 100,000			
Barbara Street - Yale Street to Arnold Street		\$ 50,000			
Davidson Street - College Street to MacKenzie Street		\$ 50,000			
Barry Downe Road - Westmount Avenue to Kingsway		\$ 50,000			
Rehabilitation of Backyard Sewermainlines (Various Locations)			\$ 500,000	\$ 500,000	\$ 500,000
Lorne Street - Martindale Road to Logan Avenue			\$ 300,000		
Gutcher Avenue - Mary Street to Irving Street			\$ 225,000		
Fairburn Street - Barry Downe Road to East End			\$ 150,000		
Various Sewer with Roads Priority Projects				\$ 500,000	\$ 500,000
Contingency - Sewer and Sewer with Watermain Priority Projects	\$ 206,325	\$ 181,234	\$ 236,207	\$ 223,711	\$ 236,416
SUBTOTAL - Sewer Priority Projects	\$ 3,256,325	\$ 11,206,234	\$ 3,811,207	\$ 1,623,711	\$ 1,586,416
Collection System - Other					
Collection Support - Contract Support	\$ 243,816	\$ 210,829	\$ 210,000	\$ 210,000	\$ 250,000
Collection Health & Safety Equipment (Trench Box / Confined Space Entry / Depot Improvements)	\$ 35,000				
Depot Remediation (W & WW Design Share)	\$ 10,000				
SUBTOTAL - Collection System - Other	\$ 288,816	\$ 210,829	\$ 210,000	\$ 210,000	\$ 250,000
Wastewater Treatment Plants - North					
Valley East WWTP Upgrades - Capital Needs Study (Including Standby Power)	\$ 200,000				
Valley East WWTP Upgrades - Concrete Rehabilitation (3 Phases)	\$ 100,000				
Chelmsford Lagoon Upgrades - Cleaning / Brush Cleaning	\$ 100,000				
Valley East WWTP Upgrades - Capital Needs Design, Contract Administration and Inspection		\$ 450,000		\$ 2,000,000	\$ 1,000,000
Chelmsford WWTP - UV Disinfection System Replacement			\$ 200,000		
SUBTOTAL - Wastewater Treatment Plants - North	\$ 400,000	\$ 450,000	\$ 200,000	\$ 2,000,000	\$ 1,000,000
Wastewater Treatment Plants - South					
Sudbury WWTP Equipment Upgrades (Blowers and unplanned Repairs)	\$ 800,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000
Walden WWTP Clarifier Rehabilitation - Engineering & Construction	\$ 300,000				
Coniston WWTP Upgrades		\$ 500,000			
Wanapitci Lagoon - Cell #1 Cleaning		\$ 25,000			
Sudbury WWTP Upgrades - Standby Power (Construction)			\$ 150,000		
Funding from Future Year Envelopes (Internal or Debt Financing - \$3,500,000 from 2017 to 2018)			\$ 4,700,000		
Sudbury WWTP Upgrades - Standby Power Construction - Financing in Budget Year			\$ (3,500,000)	\$ 750,000	\$ 2,750,000
Sudbury WWTP - Parking Lot and Entrance Upgrades			\$ 1,200,000	\$ 750,000	\$ 2,750,000
Walden WWTP Expansion - Construction			\$ 70,000	\$ 550,000	
Funding from Future Envelopes				\$ 18,000,000	
Funding from Future Year Envelopes (Debt Financing - \$16,300,000 from 2018 to 2032 - \$1,415,249 Annually)				\$ (1,000,000)	\$ 1,000,000
Walden WWTP Expansion Construction - Financing in Budget Year				\$ (16,300,000)	\$ 1,415,249
SUBTOTAL - Wastewater Treatment Plants - South	\$ 1,100,000	\$ 625,000	\$ 5,020,000	\$ 18,650,000	\$ 100,000



Wastewater Detail

PROJECT DESCRIPTION

PROJECT TYPE R (Renewal) E (Expansion) N (New)	2014 REQUEST	2015 OUTLOOK	2016 OUTLOOK	2017 OUTLOOK	2018 OUTLOOK
Plants - Lift Stations					
Lift Station Upgrades / Standby Power - Various Locations	\$ 500,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 500,000
Lift Station Upgrades - Pump Replacements	\$ 210,000	\$ 210,000	\$ 210,000	\$ 210,000	\$ 210,000
Lift Station Upgrades - Inflow Protection	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 10,000
St. Charles Lift Station Upgrades (Construction)	\$ 8,000,000	\$ (8,000,000)			
Funding from Future Year Envelopes (Internal Debt Financing - \$8,000,000 from 2016 to 2030)			\$ 961,931	\$ 961,931	\$ 961,931
St. Charles Lift Station Upgrades (Construction) - Financing in Budget Year			\$ 961,931	\$ 961,931	\$ 961,931
Main Street Lift Station (Chelmsford) - Construction			\$ 2,000,000		
SUBTOTAL - Plants - Lift Stations	\$ 730,000	\$ 9,230,000	\$ 3,230,000	\$ 1,230,000	\$ 720,000
Plants - System Wide					
Various Plant Repairs / Equipment Upgrades / Operational Support	\$ 350,000	\$ 350,000	\$ 350,000	\$ 250,000	\$ 250,000
Annual SCADA/Communication Upgrades	\$ 250,000	\$ 250,000	\$ 275,000	\$ 275,000	\$ 275,000
SCADA, Controls & Instrumentation Systems Master Plan (50% W & WW)	\$ 250,000	\$ 250,000			
Upgrading Primary Systems (Lagoons) to Secondary Treatment	\$ 100,000	\$ 100,000	\$ 100,000		
Health and Safety Inspections and Upgrades (PSH & S Reviews)	\$ 75,000	\$ 50,000	\$ 50,000		
Consultants Procedural Manual for W&WW Facilities (50% W & WW)	\$ 50,000				
Operating Manuals & As-Builts	\$ 40,000	\$ 60,000	\$ 40,000	\$ 40,000	
Roofing and Fencing	\$ 40,000	\$ 40,000	\$ 30,000	\$ 30,000	\$ 30,000
Facilities Design Manual (50% W & WW)	\$ 35,000				
Meatbird Transfer Station - Decommissioning		\$ 400,000			
Security Improvements (Card Access, Surveillance etc.)		\$ 100,000	\$ 25,000		
SUBTOTAL - Plants - System Wide	\$ 1,190,000	\$ 1,600,000	\$ 870,000	\$ 595,000	\$ 555,000
Wastewater - Strategic Initiatives					
AVL (Automatic Vehicle Locator) Software and Capital Equipment (W & WW - 40% / 60%)	\$ 440,000	\$ 20,000	\$ 20,000		
Freight Depot Upgrades	\$ 150,000				
Energy Saving Initiatives (Collection & Distribution and Plants)	\$ 100,000	\$ 200,000			
Asset Management Plan (Detailed) (50% W & WW)	\$ 100,000				
Plant Process / Energy Optimization Studies	\$ 60,000	\$ 75,000			
Trench Rescue Training	\$ 50,000				
Asset Management Software for Capital Project Planning	\$ 50,000				
GIS - Various Equipment & Software	\$ 25,000	\$ 35,000	\$ 40,000	\$ 40,000	
National W & WW Benchmarking Initiative (Distribution & Collection and Plants)	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000
Environmental Management System Implementation	\$ 25,000				
Locates	\$ 20,000				
Demand - Side Management (Wet Weather Flow Reduction)		\$ 100,000	\$ 100,000		
SUBTOTAL - Wastewater - Strategic Initiatives	\$ 1,045,000	\$ 455,000	\$ 185,000	\$ 65,000	\$ 25,000
TOTAL - Wastewater	\$ 15,722,106	\$ 35,471,548	\$ 21,865,282	\$ 32,543,928	\$ 12,889,418

INCREMENTAL OPERATING BUDGET IMPACT:

AVL Units \$ 24,000



Unfunded Capital Projects

Wastewater

PROJECT DESCRIPTION		TYPE	COST
		R (Renewal)	
		E (Expansion)	
		N (New)	
Fielding Road Sewer Servicing and Walden WWTP Upgrades		E	\$ 18,020,000
Ramsey Lake South Shore Servicing (Construction)		E	\$ 3,000,000
Maley Drive Extension - Sanitary Sewer		R	\$ 1,500,000
Jacob Street Lift Station		E	\$ 1,200,000
Boland, Lancaster, Windsor Booster (Construction - Will Include Sanitary Sewer Upgrades)		R	\$ 500,000
Lift Station Electrical Drawings		R	\$ 300,000
Manhole Rehabilitation		R	\$ 250,000
Copper Cliff Forcemain		N	TBD
Depot Upgrades (Note 1)		R	TBD
TOTAL UNFUNDED PROJECTS			\$ 24,770,000

TBD - To be determined