



Making a difference...together

GANGES SEWER LOCAL SERVICE COMMISSION
Notice of Meeting on **Monday, September 19, 2016 at 1:00 pm**
Portlock Park Meeting Room, 145 Vesuvius Bay Road, Salt Spring Island, BC

Wayne McIntyre Gary Utter Rod Scotvold David Toynbee Mike de Carle

AGENDA

1. Approval of Agenda

2. Approval of Minutes – June 14, 2016

3. Chair and Director Reports

4. Reports

4.1 Operating and Capital Budget

That the Ganges Sewer Local Service Commission recommends that the Capital Regional District Board:

1. Approve the 2017 operating and capital budget for the Ganges Sewer Service as presented;
2. Approve the 2017 Parcel Tax of \$135.97 for the Ganges Sewer Service;
3. Approve the projected 2017 Average Residential User Charge of \$591.47; and
4. Balance the 2016 actual revenue and expense on the 2016 transfer to the capital reserve fund.

5. New Business

6. Outstanding Business

7. Adjournment

To ensure quorum, advise Tracey Shaver 250 537 4448 if you cannot attend.



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**Minutes of the Regular Meeting of the Ganges Sewer Local Service Commission
Held June 14, 2016 at the Portlock Park Meeting Room, 145 Vesuvius Bay Road, Salt Spring
Island, BC**

DRAFT

PRESENT: **Director:** Wayne McIntyre
 Commission Members: Gary Utter, Rod Scotvold, David Toynbee, Mike de Carle
 Staff: Karla Campbell, Senior Manager SSI Electoral Area; Keith Wahlstrom, Manager, Engineering SSI Electoral Area; Matthew McCrank, Senior Manager, Infrastructure Operations; Dan Robson, Manager, Saanich Peninsula and Gulf Islands Operations, Peggy Dayton, Senior Financial Analyst; Kyu-Chang Jo, Financial Analyst 2; Tracey Shaver, Recording Secretary

Chair Utter called the meeting to order at 11:25 am.

1. Approval of Agenda

MOVED by Commissioner Toynbee, **SECONDED** by Commissioner Scotvold, That the Ganges Sewer Local Service Commission meeting agenda for June 14, 2016 be approved with the addition of item 5.6 Staff Report-Reclaimed Water Use from Ganges Wastewater Treatment Plant for Burgoyne Bay Septage Receiving Facility.

CARRIED

2. Approval of Minutes – January 12, 2016

MOVED by Commissioner Toynbee, **SECONDED** by Commissioner de Carle, That the Ganges Sewer Local Service Commission meeting minutes of January 12, 2016 be approved.

CARRIED

3. Chair and Director Reports

No reports presented.

4. Reports

4.1 Ganges Wastewater Infrastructure Renewal Project – Recommendation for Award of Consulting Engineering Services – SSI 2016-003

Staff reviewed the report and how the consultant contract is broken into 4 key phases:

- Pre-design
- Evaluation
- Design phase
- Design build construction

MOVED by Director McInyre, **SECONDED** by Commissioner de Carle,

The Ganges Sewer Local Service Commission recommends to the Capital Regional District (CRD) Board:

1. That the Ganges Wastewater Infrastructure Renewal Project-Contract SSI 2016-003 be awarded to Amec Foster Wheeler for the sum of \$189,650 plus GST;
2. That the CRD project manager and/or CRD project sponsor be authorized to approve up to a further \$30,000 for the design of the sludge management system for the project and;
3. That the CRD project manager and/or CRD project sponsor be authorized to utilize up to \$50,000 for contingency work.

CARRIED

5. New Business

The Ganges Sewer Commission briefly discussed some of their concerns regarding the unknown impact the Islands Trust Bylaw referrals will have on the Ganges Treatment plant.

5.1 Islands Trust Bylaw 488, Amends Bylaw 434- General Employment Definition

5.2 Islands Trust Bylaw 489, Amends Bylaw 434 -General Employment Zoning

5.3 Islands Trust Bylaw 490, Waste Management Facilities Rezoning

5.4 Islands Trust Bylaw 491, Ganges Harbour Zoning

5.5 Islands Trust Bylaw 492, Amend Bylaw 355-Technical Land Use Definition

MOVED by Commissioner Utter, **SECONDED** by Commissioner Scotvoid,

The Ganges Sewer Commission cannot make recommendations without clear understanding of the potential impact the bylaw will have on the daily operations of the physical sewer system. The Ganges Sewer Commission therefore requests that Island Trust planners provide additional information which defines the proposed changes under Bylaws 488, 489, 490, 491 and 492 in relation to Ganges Sewer utility.

CARRIED

5.6 Reclaimed Water Use from Ganges Wastewater Treatment Plant for Burgoyne Bay Septage Receiving Facility

Staff reviewed the concept and purpose of using reclaimed water at the Burgoyne site. The Commission was pleased by staff innovation and use of reclaimed water for an operational purpose which would otherwise use valuable potable water.

MOVED by Commissioner de Carle, **SCONDED** by Commissioner Scotvoid,

That the Ganges Sewer Local Commission recommends that the Electoral Area Services Committee recommends to the Capital Regional District Board: That staff be directed to submit applications to the Ministry of Environment and Island Health for use of reclaimed water for the Burgoyne Bay Septage Receiving Facility.

CARRIED

6. Outstanding Business

7. Adjournment

MOVED by Commissioner de Carle, **SECONDED** by Commissioner Toynbee,
That the meeting be adjourned at 12:05 pm.

CARRIED

CHAIR

SENIOR MANAGER



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**REPORT TO GANGES SEWER LOCAL SERVICE COMMISSION
MEETING OF MONDAY, SEPTEMBER 19, 2016**

SUBJECT 2017 OPERATING AND CAPITAL BUDGET

ISSUE

This report provides a synopsis of the 2017 operating and capital budget, highlighting significant proposed changes related to operational expenditures, debt charges, any capital expenditures and revenue for the Ganges Sewer Service.

In accordance with Bylaw No. 3693, "Ganges Sewer Local Commission Establishment Bylaw states, "Before the end of November of each year, the Commission shall be presented with a five year operating and capital budgets for the services provided in the Service Area which shall include estimates for the administrative, development, maintenance, operational and other expenses, including debt charges, and shall submit such expenditure estimates, together with estimates for expected revenue, in a form approved by the Financial Officer of the CRD for the approval of the Regional Board and for inclusion in the Regional Board's preliminary and annual budgets."

BACKGROUND

2016 Estimated Actual Operation Revenue and Expense

The estimated actual 2016 operating cost is projected to be **\$68,350** under budget primarily the result of:

1. lower than budgeted expenditures for:
 - a. sludge hauling contracts (\$8,900)
 - b. screening, grit and waste sludge disposal (\$23,790)
 - c. repairs and maintenance (\$6,870)
 - d. labour charges (\$40,090)
 - e. other operating expenses (\$670)
2. higher than budgeted expenditures for:
 - a. electricity (\$3,070)
 - b. water (\$390)
 - c. supplies (\$8,510)

The estimated actual operating revenue is projected to be approximately **\$540** over budget due to additional interest income received.

This results in a projected year-end net revenue of **\$68,890**. However when adjusted for a reduction in MFA principal and interest payments of **\$72,280** the actual projected year end net revenue is **\$141,170**.

It is proposed that the budgeted transfer to the capital reserves fund be increased by **\$141,170** to a 2016 year end total of **\$206,070** in order to help fund future capital improvements.

2017 OPERATING BUDGET

An increase in the 2017 operating expense of **\$7,940** (1.3%) is proposed. This is primarily a result of:

1. increase expenditure for:
 - a. repairs and maintenance (\$180)
 - b. allocations (\$19,310) – primarily due to vehicles being extracted from the labour charges and budgeted for as an allocation (\$16,200)
 - c. electricity (\$3,050)
 - d. water (\$70)
 - e. supplies (\$220)
 - f. other operating expenses (\$140)
2. reduction in labour charges (\$15,030)

Forecast 2017-2021

Although operating costs are projected to be significantly lower than budget in 2016, the 2017 budget includes an increase of 1.3% in operating costs over the 2016 budget amount, followed by 2.2% in 2018 and 2.1% per year in each of the following 3 years. The 2017 increase reflects operating conditions that are consistent with prior years. Until the plant is fully upgraded, no significant changes are proposed in the budget line items (example, the 2016 sludge management costs were lower as well as the labour needed to maintain the plant, but once the new plant is operational, these costs may be higher/lower).

2017 DEBT AND RESERVES FUNDS

Maintenance Reserves:

Maintenance reserves are to be used for the purchase of equipment and supplies that are typically not replaced annually such as ultraviolet lamps and sensors and other various items; and for certain operation and maintenance activities that are not typically performed annually such as outfall inspections. In addition, the maintenance reserves will support ongoing sewer collection system flushing and repairs to mitigate inflow and infiltration and reduce the risk of overflows due to blockages.

It is proposed that \$21,500 be transferred to the maintenance reserves in 2017; unchanged from 2016.

The maintenance reserve balance at the end of 2016 is projected to be **\$25,180**.

Capital Reserve Fund:

It is proposed that the transfer to capital reserve fund be set at \$50,000 in 2017, decreasing to \$40,000 in 2018 to 2021. This reduced transfer helps offset the increase the users will be seeing as a result of the rehabilitation project while at the same time recognizing the need to start to save for replacement of components with a life expectancy (e.g. membranes) less than the debt servicing life.

The capital reserve fund balance at the end of 2016 is projected to be **\$431,350**.

Capacity Purchase Reserve Fund:

There is also a Capacity Purchase Reserve Fund with a projected balance of **\$72,390** at the end of 2016. The use of these funds is restricted to the future expansion of the system related to development.

MFA Debt

Presently, there is no debt servicing costs for Ganges sewer. However, additional short term debt may begin in late 2016 to undertake capital improvements and will increase as the money is borrowed. The 2017 debt servicing costs are projected to be \$190,100. A more detailed debt payment program will be developed as the rehabilitation project plan and schedule is finalized and therefore the 2017 debt charge may need to be adjusted. As previously noted, the proposed transfer to capital is \$50,000 in 2017. This transfer may be adjusted if needed to balance any changes in the debt charges.

2017 REVENUE (User Charge and Parcel Tax)

In order to meet operating expenses and debt servicing costs it is proposed that:

- The practice of carrying forward year-end surplus amounts as revenue be reconsidered and all annual expenditures be funded through revenue generated in that year.
- user charge increase from \$710,960 to \$819,960; this results in an increase in the average residential user charge from \$512.81 per year to \$591.47 per year for each residential property connected to the system. The increase of \$78.66 is due to new debt costs (\$83.93) and an increase in operating expenses (\$5.73), offset by the reduction in the transfer to the CRF (\$10.75) and slightly higher revenues (\$0.25).
- parcel tax remains unchanged at \$54,130; this results in a parcel tax of \$135.97 per year for each parcel within the service area.
- other revenue increase from \$700 to \$1,040.

2017 – 2021 FIVE YEAR CAPITAL PLAN

The major capital improvement plan for the Ganges Sewer System was approved by referendum on July 25, 2015. The \$3.9 million project will be undertaken over a period of 4 years. Details of the expected work, timelines and budgets are contained in separate reports provided to the Commission.

The 2017 capital plan expenditure for the sewer system rehabilitation is \$1,206,100. This value is in addition to the 2016 capital plan value of \$2,700,420. The total project costs are now within the capital expenditure plan.

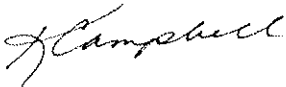
Additional projects anticipated for Ganges are outlined in the attached budget and include:

- 2019 Strategic Asset Management Plan (SAMP) (\$27,566)

RECOMMENDATION

That the Ganges Sewer Local Service Commission recommends that the Capital Regional District Board:

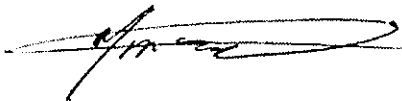
1. Approve the 2017 operating and capital budget for the Ganges Sewer Service as presented;
2. Approve the 2017 Parcel Tax of \$135.97 for the Ganges Sewer Service;
3. Approve the projected 2017 Average Residential User Charge of \$591.47; and
4. Balance the 2016 actual revenue and expense on the 2016 transfer to the capital reserve fund.



Karla Campbell, Senior Manager
Salt Spring Island Electoral Area



Rianna Lachance, BCom, CPA, CA,
Manager of Financial Planning and Analysis
Concurrence



Matt McCrank, M.Sc., P.Eng.
Senior Manager, Infrastructure Operations
Integrated Water Services
Concurrence

Attachment: Ganges Sewer 2017 Budget

CAPITAL REGIONAL DISTRICT

2017 Budget

Ganges Sewer Utility (SSI)

Committee Review

Compiled and Presented by CRD Finance

September 2016

Service: 3.810 Ganges Sewer Utility (SSI)

Committee: Electoral Area Services

DEFINITION:

To provide, operate and maintain sewage collection treatment and disposal facilities in the Ganges area on Salt Spring Island. (Letters Patent - March, 1978; Bylaw No. 492, 1978) Local Service Conversion Bylaw No. 1923, July 12, 1991.

PARTICIPATION:

Ganges - C(764) LSA#10

MAXIMUM LEVY:

Greater of \$270,000 or \$7.46 / \$1,000 to a maximum of \$1,682,895 on actual assessed value of land and improvements.

MAXIMUM CAPITAL DEBT:

Authorized: (A Bylaw 4007, Aug 12, 2015) \$3,900,000
Borrowed: \$0

COMMISSION:

Ganges Sewer Local Services Committee established by Bylaw No. 1906, April 24, 1991.

FUNDING:

Any deficiencies after user charge and/or frontage tax or parcel tax to be levied on taxable school assessments, excluding all the property of BC Hydro and Power Authority.

User Charge: Based on water consumption billed annually to properties connected to the system.

Parcel Tax: Annual charge based only on properties capable of being connected to system.

Connection Charge: Based on actual cost.

RESERVE FUND:

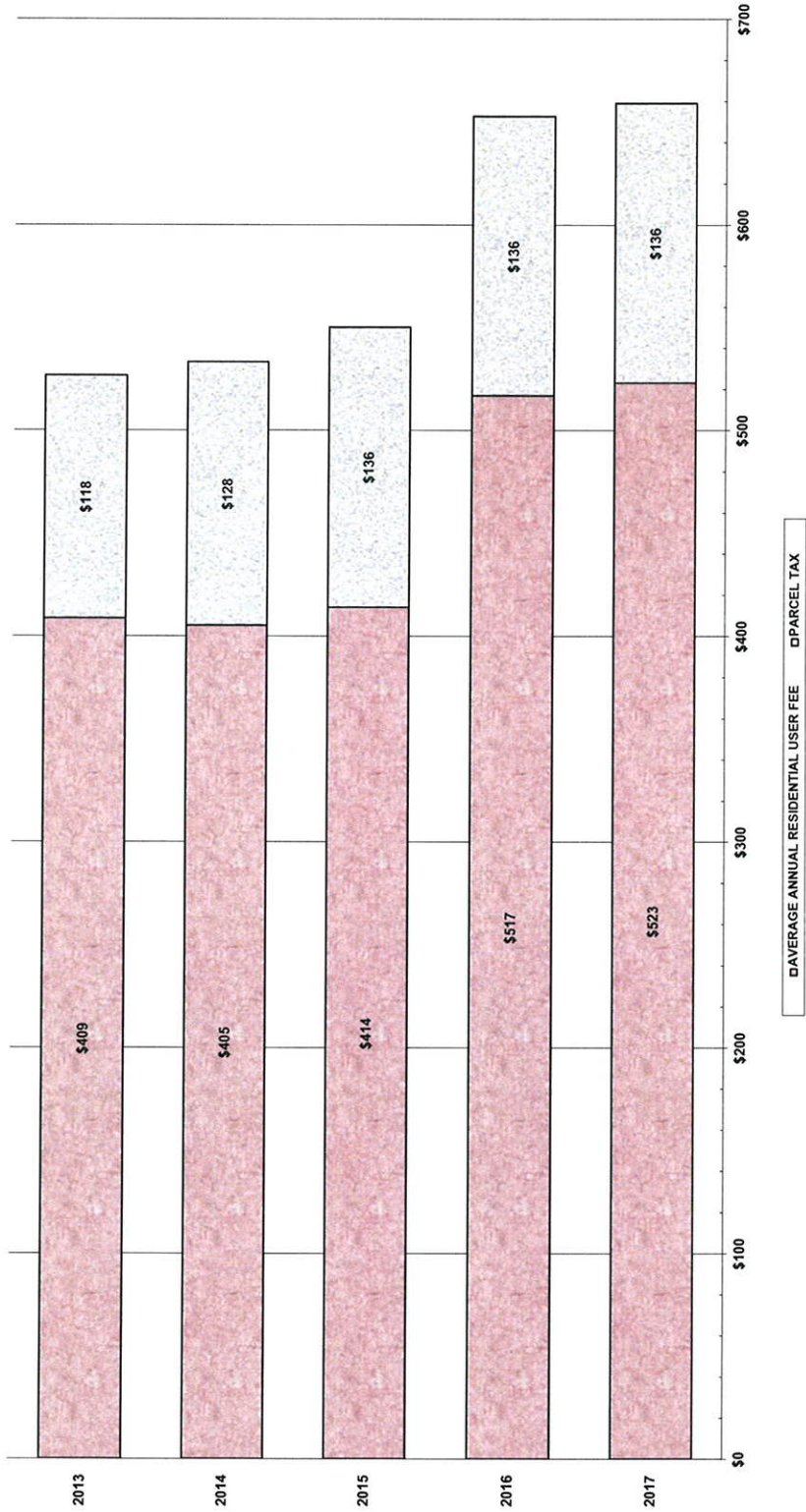
Bylaw No. 3125 (November 26, 2003)

	2016 BOARD BUDGET	2016 ESTIMATED ACTUAL	BUDGET REQUEST			FUTURE PROJECTIONS							
			2017 CORE BUDGET	2017 ONGOING	2017 ONE-TIME	2017 TOTAL	2018	2019	2020	2021			
Ganges Sewer Utility (SSI)													
<u>OPERATING COSTS:</u>													
Sludge Hauling Contracts	31,200	22,300	31,200	-	-	31,200	31,820	32,460	33,110	33,770			
Screenings, Grit & Waste Sludge Disposal	121,000	97,210	121,000	-	-	121,000	123,420	125,890	128,410	130,980			
Repairs & Maintenance	11,630	4,760	11,810	-	-	11,810	12,050	12,290	12,530	12,770			
Allocations	43,020	43,020	62,330	-	-	62,330	63,580	64,860	66,160	67,470			
Electricity	64,130	67,200	67,180	-	-	67,180	69,530	71,620	73,770	75,980			
Water	4,500	4,890	4,570	-	-	4,570	4,660	4,750	4,850	4,950			
Supplies	15,260	23,770	15,480	-	-	15,480	15,790	16,100	16,420	16,760			
Labour Charges	286,830	246,740	271,800	-	-	271,800	277,242	282,790	288,450	294,220			
Contingency	-	-	-	-	-	-	-	-	-	-			
Other Operating Expenses	28,020	27,350	28,160	-	-	28,160	28,718	29,290	29,880	30,480			
TOTAL OPERATING COSTS	605,590	537,240	613,530	-	-	613,530	626,810	640,050	653,580	667,380			
*Percentage Increase over prior year							2.2%	2.1%	2.1%	2.1%			2.1%
<u>DEBT/RESERVES</u>													
Transfer to Maintenance Reserve Fund	21,500	21,500	21,500	-	-	21,500	21,500	21,500	21,500	21,500			21,500
Transfer to Capital Reserve Fund	64,900	206,070	50,000	-	-	50,000	40,000	40,000	40,000	40,000			40,000
MFA Principal Payment	-	-	125,530	-	-	125,530	137,200	138,260	138,260	138,260			138,260
MFA Interest Payment	46,800	1,520	64,570	-	-	64,570	98,020	101,400	101,660	101,660			101,660
MFA Debt Reserve/Charges	27,000	-	-	-	-	-	-	-	-	-			-
TOTAL DEBT / RESERVES	160,200	229,090	261,600	-	-	261,600	296,720	301,160	301,420	301,420			301,420
TOTAL COSTS	765,790	766,330	875,130	-	-	875,130	923,530	941,210	955,000	968,800			968,800
<u>FUNDING SOURCES (REVENUE)</u>													
Estimated balance C/F from 2016 to 2017	-	-	-	-	-	-	-	-	-	-			-
Balance C/F from 2015 to 2016	-	-	-	-	-	-	-	-	-	-			-
User Charges	(710,960)	(710,960)	(819,960)	-	-	(819,960)	(868,360)	(886,040)	(899,830)	(913,630)			(913,630)
Other Revenue	(700)	(1,240)	(1,040)	-	-	(1,040)	(1,040)	(1,040)	(1,040)	(1,040)			(1,040)
TOTAL REVENUE	(711,660)	(712,200)	(821,000)	-	-	(821,000)	(869,400)	(887,080)	(900,870)	(914,670)			(914,670)
REQUISITION	(54,130)	(54,130)	(54,130)	-	-	(54,130)	(54,130)	(54,130)	(54,130)	(54,130)			(54,130)
*Percentage increase over prior year							5.9%	2.0%	1.6%	1.5%			1.5%
User Charge							0.0%	0.0%	0.0%	0.0%			0.0%
Parcel Tax							5.5%	1.9%	1.5%	1.4%			1.4%
Combined													

Service: 3.810 Ganges Sewer Utility (SSI) Committee: Electoral Area Services

<u>Year</u>	<u>Taxable Folios</u>	<u>Parcel Tax</u>	<u>Residential</u>		<u>Assessments \$(000's)</u>
			<u>SFE's</u>	<u>User Charge</u>	
				<u>Taxes & Chgs</u>	
2010	381	\$118.35	565	\$420.99	213,515
2011	382	\$140.40	567	\$420.99	219,117
2012	408	\$139.74	567	\$408.51	213,020
2013	415	\$137.28	570	\$405.04	221,913
2014	419	\$135.86	584	\$413.83	224,108
2015	419	\$136.07	584	\$516.68	218,850
2016	419	\$135.97	583	\$512.81	225,589
2017	419	\$135.97	583	\$591.47	

CAPITAL REGIONAL DISTRICT GANGES SEWER FUNDING ANALYSIS 2013-2017



Actual Costs 2013-2016, Projected 2017
 Prepared by CRD Finance
 13/09/2016

CAPITAL REGIONAL DISTRICT CAPITAL PLAN

CAPITAL BUDGET FORM

2017 & Forecast 2018 to 2021

Service #: 3.810

Service Name: Ganges Sewer Utility (SSI)

No.	Capital Exp. Type	Capital Project Description	Asset Class	Funding Source	Total Project Budget	Carry Forward	2017	2018	2019	2020	2021	5 - Year Total
16-01	Renewal	Project X		Cap		0						
				Res			0	0	0	0	0	0
				Grant			0	0	0	0	0	0
		Sub-total	S		0	0	0	0	0	0	0	0
17-01	Replacement	Sewer System Rehabilitation	S	Debt	2,700,420	2,700,420	-					0
		Sewer System Rehabilitation	S	Debt	1,206,100		1,206,100					1,206,100
19-01	Replacement	Strategic Asset Management Plan - Target 2019	S	Grant	27,556		0	0	27,556	0	0	27,556
				Res			0	0	0	0	0	0
				Debt			0	0	0	0	0	0
			L									0
				Cap		0	0	0	0	0	0	0
				Res			0	0	0	0	0	0
			B		0	0	0	0	0	0	0	0
		Sub-total			3,934,076	2,700,420	1,206,100	0	27,556	0	0	1,233,656
		Total			3,934,076	2,700,420	1,206,100	-	27,556	-	-	1,233,656

Funding Source Codes
Debt = Debenture Debt (new debt only)
ERF = Equipment Replacement Fund
Grant = Grants (Federal, Provincial)
Cap = Capital Funds on Hand
Other = Donations / Third Party Funding
Res = Reserve Fund
STLoan = Short Term Loans

Asset Class
L = Land
S = Engineering Structure
B = Buildings
V = Vehicles
E = Equipment

Capital Expenditure Type
New = Expenditure for new asset only
Renewal = Expenditure replaces an existing asset and extends the service ability or enhances technology in delivering that service
Replacement = Expenditure replaces an existing asset

Service: 3.810 Ganges Sewer Utility (SSI)

Committee: Electoral Area Services

1 Sewer System Rehabilitation (Carry Forward)

\$2,700,420

1.1 Replace Fine Screen, Membranes, Cleaning Tank Heater (\$291,200)

\$1,173,900

The fine screen, membranes, crane, cleaning tank heater, effluent piping and pumps and recirculation piping at the Ganges wastewater treatment plant have reached their end of life and need to be replaced. The budget for this item is for design and the upgrades required for the replacement of these components.

1.2 Inflow and Infiltration Program - Phase 1 (\$108,340)

\$108,300

The Stantec engineering study conducted in 2011 noted that there are increased sewage flows during rainfall events, suggesting inflow and infiltration issues, reducing usable capacity at the Ganges wastewater treatment plant. The budget for this item is to conduct a study to identify areas of inflow and infiltration.

1.3 Replace Harbour House Pump Station & SCADA (\$470,928)

\$470,900

The Harbour House pump station is at end of life and replacement is required. The intention is to reuse the existing concrete structure, if possible. SCADA will be added to this station. The budget for this item is for replacement of the mechanical and electrical equipment as well as provision of SCADA.

1.4 Resolve Outfall Deficiencies (\$70,358)

\$70,400

The outfall for the Ganges wastewater treatment plant was inspected in 2012 with noted deficiencies – five sacrificial anodes could not be located, a flange bolt was noted as being unsecured. The budget for this item is for 10 new anodes, hammer testing the flange bolts and replacing any flange bolts requiring replacement.

1.5 Turbidity Meter Replacement (\$12,999)

\$13,000

The turbidity meter for the Ganges wastewater treatment plant is at its end of life and requires replacement. The budget for this item is for procurement and replacement with a new turbidity meter.

1.6 Blower Vibration Testing and Repairs (\$17,438)

\$17,400

The blowers at the Ganges wastewater treatment plant have been identified as requiring vibration testing to maintain proper operation and prevent premature failure. The budget for this item is for vibration testing of the blowers and any repairs if required.

Service: 3.810 Ganges Sewer Utility (SSI)

Committee: Electoral Area Services

1.7 Sludge Thickening Tank and Membranes (\$500,084)

\$500,020

The membranes that perform the sludge thickening, separate from the membrane bioreactor, are starting to have breakthrough of total suspended solids, affecting effluent quality. The budget for this item is for replacement of the membranes and the tank.

1.8 Replace Flow Meters with Mag Meters (\$97,467)

\$97,500

Three flow meters currently used at the Ganges wastewater treatment plant are the old, unreliable paddlewheel style flow meters and in need of replacement.

1.9 Remove Old RBC Components (\$32,365)

\$32,400

The RBC tank at the Ganges wastewater treatment plant has not been in operation since the mid-1990's. The components will be removed so that the RBC tank could serve as equalization storage.

1.10 Replace 208V Motor Control Centre (\$216,583)

\$216,600

The existing motor control centre at the Ganges wastewater treatment plant is at its end of life and need of replacement. This is the remaining electrical work to bring the facility up to the current Electrical Code. This budget item will be for replacement of the motor control centre.

2 Sewer System Rehabilitation (2017)

\$1,206,100

2.1 Replace Roofing, Paint Building, Replace Fence (\$90,924)

\$90,000

The Ganges WWTP building requires the roofing to be replaced and siding to be repainted. The site security fence surrounding the site is falling down in areas, and not present in others. This budget item will be for painting the building, replacing the roof and site security fence.

2.2 Inflow and Infiltration Program - Phase 2 (\$189,967)

\$190,000

As an extension of the Capital Project – Inflow & Infiltration Program Phase I, this project will address issues highlighted in Phase

2.3 Replace Manson Pump Station & SCADA (\$470,928)

\$470,900

The Harbour House pump station is at end of life and replacement is required. The intention is to reuse the existing concrete structure, if possible. SCADA will be added to this station. The budget for this item is for replacement of the mechanical and electrical equipment as well as provision of SCADA.

2.4 Convert RBC Tank to Equalization Tank (\$94,983)

\$95,000

As an extension of the Capital Project – Remove Old RBC Components at the Ganges WWTP, this budget item is for procurement and installation of mechanical equipment to convert the old RBC tank to an equalization tank, which will add storage capacity to better manage peak flow events

2.5 Influent Pump Station & Piping Replacement (\$328,789)

\$328,000

Service: 3.810 Ganges Sewer Utility (SSI)

Committee: Electoral Area Services

The Ganges wastewater treatment plant influent pump station is at end of life, the pumps, process piping and valves require replacement and the site underground piping to the fine screen is of suspect condition. The budget for this item is for replacement of the mechanical and electrical equipment as well as replacement of some of the site piping.

2.6 Replace Automatic Valves and Actuators (\$32,178) \$32,200

The Ganges wastewater treatment plant valves and actuators will need to be replaced in 2019.

3 Strategic Asset Management Plan - SAMP (2019) \$27,556

A strategic asset management plan has been partially completed and provides supporting documentation to the work anticipated from 2016 to 2019. This phase of the SAMP will consolidate the current utility infrastructure and identify where further studies, policies, maintenance needs or projects are required.

Reserve Schedule

Reserve Fund: 3.810 Ganges Sewer Utility (SS) Capital Reserve Fund - Bylaw 3125

For capital repairs, additions and improvements to sewage system infrastructure

Reserve Cash Flow

	Estimate 2016	Budget				
		2017	2018	2019	2020	2021
Fund: 1056 Fund Center: 101836 & 101900						
Beginning Balance	297,668	503,738	553,738	593,738	633,738	673,738
Transfer to Cap Fund (Based on Capital Plan)	-	-	-	-	-	-
Transfer from Operating Budget	205,070	50,000	40,000	40,000	40,000	40,000
Interest Income*	-	-	-	-	-	-
Ending Balance \$	503,738	553,738	593,738	633,738	673,738	713,738

* Interest should be included in determining the estimated ending balance for the current year. Interest in planning years nets against inflation which is not included.

Reserve Cash Flow

	Estimate 2016	Budget				
		2017	2018	2019	2020	2021
Fund: 1056 Fund Center: 101836						
Beginning Balance	225,281	431,351	481,351	521,351	561,351	601,351
Transfer to Cap Fund (Based on Capital Plan)	-	-	-	-	-	-
Transfer from Ops Budget	206,070	50,000	40,000	40,000	40,000	40,000
Interest Income	-	-	-	-	-	-
Ending Balance \$	431,351	481,351	521,351	561,351	601,351	641,351

Reserve Cash Flow

	Estimate 2016	Budget				
		2017	2018	2019	2020	2021
Fund: 1056 Fund Center: 101900						
Beginning Balance	72,387	72,387	72,387	72,387	72,387	72,387
Transfer to Cap Fund (Based on Capital Plan)	-	-	-	-	-	-
Transfer from Ops Budget	-	-	-	-	-	-
Interest Income	-	-	-	-	-	-
Ending Balance \$	72,387	72,387	72,387	72,387	72,387	72,387

For use only to fund costs resulting from expansion of service

Reserve Schedule

Reserve Fund: 3.810 Ganges Sewer Maintenance Reserve (GL 290050)

For unforeseen operational repairs and maintenance

Reserve Cash Flow

	Estimate 2016	Budget				
		2017	2018	2019	2020	2021
Beginning Balance	3,680	25,180	46,680	68,180	89,680	111,180
Transfer from Operating Budget	21,500	21,500	21,500	21,500	21,500	21,500
Expenditures	-	-	-	-	-	-
Ending Balance \$	25,180	46,680	68,180	89,680	111,180	132,680