



Making a difference...together

GANGES SEWER LOCAL SERVICE COMMISSION

Notice of **Special Meeting** on **Thursday, October 13, 2022 at 12:00 PM**
Creekside Meeting Room, #108-121 McPhillips Avenue, Salt Spring Island, BC

Gary Holman Gary Utter David Toynbee Mike de Carle

Zoom:

<https://us06web.zoom.us/j/84492218399?pwd=VGZSQXgwMkQ0MkYxSIZDTG9QYjZnZz09>

AMENDMENT TO AGENDA

- 1. Territorial Acknowledgement / Call Meeting to Order**
- 2. Approval of the Agenda** **1-2**
- 3. Adoption of the Minutes of October 14, 2021** **3-5**
- 4. Director and Chair Reports**
- 5. New Business**
 - 5.1 2023 Operating and Capital Budget** **6-25**

That the Ganges Sewer Local Service Commission:

 1. Approve the 2022 transfer of \$100,000 from the Capital Reserve to the Equipment Reserve.
 2. Approve the 2023 operating and capital budget as presented, and that the 2022 actual operating deficit or surplus be balanced on the 2022 Reserve Funds transfer (CRF and/or ORF), and
 3. Recommend that the Electoral Area Services Committee recommend that the CRD Board approve the 2023 operating and capital budget and the five-year Financial Plan for the Ganges Sewer Local Service as presented.
 - 5.2 Request Additional Funds to Complete the Detailed Design for the Ganges Wastewater Treatment Plant Aeration System Upgrade Design** **26-27**

That the Ganges Sewer Local Services Commission recommends to the Capital Regional District Board that the Ganges Sewer Utility 2022-2026 Five-Year Capital Plan be amended to increase the project budget by an additional \$24,500 from \$90,000 to \$114,500 for the Ganges Wastewater Treatment Plant Aeration System Upgrade Design project, funded by Capital Reserve Fund.
 - 5.3 Reclaimed Water Study Discussion**
- 6. Outstanding Business – None**

7. Next Meeting – None

8. Adjournment



Making a difference...together

Minutes of the of the Ganges Sewer Local Service Commission
Held October 14, 2021 at Salt Spring Island Public Library, 129 McPhillips Avenue, BC

Present: **CRD Director:** Gary Holman
Commission Members: Gary Utter, David Toynbee, Mike de Carle, Jodie Miller (via Zoom)
Staff: Karla Campbell, Senior Manager, SSI Administration, Dan Robson, Manager, Saanich Peninsula and Gulf Islands Operations, Dean Olafson, Manager of Engineering, Lia Xu, Manager Finance Services, and Shayla Burnham, Recording Secretary
DRAFT

1. Territorial Acknowledgement

Territorial Acknowledgement was provided by Chair Utter and the meeting was called to order at 10:01 am.

2. Limited Space Meeting Resolution

MOVED by Director Holman, **SECONDED** by Commissioner Toynbee, that this resolution applies to the Ganges Sewer Local Service Commission for the meeting being held on October 14, 2021, and that the attendance of the public at the place of the meeting will be limited in accordance with the applicable requirements or recommendations under the Public Health Act, despite the best efforts of the Ganges Sewer Commission, because:

- a. The available meeting facilities cannot accommodate more than (20) people in person, including members of Ganges Sewer Commission and staff, and
- b. There are no other facilities presently available that will allow physical attendance of the Ganges Sewer Commission and the public in sufficient numbers; and

That the Ganges Sewer Commission is ensuring openness, transparency, accessibility and accountability in respect of the open meeting by the following means:

- a. By making the meeting agenda, as well as the other relevant documents, available on the CRD website, and directing interested persons to the website by means of the notices provided in respect of the meeting,
- b. By making the minutes of the meeting available on the CRD website following the meeting.

CARRIED

3. Approval of Agenda

MOVED by Commissioner Toynbee, **SECONDED** by Commissioner de Carle, that the October 14, 2021, Ganges Sewer Local Service Commission agenda be approved as amended by adding item 7.1 Capacity in the Sewer System for Affordable Housing.

CARRIED

4. Approval of Minutes October 27, 2020

MOVED by Commissioner de Carle, **SECONDED** by Commissioner Toynbee, that the October 27, 2020 meeting minutes of the Ganges Sewer Local Service Commission be approved as amended by adding Item 8.2 Rate Review as an ongoing agenda item moving forward.

CARRIED

5. Chair and Director Reports

Director Holman briefly reported:

- Provisional Budget to be approved by October 27, 2021 and Final Budget to be approved in March 2022.
- Fees and charges bylaw going to the CRD Board in November 2021.

Chair Utter – no report.

Lia Xu joined the meeting via Zoom at 10:07 am.

6. New Business

6.1 2022 Operating And Capital Budget

- 2021 operating expenses slightly over budget.
- 2021 operating revenue on budget.
- 2% increase for 2022 operating budget.
- Modification to sludge thickening tank with a target of 2.5% solids will reduce future sludge hauling.
- The Commission asked what the minimum Capital Reserve Fund balance was and staff confirmed a new Capital Reserve Funding Guideline had been implemented.
- A “target ratio” line was requested by the Commission for inclusion in future budget meeting agendas as a way for the Commission to properly monitor spending and staff confirmed this request would be implemented in 2022.
- Staff to update the Commission on the Development Cost Charges (DCC) bylaw regarding details associated with service expansion.
- Staff confirmed a review of the aeration system proved to be under sized and that staff have received a preliminary cost estimate in the \$600,000 range.

MOVED by Commissioner Toynbee, **SECONDED** by Commissioner de Carle, that the Ganges Sewer Local Service Commission approve the 2022 operating and capital budget as presented, and that the 2021 actual operating deficit or surplus be balanced on the 2021 transfer to the Operating Reserve Fund.

CARRIED

MOVED by Commissioner Toynbee, **SECONDED** by Commissioner de Carle, that the Ganges Sewer Local Service Commission recommend that the Electoral Area Services Committee recommend that the CRD Board approve the 2022 operating and capital budget and the five-year Financial Plan for the Ganges Sewer Local Service as presented.

CARRIED

Lia Xu left the meeting at 11:41 am.

7. New Business

7.1 Capacity in the Sewer System for Affordable Housing

- The Commission recommends supporting, in principle, the suggestion to ensure holding sufficient capacity, for the Drake Road Development and request staff to review the property capacity and commitments and return to the Commission with an update.

8. Next Meeting

Friday, November 5, 2021 at the SSI Library, 129 McPhillips Avenue, Salt Spring Island, BC from 10:00 a.m. – 12 :00 p.m.

9. Adjournment

MOVED by Commissioner de Carle, **SECONDED** by Commissioner Toynbee, that the Ganges Sewer Local Service Commission meeting adjourn at 11:57 am.

CARRIED

CHAIR

SENIOR MANAGER

**REPORT TO GANGES SEWER LOCAL SERVICES COMMISSION
FRIDAY, OCTOBER 13, 2022**

SUBJECT **2023 Operating and Capital Budget**

ISSUE SUMMARY

ISSUE

To present the 2023 operating and capital budget. In accordance with Bylaw No 1906, "Ganges Sewer Local Service Commission Bylaw No. 1, 1991" the Commission's approval of the annual budget is required.

BACKGROUND

The Capital Regional District (CRD) is required by legislation under the *Local Government Act* (LGA) to prepare an annual operating and capital budget and a 5-year financial plan including Operating Budgets and Capital Expenditure Plans annually. CRD staff have prepared the budget and financial plan shown in Appendix A to this report for the Ganges Sewer Local Service.

The Operating Budget includes the regular annual costs to operate the service. The Capital Expenditure Plan shows the anticipated expenditures for capital additions. These may include purchases of new assets or infrastructure, upgrades or improvements to existing assets or asset review and study work that could potentially lead to future capital improvements.

In preparing the Operating Budget, CRD staff considered:

1. Actual expenditures incurred between 2020 and 2022
2. Anticipated changes in level of service (if any)
3. Maximum allowable tax requisition
4. Annual Cost per taxpayer and per SFE

Factors taken into consideration in the preparation of the Capital Expenditure Plan included:

1. Available funds on hand
2. Projects already in progress
3. Condition of existing assets and infrastructure
4. Regulatory, environmental and health and safety factors.

Adjustments for surpluses or deficits from 2022 may be made in January 2023. The CRD Board will give final approval to the budget and financial plan in March 2023.

The Financial Plan for the years 2024 – 2027 may be changed in future years.

BUDGET OVERVIEW

Operating Budget

It is projected that operating expenses in 2022 will be approximately \$108,704 over budget which is primarily due to emergency response and corrective maintenance for the following:

- Repairs and environmental response to damaged wastewater treatment valves and sludge discharge to ground because of significant cold weather event that occurred in January
- Troubleshooting and repairs of the headworks screenings screw compactor gear box
- Troubleshooting and replacement of SCADA electronic process control equipment
- Troubleshooting and rebuilding of the wastewater treatment plant permeate pump
- Replacement of effluent flow meter equipment
- Repairs of the equalization tank pumps
- Ongoing troubleshooting and corrective maintenance of treatment process communications control equipment
- Replacement of wastewater treatment plant reclaimed process water supply line
- Wastewater Treatment Plant railing kick plate installation to address safety issue
- Wastewater Treatment Plant air compressor control modifications to address safety issue

Other contributing factors for the operating budget deficit include:

- Additional sludge hauling and disposal costs related to ongoing optimization of the treatment and sludge thickening process
- Outfall inspection costs are two times from what was planned

It is projected that the 2022 operating revenue is on target. This results in an operating deficit of approximately \$108,704 projected for the service.

To balance the 2022 operating budget, it is proposed that the 2022 transfer to the Capital Reserve Fund (CRF) in the amount of \$50,000 not be made and further that the 2022 transfer to the Operating Reserve Fund (ORF) be reduced from \$70,000 to \$11,296. This will result in a deficiency of within each of the reserve funds, which requires replenishment in 2023 and future years' planning. Otherwise, the resulting deficiency in 2022 must immediately be included as an expenditure to be recovered from revenue in 2023 financial plan as required by *Local Government Act Section 374(11)*.

The 2023 gross operating costs has been increased by \$100,496 (14%) over 2022. The increase is primarily to account for inflation, one-time cyclical maintenance (sanitary sewer system flushing and inspections for \$80,000) and increased labour charges. The increased labour charges are a result of the addition of a dedicated 'on-island' Manager of Operations that will be based on Salt Spring Island and have operational oversight of all CRD local services on Salt Spring Island and Southern Gulf Islands. The primary drivers for this role are to address regulatory requirements, workload management, capital project coordination and integration and to provide additional oversight and support to worker health and safety.

Municipal Finance Authority (MFA) Debt

Loan Authorization Bylaw 4007 to borrow \$3,900,000 was approved and adopted in 2015 for *Ganges Sewer Rehabilitation Project*. Table 1 summarizes the detailed information for existing MFA debt issues related to LA4007.

Table 1 – Existing Debt Summary

<i>MFA Issues</i>	<i>Term</i>	<i>Borrowing Year</i>	<i>Retirement Year</i>	<i>Refinance Year</i>	<i>Interest Rate</i>	<i>Principal</i>	<i>Principal Payment</i>	<i>Interest Payment</i>	<i>Total Annual Debt Cost</i>
LA4007-139	20	2016	2036	2026	2.10%	\$350,000	\$13,026	\$7,350	\$20,375
LA4007-142	25	2017	2042	2027	3.15%	\$1,500,000	\$41,142	\$47,250	\$88,392

LA4007-146	20	2018	2038	2028	3.20%	\$1,800,000	\$66,988	\$57,600	\$124,588
LA4007-149	25	2019	2044	2029	2.24%	\$250,000	\$6,857	\$5,600	\$12,457
Total						\$3,900,000	\$128,013	\$117,800	\$245,813

Operating Reserve Fund

The Operating Reserve Fund is used to undertake maintenance activities that typically do not occur on an annual basis. Typical maintenance activities include outfall inspection, treatment facility tank draining/cleaning/inspection and sanitary sewer collection system jet hydro flushing and manhole inspections. The operating reserve also funds the procurement of small equipment and supplies that are not purchased on an annual basis. Additionally, the operating reserve could be used for emergency unplanned repairs.

It is proposed that transfers to the Operating Reserve Fund be set at \$42,000 in 2023 to ensure future maintenance activities are fully funded and an optimal fund balance is maintained.

There is \$135,000 of planned maintenance to be funded by the operating reserve over the next five years. The Operating Reserve Fund balance at the end of 2022 is projected to be \$75,949.

Equipment Replacement Fund

The Equipment Replacement Fund (ERF) is used to pay for the replacement of machinery and equipment. An ERF was reactivated in 2022 to better plan the funding for the replacement of the sewer system membrane filter which has a 10-year life cycle with replacement cost of approximately \$500,000. The current membrane filter is expected to reach the end of its life cycle in 2030.

It is proposed that \$100,000 be reallocated from Capital Reserve Fund to Equipment Replacement Fund in 2022. From 2023 onwards, \$50,000 is planned to be transferred from operating budget annually to ensure that the ERF is funded at an optimal level to fund the system membrane filter replacement every 10 years.

The Equipment Reserve Fund balance at the end of 2022 is projected to be \$100,000.

Capital Reserve Fund

The Capital Reserve Fund is to be used to pay for capital expenditures that are not funded by other sources such as grants, operating budget, or debt.

It is proposed that the Capital Reserve Fund transfer to be set at \$29,725 in 2023. Reserve fund transfer planning is influenced by funding requirements to support the five-year capital expenditure plan, the emergency response to infrastructure failures and guided by *Capital Reserve Funding Guidelines* endorsed by the CRD Board in aiming to achieve the optimal reserve fund level to ensure long-term prudent and sustainable management of service delivery objectives through capital investments.

The balance of the reserve at the end of 2022 is projected to be \$537,152. The balance of the Capital Reserve Fund dedicated to fund costs resulting from expansion of service is projected to be \$67,477 at the end of 2022. The combined balance for the two reserve funds at the end of 2022 is \$604,629.

Capital Expenditure Plan

The 5-year plan includes \$2,107,500 of expenditures to be funded from the Capital Reserve Fund, debt, grant, or capital on hand.

The following three (3) new projects or budget amendments were added to the 2023 five-year capital plan:

1. MBR Cassette Lifting Brackets (23-02) - \$65,000
2. Replacement of Key Components and Critical Spares (23-03) - \$55,000
3. Electrical Upgrades (24-01) - \$28,000

Table 2 below provides the future debt servicing cost simulation for analytical purposes with the indicative interest rate provided by MFA at the time of simulation. The debt servicing is for two projects: \$800,000 for the construction of chemical storage, lab, and crew room facilities (21-04); and \$530,000 for the construction of aeration system improvements (22-03).

Table 2 – Future New Debt Simulation

<i>Future Borrowing(s) Estimation</i>	<i>Term</i>	<i>Borrowing Year</i>	<i>Retirement Year</i>	<i>Estimated Interest Rate</i>	<i>Principal</i>	<i>Principal Payment</i>	<i>Interest Payment</i>	<i>Total Annual Debt Cost</i>
	20	2025	2045	4.70%	\$1,330,000	\$52,066	\$62,510	\$114,576

At the commencement of each loan, 1% of the gross amount borrowed is withheld and retained by MFA as Debt Reserve Fund (DRF). In order to provide the full amount to fund the capital project, this 1% DRF amount is budgeted in operating budget in the year of borrowing. However, there is no principal payment required in the year of borrowing.

Capital Project Fund

As specific capital projects are approved, the funding revenues for them are transferred into this Capital Project Fund from the Capital Reserve Fund. Any funds remaining upon completion of a project are transferred back to the Capital Reserve Fund for use on future capital projects.

User Charge and Parcel Tax

The user charge and parcel tax fund the service. Residential, institutional, and commercial properties within the service area pay the annual user charge and the parcel tax. Table 3 summarizes 2023 over 2022 changes for parcel tax and user fee of residential customers based on average consumption.

Table 3 – Parcel Tax and User Charge Summary

<i>Budget Year</i>	<i>Parcel Tax</i>	<i>Taxable Folios Numbers</i>	<i>Parcel Tax per Folio*</i>	<i>User Charge</i>	<i>SFE Numbers</i>	<i>User Charge per SFE</i>	<i>Parcel Tax & User Charge</i>
2022	\$58,147	416	\$147.11	\$1,015,009	616	\$765.08	\$912.19
2023	\$59,891	423	\$149.02	\$1,045,452	616	\$776.33	\$925.35
Change (\$)	\$1,744	7	\$1.91	\$30,443	0	\$11.25	\$13.16
Change (%)	3.00%	1.68%	1.29%	3.00%	0.00%	1.47%	1.44%

* Includes the 5.25% admin fee charged by the Ministry of Finance (not CRD revenue)

RECOMMENDATION

That the Ganges Sewer Local Service Commission:

1. Approve the 2022 transfer of \$100,000 from the Capital Reserve to the Equipment Reserve.
2. Approve the 2023 operating and capital budget as presented, and that the 2022 actual operating deficit or surplus be balanced on the 2022 Reserve Funds transfer (CRF and/or ORF), and
3. Recommend that the Electoral Area Services Committee recommend that the CRD Board approve the 2023 operating and capital budget and the five-year Financial Plan for the Ganges Sewer Local Service as presented.

Submitted by	Karla Campbell, Senior Manager, MBA, BPA, Salt Spring Island Electoral Area
Submitted by	Jason Dales, Senior Manager B.Sc, WD IV, Infrastructure Operations
Submitted by	Rianna Lachance, BCom, CPA, CA, Senior Manager, Financial Services
Concurrence	Robert Lapham, MCIP, RPP, Chief Administrative Officer

KC/JD/RL:sb

Attachment: [2023 Ganges Sewer Service Budget](#)

CAPITAL REGIONAL DISTRICT

2023 Budget

Ganges Sewer (SSI)

Commission Review

OCTOBER 2022

Service: **3.810 Ganges Sewer Utility (SSI)**

Committee: **Electoral Area**

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** on actual assessed value of land and improvements. To a maximum of **\$2,861,265**.

MAXIMUM CAPITAL DEBT:

Authorized: (A Bylaw 4007, Aug 12, 2015)	\$3,900,000
Borrowed:	\$3,900,000
Remaining	<u>\$0</u>

COMMISSION:

Ganges Sewer Local Services Commission - Bylaw No. 3693 (April 14, 2010)

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)

3.810 - Ganges Sewer (SSI)		BOARD 2022 ESTIMATED BUDGET ACTUAL		BUDGET REQUEST 2023				FUTURE PROJECTIONS			
				CORE BUDGET	ONGOING	ONE-TIME	TOTAL	2024	2025	2026	2027
OPERATING COSTS											
Sludge Hauling Contracts	30,080	38,900		30,980	-	-	30,980	31,600	32,230	32,870	33,530
Screenings, Grit & Waste Sludge Disposal	124,740	172,900		128,490	-	-	128,490	131,060	133,680	136,350	139,070
Repairs & Maintenance	24,320	61,200		14,750	-	80,000	94,750	45,040	15,350	15,660	40,970
Allocations	48,481	48,481		49,469	-	-	49,469	50,459	51,462	52,491	53,544
Electricity	61,850	55,650		63,710	-	-	63,710	64,980	66,280	67,610	68,970
Water	7,750	3,195		3,260	-	-	3,260	3,330	3,400	3,470	3,540
Supplies	16,210	16,860		16,710	-	-	16,710	17,050	17,390	17,740	18,100
Labour Charges	374,535	396,034		375,266	23,230	-	398,496	418,358	426,748	435,288	444,007
Other Operating Expenses	30,590	34,040		33,160	-	-	33,160	34,020	34,900	35,810	36,750
TOTAL OPERATING COSTS	718,556	827,260		715,795	23,230	80,000	819,025	795,897	781,440	797,289	838,481
*Percentage Increase over prior year				-0.4%	3.2%	11.1%	14.0%	-2.8%	-1.8%	2.0%	5.2%
DEBT / RESERVES											
Transfer to Operating Reserve Fund	70,000	11,296		42,000	-	-	42,000	45,000	39,000	10,000	15,000
Transfer to Capital Reserve Fund	50,000	-		29,725	-	-	29,725	33,020	39,470	13,685	29,395
Transfer to Equipment Replacement Fund	-	-		50,000	-	-	50,000	50,000	50,000	50,000	50,000
MFA Principal Payment	128,013	128,013		128,013	-	-	128,013	128,013	128,013	180,078	180,078
MFA Interest Payment	117,800	117,800		117,800	-	-	117,800	117,800	133,428	180,310	180,310
MFA Debt Reserve Fund	830	830		700	-	-	700	700	14,000	700	700
TOTAL DEBT / RESERVES	366,643	257,939		368,238	-	-	368,238	374,533	403,911	434,773	455,483
TOTAL COSTS	1,085,199	1,085,199		1,084,033	23,230	80,000	1,187,263	1,170,430	1,185,351	1,232,062	1,293,964
*Percentage Increase over prior year				-0.1%	2.1%	7.4%	9.4%	-1.4%	1.3%	3.9%	5.0%
FUNDING SOURCES (REVENUE)											
Transfer from Operating Reserve Fund	(10,000)	(10,000)		-	-	(80,000)	(80,000)	(30,000)	-	-	(25,000)
User Charges	(1,015,009)	(1,015,009)		(1,022,222)	(23,230)	-	(1,045,452)	(1,076,820)	(1,119,891)	(1,164,692)	(1,199,634)
Other Revenue	(2,043)	(2,043)		(1,920)	-	-	(1,920)	(1,920)	(1,920)	(1,920)	(1,920)
TOTAL REVENUE	(1,027,052)	(1,027,052)		(1,024,142)	(23,230)	(80,000)	(1,127,372)	(1,108,740)	(1,121,811)	(1,166,612)	(1,226,554)
REQUISITION - PARCEL TAX	(58,147)	(58,147)		(59,891)	-	-	(59,891)	(61,690)	(63,540)	(65,450)	(67,410)
*Percentage Increase over prior year				0.7%	2.3%		3.0%	3.0%	4.0%	4.0%	3.0%
User Fee				3.0%			3.0%	3.0%	3.0%	3.0%	3.0%
Requisition				0.8%	2.2%		3.0%	3.0%	3.9%	3.9%	3.0%
Combined											

Ganges Sewer (SSI)
Reserve Summary Schedule
2023 - 2027 Financial Plan

Reserve/Fund Summary						
	Estimated	Budget				
	2022	2023	2024	2025	2026	2027
Operating Reserve Fund	75,949	37,949	52,949	91,949	101,949	91,949
Equipment Replacement Fund	100,000	150,000	200,000	250,000	300,000	350,000
Capital Reserve Fund	604,629	554,354	554,374	383,844	397,529	426,924
Total	780,578	742,303	807,323	725,793	799,478	868,873

Reserve Schedule

Reserve Fund: 3.810 Ganges Sewer (SSI) - Operating Reserve Fund - Bylaw 4144

Reserve fund used for: unforeseen operational repairs and maintenance; infrequent maintenance activities such as treatment facility tank cleaning and inspection, collection system flushing and inspection, outfall inspection etc.

Reserve Cash Flow

Fund: Fund Centre:	1500 105210	Estimated	Budget				
		2022	2023	2024	2025	2026	2027
Beginning Balance		73,603	75,949	37,949	52,949	91,949	101,949
Transfer from Ops Budget		11,296	42,000	45,000	39,000	10,000	15,000
Expenditures		(10,000)	(80,000)	(30,000)	-	-	(25,000)
Planned Maintenance Activity		Outfall Inspection	Sanitary sewer flushing & inspections	WWTP tank draining, cleaning & inspection			Outfall Inspection
Interest Income*		1,050					
Ending Balance \$		75,949	37,949	52,949	91,949	101,949	91,949

Assumptions/Background:

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

Reserve Schedule

Reserve Fund: 3.810 Ganges Sewer (SSI) - Equipment Replacement Fund

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Reserve Cash Flow

Fund: Fund Centre:	1022 101458	Estimated	Budget				
		2022	2023	2024	2025	2026	2027
Beginning Balance		-	100,000	150,000	200,000	250,000	300,000
Transfer from Ops Budget		-	50,000	50,000	50,000	50,000	50,000
Transfer from CRF		100,000	-	-	-	-	-
Interest Income		-					
Ending Balance \$		100,000	150,000	200,000	250,000	300,000	350,000

Assumptions/Background: Membrane replacement at \$500K every 10 years, anticipated next replacement in 2030.

Reserve Schedule

Reserve Fund: 3.810 Ganges Sewer (SSI) - Capital Reserve Fund #1 - Bylaw 3125

For capital repairs, additions and improvements to sewage system infrastructure

Reserve Cash Flow

Fund: Fund Centre:	1056 101836	Estimated	Budget				
		2022	2023	2024	2025	2026	2027
Beginning Balance		797,869	537,152	486,877	486,897	316,367	330,052
Transfer from Ops Budget		-	29,725	33,020	39,470	13,685	29,395
Transfer from Cap Fund		30,823	-	-	-	-	-
Transfer to Cap Fund		(197,500)	(80,000)	(33,000)	(210,000)	-	-
Transfer to ERF		(100,000)	-	-	-	-	-
Interest Income*		5,960					
Ending Balance \$		537,152	486,877	486,897	316,367	330,052	359,447

Assumptions/Background:

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

Reserve Schedule

Reserve Fund: 3.810 Ganges Sewer (SSI) - Capital Reserve Fund #2 - Bylaw 3125

For capital repairs, additions and improvements to sewage system infrastructure

Reserve Cash Flow

Fund: Fund Centre:	1056 101900	Estimated	Budget				
		2022	2023	2024	2025	2026	2027
Beginning Balance		66,757	67,477	67,477	67,477	67,477	67,477
Transfer from Ops Budget		-	-	-	-	-	-
Transfer to Cap Fund		-	-	-	-	-	-
Interest Income*		720					
Ending Balance \$		67,477	67,477	67,477	67,477	67,477	67,477

Assumptions/Background:

For use only to fund costs resulting from expansion of service

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

CAPITAL REGIONAL DISTRICT

FIVE YEAR CAPITAL EXPENDITURE PLAN SUMMARY - 2023 to 2027

Service No.	3.810	Carry Forward from 2022	2023	2024	2025	2026	2027	TOTAL
Ganges Sewer Utility (SSI)								
EXPENDITURE								
Buildings	B	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equipment	E	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Land	L	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Engineered Structures	S	\$1,347,500	\$235,000	\$58,000	\$1,737,500	\$0	\$0	\$2,030,500
Vehicles	V	\$0	\$77,000	\$0	\$0	\$0	\$0	\$77,000
		\$1,347,500	\$312,000	\$58,000	\$1,737,500	\$0	\$0	\$2,107,500
SOURCE OF FUNDS								
Capital Funds on Hand	Cap	\$107,500	\$50,000	\$0	\$57,500	\$0	\$0	\$107,500
Debtenture Debt (New Debt Only)	Debt	\$800,000	\$0	\$0	\$1,330,000	\$0	\$0	\$1,330,000
Equipment Replacement Fund	ERF	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Grants (Federal, Provincial)	Grant	\$140,000	\$182,000	\$25,000	\$140,000	\$0	\$0	\$347,000
Donations / Third Party Funding	Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Reserve Fund	Res	\$300,000	\$80,000	\$33,000	\$210,000	\$0	\$0	\$323,000
		\$1,347,500	\$312,000	\$58,000	\$1,737,500	\$0	\$0	\$2,107,500

CAPITAL REGIONAL DISTRICT
5 YEAR CAPITAL PLAN
2023 - 2027

<p>Project Number</p> <p>Project number format is "Y-Y-W-W"</p> <p>Y = the first two digits of the year the project is planned to start</p> <p>W = a numerical value. For example, 23-01 is a project planned to start in 2023</p>	<p>Capital Project Description</p> <p>Briefly describe project scope and service benefits.</p> <p>For example, <i>"Full Road Replacement of a 40-year road above the swimming pool area. The new roading system is built current energy standards, designed to minimize maintenance and have an expected service life of 35 years"</i></p>	<p>Project Objectives</p> <p>Maintain level of Service - Project maintains existing or improved level of service</p> <p>Advance board or corporate priority - Project is a board or corporate priority.</p> <p>Emergency - Project is required for health or safety reasons.</p> <p>Cost Benefit - Economic benefit to the organization.</p>
<p>For projects in previous capital plans, use the same project numbers previously assigned</p>	<p>Capital Expenditure Type</p> <p>Study - Expenditure for feasibility and business case report.</p> <p>New - Expenditure for new asset only</p> <p>Renewal - Expenditure upgrades an existing asset and extends the service ability or enhances technology in delivering that service</p> <p>Replacement - Expenditure replaces an existing asset</p>	
<p>Capital Project Title</p> <p>Input title of project. For example, "Asset Name - Road Replacement", "Main Water Pipe Replacement"</p>	<p>Asset Class</p> <p>C - Canal</p> <p>S - Buildings</p> <p>B - Engineering Structure</p> <p>V - Vehicles</p>	
	<p>Funding Source Codes</p> <p>Debt = Debt (new debt only)</p> <p>EFF = Equipment Replacement fund</p> <p>Grant = Grants (Federal, Provincial)</p> <p>Other = Donations / Third Party Funding</p> <p>Res = Reserve fund</p> <p>Stimom = Short term loans</p> <p>WU - Water Utility</p> <p>If there is more than one funding source, use additional rows for the project.</p>	<p>Long-term Planning</p> <p>Master Plan / Servicing Plan = Plan that identifies new assets required to meet future needs.</p> <p>Asset Management Plan / Sustainable Service Delivery Plan - Integrated plan that identifies asset replacements based on level of service, critically, condition, risk, replacement costs as well as external impacts.</p> <p>Replacement Plan - Plan that identifies asset replacements based primarily on asset age or asset material type.</p> <p>Condition Assessment - Assessment that identifies asset replacements based on asset condition.</p>
	<p>Cost Estimate Class</p> <p>Class A (£10-15%) = Estimate based on final drawings and specifications, used to evaluate tenders.</p> <p>Class B (£15-25%) = Estimate based on investigations, studies or preliminary design used for budget planning</p> <p>Class C (£25-40%) = Estimate based on limited site information, used for program planning</p> <p>Class D (£50%) = Estimate based on little/no site information, used for long-term planning</p>	

Service #:	3.810
Service Name:	Ganges Sewer Utility (SS)

Project List and Budget													
Project Number	Capital Expenditure Type	Capital Project Title	Capital Project Description	Total Project Budget	Asset Class	Funding Source	Carryforward from 2022	2023	2024	2025	2026	2027	5 - Year Total
21-01	New	Strategic Asset Management Plan	Identify condition of assets, develop prioritized list of infrastructure replacement.	\$50,000	S	Grant	\$40,000	\$0	\$0	\$40,000	\$0	\$0	\$40,000
21-01	New	Reclaimed Water Study	Feasibility study, identify infrastructure and regulatory requirements and develop conceptual plan and cost estimate for use reclaimed water.	\$57,500	S	Cap	\$57,500	\$0	\$0	\$57,500	\$0	\$0	\$57,500
21-03	New	VFD Installation for EO Tank	Installation of VFD for EO pumps to equitize feed rate for the plant	\$55,000	S	Cap	\$50,000	\$90,000	\$0	\$0	\$0	\$0	\$90,000
21-04	New	Gargas WWTP Lab Room, Crew Room, blower room design, and chemical storage	Detailed Design for lab and crew room/facility and Blower room expansion for Gargas WWTP	\$1,060,000	S	Res	\$60,000	\$0	\$0	\$0	\$0	\$0	\$60,000
21-04	New		Construction of chemical storage, lab, crew room facilities		S	Res	\$200,000	\$0	\$0	\$200,000	\$0	\$0	\$200,000
21-04	New		Construction of chemical storage, lab, crew room facilities		S	Debt	\$800,000	\$0	\$0	\$800,000	\$0	\$0	\$800,000
22-01	Replacement	Electricate Assent for Borrowing	Retention or Alternative Approval Process - Funding for Construction of WWTP chemical storage, lab, crew room facilities	\$20,000	S	Res	\$20,000	\$0	\$20,000	\$0	\$0	\$0	\$20,000
22-02	Replacement	Public Engagement	Inform and engage public with service area on upcoming works required for borrowing to fund.	\$10,000	S	Res	\$10,000	\$0	\$10,000	\$0	\$0	\$0	\$10,000
22-03	New	Aeration system improvement construction	Construction of aeration system improvements including blowers, diffusers and piping systems.	\$650,000	S	Grant	\$100,000	\$0	\$0	\$100,000	\$0	\$0	\$100,000
22-03	New				S	Debt	\$0	\$0	\$0	\$550,000	\$0	\$0	\$550,000
23-01	Replacement	Replace Generator Trailer	Equipment replacement. Replace IWS Operators Trailer F00845 1990 Unit Generator Trailer	\$77,000	V	Grant	\$0	\$77,000	\$0	\$0	\$0	\$0	\$77,000
23-02	New	MBR Cassette lifting brackets	Purchase and install MBR cassette lifting brackets. Identified as an H & S concern for operations staff.	\$65,000	S	Grant	\$0	\$55,000	\$0	\$0	\$0	\$0	\$55,000
23-03	New	Key components and spares replacement schedule	Provisional allowance for the supply and installation of key components and critical spares.	\$55,000	S	Grant	\$0	\$50,000	\$0	\$0	\$0	\$0	\$50,000
23-03					S	Res	\$0	\$5,000	\$0	\$0	\$0	\$0	\$5,000
24-01	New	Electrical upgrades	Installation of additional lighting and HMI upgrade.	\$28,000	S	Grant	\$0	\$0	\$25,000	\$0	\$0	\$0	\$25,000
24-01					S	Res	\$0	\$0	\$3,000	\$0	\$0	\$0	\$3,000
			GRAND TOTAL	\$2,107,500			\$1,347,500	\$312,000	\$59,000	\$1,737,500	\$0	\$0	\$2,107,500

Service: 3.810 Ganges Sewer Utility (SSI)			
Project Number 21-01	Capital Project Title Strategic Asset Management Plan	Capital Project Description	Identify condition of assets, develop prioritized list of infrastructure replacement.
Project Rationale Identify condition of assets, develop prioritized list of infrastructure replacement.			
Project Number 21-02	Capital Project Title Reclaimed Water Study	Capital Project Description	Feasibility study, identify infrastructure and regulatory requirements and develop conceptual plan and cost estimated for use reclaimed water.
Project Rationale Feasibility study, identify infrastructure and regulatory requirements and develop conceptual plan and cost estimated for use reclaimed water.			
Project Number 21-03	Capital Project Title VFD Installation for EQ Tank	Capital Project Description	Installation of VFD for EQ pumps to equalize feed rate for the plant
Project Rationale Current pumps in the Equalization tank are stop when the flow in Bioreactor is high. VFD equipped pumps can better regulate the flow rate for the plant.			
Project Number 21-04	Capital Project Title Ganges WWTP Lab Room, Crew Room, blower room design, and chemical storage	Capital Project Description	Detailed Design for lab and crew room/facility and Blower room expansion for Ganges WWTP
Project Rationale Detailed designs of expanded facilities are required for the lab, crew area, blower room and storage at the Ganges WWTP.			
Project Number 22-01	Capital Project Title Electorate Assent for Borrowing	Capital Project Description	Referendum or Alternative Approval Process - Funding for Construction of WWTP chemical storage, lab, crew room facilities
Project Rationale Referendum or Alternative Approval Process - Funding for Construction of WWTP chemical storage, lab, crew room facilities			

Project Number 22-02	Capital Project Title Public Engagement	Capital Project Description Inform and engage public within service area on upcoming works required for borrowing to fund.
Project Rationale Inform and engage public within service area on upcoming works required for borrowing to fund.		

Project Number 22-03	Capital Project Title Aeration system improvement construction	Capital Project Description Construction of aeration system improvements including blowers, diffusers and piping systems.
Project Rationale Required to maintain and improve the process performance of the WWTP.		

Project Number 23-01	Capital Project Title Replace Generator Trailer	Capital Project Description Equipment replacement. Replace IWS Operations Trailer F00845 1999 Ubbit Generator Trailer
Project Rationale Need to replace aging compressors before they fail.		

Project Number 23-02	Capital Project Title MBR Cassette lifting brackets	Capital Project Description Purchase and install MBR cassette lifting brackets. Identified as an H & S concern for operations staff.
Project Rationale Purchase and install MBR cassette lifting brackets. Identified as an H & S concern for operations staff.		

Project Number 23-03	Capital Project Title Key components and spares replacement schedule	Capital Project Description Provisional allowance for the supply and installation of key components and critical spares.
Project Rationale Provisional allowance for the supply and installation of key components and critical spares.		

Project Number 24-01	Capital Project Title Electrical upgrades	Capital Project Description Installation of additional lighting and HMI upgrade.
Project Rationale Installation of additional lighting and HMI upgrade.		

3.810 - Ganges Sewer (SSI)

Capital Projects

Updated @ Aug 30, 2022

Year	Project#	Status	Capital Project Description	Total Project Budget	Spending		Total Funding in Place	Return Project Surplus After Completion	
					Expenditure Actuals	Remaining Spending		CRF	
2021	CE.476.8305	Close	Sludge Thickening System Optimization	85,402	54,579	30,823	85,402	30,823	
2021	CE.755.1601	Open	Compressor replacement	10,000	10,000	-	10,000	-	
2022	CE.800.8301	Open	VFD Installation for EQ Tank	50,000	25	49,975	50,000	-	
2022	CE.798.8301	Open	Aeration System - Ganges WWTP	90,000	4,853	85,148	90,000	-	
2022	CE.801.8001	Open	Reclaimed Water Study	57,500	475	57,025	57,500	-	
			Totals	292,902	69,932	222,971	292,902	30,823	

Service:

3.810 Ganges Sewer (SSI)

Committee: Electoral Area

<u>Year</u>	<u>Taxable Folios</u>	<u>Parcel Tax per Folio</u>	<u>SFE's</u>	<u>User Charge per SFE</u>	<u>Total Tax & Charges</u>	<u>Actual Assessments \$(000's)</u>
2010	381	\$118.04	565	\$388.26	\$506.30	\$213,515
2011	382	\$118.04	567	\$388.26	\$506.30	\$219,117
2012	408	\$118.04	567	\$420.99	\$539.03	\$213,020
2013	415	\$118.00	570	\$408.51	\$526.51	\$221,913
2014	419	\$127.99	584	\$405.04	\$533.03	\$224,108
2015	419	\$136.07	584	\$401.66	\$537.73	\$218,850
2016	419	\$135.97	583	\$522.98	\$658.95	\$225,589
2017	418	\$136.30	583	\$651.80	\$788.10	\$239,471
2018	418	\$136.30	583	\$721.61	\$857.91	\$269,120
2019	418	\$136.30	586	\$751.31	\$887.61	\$289,639
2020	416	\$136.95	588	\$723.55	\$860.50	\$315,534
2021	416	\$144.21	591	\$799.66	\$943.87	\$314,650
2022	416	\$147.11	616	\$765.08	\$912.19	\$383,548
2023	423	\$149.02	616	\$776.33	\$925.35	

Change from 2022 to 2023

\$1.91	\$11.25	\$13.16
1.30%	1.47%	1.44%

Ganges Sewer (SSI) Funding Analysis 2019 - 2023



**REPORT TO GANGES SEWER UTILITY COMMISSION
MEETING OF FRIDAY, OCTOBER 13th, 2022**

SUBJECT **Request Additional Funds to Complete the Detailed Design for the Ganges Wastewater Treatment Plant Aeration System Upgrade Design**

ISSUE

Additional funds are required to continue with the investigation and design for the Ganges Wastewater Treatment Plant (WWTP) aeration system upgrade.

BACKGROUND

The Ganges WWTP was built in 1983 to service the Ganges community on Salt Spring Island. The original plant employed a rotating biological contactor (RBC) process, which was converted to a membrane bioreactor (MBR) process in 1998. In the most recent upgrade undertaken between 2016-2018, many equipment components were replaced and some process modifications were made.

During the course of completing the upgrade some additional items were identified that should be addressed and brought forward to the Commission at their August 29, 2019 meeting. The Ganges WWTP had been experiencing low dissolved oxygen (DO) concentrations in the aeration tank. The plant achieves biochemical oxygen demand (BOD) reduction but has not been able to achieve full and stable nitrification in the summer, which has led to high concentrations of ammonia in the effluent. In 2020 a project was added to the capital plan to retain a specialist in aeration systems to evaluate the process and provide recommendations for improvement which was completed in 2020. The preliminary design report presented blower options, sizing and location options as well as proposed upgrades to header sizing and diffuser layout modifications.

A request for proposals for detailed design was issued in August 2022 and three proposal submissions were received. After evaluating and scoring all proposals, the cost presented by the preferred proponent is marginally greater than the allocated budget.

ALTERNATIVES

Alternative 1

That the Ganges Sewer Local Services Commission recommends to the Capital Regional District Board that the Ganges Sewer Utility 2022-2026 Five-Year Capital Plan be amended to increase the project budget by an additional \$24,500 from \$90,000 to \$114,500 for the Ganges Wastewater Treatment Plant Aeration System Upgrade Design project, funded by Capital Reserve Fund.

Alternative 2

That this report be referred back to staff for additional information.

IMPLICATIONS

A delay in the approval of the additional project budget will likely postpone the project until 2023. A delay to 2023 will probably result in an increase in the quoted price for the work and the potential need to re-tender the project. The table outlines the project costs and additional funding required

Ganges Sewer Local Services Commission – October 13th, 2022
Request Additional Funds to Complete the Detailed Design for the Ganges Wastewater Treatment Plant Aeration System Upgrade Design **2**

to complete the project.

Ganges WWTP Aeration System Upgrade	Budget
Initial Project Budget	
Project Management	\$9,000
Design	\$81,000
Sub Total	\$90,000
Spent to Date	
Project Management costs to date	(\$5,680)
Costs to Complete	
Design Cost (Quote from preferred proponent)	(\$91,200)
Contingency (10%)	(\$9,120)
Project Management to complete	(\$8,500)
Total Costs	(\$114,500)
Additional Funding Required	
Funding to be Transferred from CRF	\$24,500

There are sufficient fund available in the Capital Reserve Fund for the service to increase the project budget by \$24,500.

CONCLUSION

The balance in the Capital Reserve Fund (\$537,152) has sufficient funds available to complete the detailed design for the Aeration System Upgrade for the Ganges Sewer Utility service and avoid schedule delays, increased costs and the potential for the plant to operate with less than efficient denitrification.

RECOMMENDATION

That the Ganges Sewer Local Services Commission recommends to the Capital Regional District Board that the Ganges Sewer Utility 2022-2026 Five-Year Capital Plan be amended to increase the project budget by an additional \$24,500 from \$90,000 to \$114,500 for the Ganges Wastewater Treatment Plant Aeration System Upgrade Design project, funded by Capital Reserve Fund.

Submitted by:	Dean Olafson, P. Eng., MBA, Engineering Manager, Salt Spring Electoral Area
Concurrence:	Karla Campbell, MBA, BPA, Senior Manager, Salt Spring Electoral Area
Concurrence:	Lia Xu, M. Sc., CPA, CGA Manager, Financial Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer