

**MEMORANDUM**

**BRC-C 1-2020**

**Subject:** Councillor Information Requests from October 15, 2020 Budget Review Committee of the Whole

**Date:** November 26, 2020

**To:** Budget Review Committee of the Whole

**From:** Todd Harrison, Commissioner/Treasurer Corporate Services

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This memo is in response to Councillor Information Requests at Budget Review Committee of the Whole on October 15 as follows:

1. *Committee members requested additional information respecting the strategy and rationale behind the budgeting of the South Niagara Falls Wastewater Treatment Plant project.*
  - a) *Provide information regarding the contingency budget for the South Niagara Falls Wastewater Treatment Plant Projects.*
  - b) *Provide additional information regarding the financing strategy for the South Niagara Falls Wastewater Treatment Plant Projects.*
  - c) *Provide information respecting the inclusion of the South Niagara Falls Wastewater Treatment Plant in the Development Charges background study and by-law. (Councillor Redekop).*
2. *Provide information respecting the capital projects evaluated under the CAMRA model which were not included in the 2021 capital budget. (Councillor Heit).*

**1. a) Provide information regarding the contingency budget for the South Niagara Falls Wastewater Treatment Plant Projects (SNF WWTP).**

Contingencies and estimates are budgeted within the project through the following:

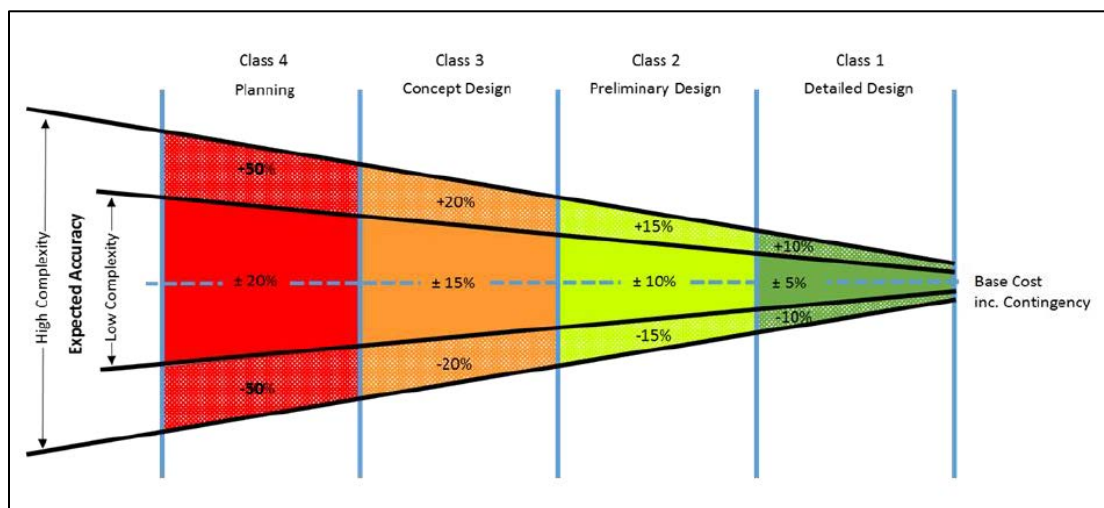
- An overall 10% project contingency.
- Contingency in pricing estimates on price sensitive assets.
- A capital inflation rate of 4% for the time value of money.

Cost estimating accuracy will improve as the project progresses. For the purposes for budgeting, class 3 concept design cost estimates were utilized. Per Table 1 and Figure 1, the accuracy range of these estimates are between 15-20%.

Table 1 Types of Estimate Class and Accuracy Ranges

Estimate Class	Estimate Class Description	End Usage / Major Deliverables	Accuracy Range (+/-)	
			Low Complexity	High Complexity
Class 4	Planning Cost Estimate	Concept Screening; justification for project planning funding. Minimum information requirements.	20	50
Class 3	Concept Design Cost Estimate	Basis for budgeting and approvals.	15	20
Class 2	Preliminary Design Cost Estimate	Used for project cost control during design; initial detailed estimate.	10	15
Class 1	Detailed Design Cost Estimate	Final cost review in preparation for construction; tender ready.	5	10

Figure 1 Variability of Estimates per Class



**1. b) Provide additional information regarding the financing strategy for the SNF WWTP Projects.**

The SNF WWTP capital requirement is as follows:

- 2021 capital budget includes \$320 million (\$5 million approved in prior years, total cost estimate is \$325 million)
- \$34 million required to be initiated in 2021 for the purchase of land, design, EAs with \$23 million in DC debentures and \$11 million in debentures financed from the wastewater rates.

- Remaining \$286 million to be initiated at a later date with funding of:
  - \$53 million debentures financed from the wastewater rates as this is supporting upgrades of existing infrastructure (i.e. benefit to existing)
  - \$125 million debentures financed from development charges as this is to support growth
  - \$108 million in unconfirmed grants
  - Project construction will not begin until grant funding is confirmed
  - Approval of the debentures at this time ensures Region's debt capacity is preserved for this project however debt will not be acquired until after costs are incurred.
- Operating budget impacts of \$320 million must be approved in year of capital project approval as per policy and can be accommodated within 2% water/wastewater rates. Approval of the wastewater operating budget at this time ensures capacity to support debt servicing costs and plant operating costs of:
  - \$3.8 million for debt servicing
  - \$5.2 million for plant operations
  - Until these wastewater operating funds are required for the above purposes, funding will be transferred to wastewater capital budget to fund replacement of existing infrastructure to be approved within each year's capital budget.
- Timing of Council budget approvals is different than cash flow requirements managed by staff. The differences are provided in appendix 1.

With respect to options to obtain the appropriate approvals to execute the above, there are essentially two options:

Recommended Option 1 – Approve the project in 2021 to construct the plant, and finance/cash flow the construction costs over the construction period and life of the asset.

Alternative Option 2 - Delay approval until Region has adequate funding accumulated to approve and allocate funding to construction of plant

**Option 1. Approve the project in 2021 to construct the plant, and finance/cash flow the construction costs over the construction period and life of the asset.**

- **Council decision points:**
  - 2021– Capital Budget - approve the \$320 million project. Project expenditures can begin on the design, environmental assessment and land acquisition.

- As the Region has adequate working capital the debt is not acquired at this point. Upon project substantial completion (approx. 2027) debt is issued with a 30 year debt term requiring \$3.8 million each year to pay the principal and interest on that debt.
  - The \$21 million base operating budget transfer to reserve is still available to support other infrastructure renewal in the Region's capital budget.
- 2021– Wastewater Operating Budget – understand and approve the impact and affordability of the operating budget dollars required to support the capital decision. Operating budget includes \$3.8 million required each year for 30 years to pay down the debt and the \$5.2 million that will be required to operate the plant. These amounts are 'placeholders' for Council understanding of financial impact and tradeoffs of the decision to construct the plant.
- Council budget decisions related to this project are complete other than to comply with the procurement policy and/or to deal with capital budget variances if required.

**Option 2. Delay approval until Region has adequate funding accumulated to approve and allocate funding to construction of plant.**

- **Background**
  - No funding would be spent on construction until all of budget and funding is approved.
  - Option to fund the \$64 million required from the Region's wastewater rates from amounts transferred to capital reserves (benefit to existing). With only \$21 million a year in the base wastewater budget dedicated to all capital reserves it would take three years to accumulate \$64 million to fund this requirement, and leave zero remaining for other infrastructure.
  - Other capital priorities would require debt financing which would require increases to the rate budget to support the annual principal and interest repayment requirements associated with financing those projects.
  - Option to use debenture financing sometime in the future for the project mirrors the funding approval principles of Option 1 but with a later start date and assuming debt capacity not assigned to other projects.
- **Council decision points:**
  - 2021 to 2023 - Wastewater operating budget – set aside \$21 million transfer to capital reserve for the plant construction or not. No funds will be spent on plant until total capital project is approved.

- 2024 – Capital budget - approve the \$320 million project. Project expenditures can begin on the design, environmental assessment and land acquisition.
- 2024 Wastewater operating budget – same as in Option 1 2021 Wastewater Operating Budget decisions.

**Cashflow impacts** - The cash flow impacts of these options are different and separate from the budget decisions above. Due to the long term nature of the construction of capital infrastructure the following additional opportunities are established in policy relative to Option 1:

- With respect to the Operating Budget - the Region continues to leverage the established \$9.0 million comprised of \$3.8 million (debt charges) and \$5.2 million (operations: staff, utilities, maintenance) to fund pay as you go capital.
  - 2021 to 2026 - \$9.0 million in the operating budget will not be set aside for debt servicing or operations but will be transferred to the wastewater capital reserve to be used/approved in the capital budget each year to invest in infrastructure.
  - 2027 - debentures will be issued and the \$3.8 million already established in the operating budget will be used to fund the principle and interest payments of that debt until it is paid off. Also, the plant will be in service and the \$5.2 million operating budget will be used for staff, maintenance and utility costs.
- With respect to the Capital Budget -
  - 2021 to 2023 - Staff spends \$34 million of the \$320 million approved capital cost on EA, planning, design, land etc.
  - 2024 to 2027 - Staff spends \$286 million of the \$320 million approved capital cost on construction.

**1. c) *Provide information respecting the inclusion of the South Niagara Falls Wastewater Treatment Plant in the Development Charges (DC) background study and by-law.***

The 2017 DC Background study estimated the total cost of the projects to be \$185 million with a potential DC recoverable cost of \$83 million. The revised estimated gross cost of the projects included in the 2021 Capital Budget is \$320 million with a potential DC recoverable of \$148 million. The revised estimates and debt servicing costs will be reflected in future updates to the DC background study.

The primary reasons for the increase from the 2017 estimates are as follows:

- The trunk sewer estimated depth and length increased based on conceptual design information.
- Increased property acquisition cost estimates.
- Addition of treatment costs and provision for potential tertiary treatment
- Capital inflation rate of 4% per year dependent on timing of project cash flow/construction compared to 2% capital inflation rate used previously.
- An updated wastewater strategy that will provide improved level of service, enhanced ability to address wet weather flows, and greater flexibility for efficient servicing in the future.

For an in-depth comparison by project, please see [PW 39-2020 - Appendix 2 Project Budget Cost and Scope Comparison](#).

**2. Provide information respecting the capital projects evaluated under the CAMRA model which were not included in the 2021 capital budget.**

Attached to this memorandum is appendix 2, which is the listing of deferred capital projects in 2021. These projects were deferred as part of the corporate prioritization process.

Respectfully submitted and signed by

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Todd Harrison, CPA, CMA  
Commissioner/Treasurer Corporate Services

Appendix 1 SNF WWTP Option Analysis  
Appendix 2 List of Deferred Capital Projects in 2021

- Green shading highlights the time of Capital Budget Approval.

<b>Option 1: 2021 Budget Approval and Financing Strategy</b>								
<b>In thousands</b>								
	<b>Rate Budget Approvals</b>							
	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027 - 2057</b>	<b>Total</b>
<b><u>Operating Budget</u></b>								
Debt Charge Placeholder	3,800	3,800	3,800	3,800	3,800	3,800	-	<b>22,800</b>
Debt Charges							3,800	
Operating Costs Placeholder	5,200	5,200	5,200	5,200	5,200	5,200	-	<b>31,200</b>
Operating Costs							5,200	
<b><u>Capital Budget</u></b>								
One-time Pay As You Go Renewal Projects	9,000	9,000	9,000	9,000	9,000	9,000		<b>54,000</b>
South Niagara Falls Wastewater Treatment Plant	320,000							<b>320,000</b>
Transfer from Capital Reserve to Project	(64,000)							<b>(64,000)</b>
DC Debt Funding	(148,000)							<b>(148,000)</b>
External Funding	(108,000)							<b>(108,000)</b>
<b><u>Capital Project Cashflow</u></b>								
	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>Total</b>
<b><u>Expenditure (Initiate \$34M in 2021, Remaining upon grant approval):</u></b>								
Class EA, Planning, Design & Property	(10,509)							<b>(10,509)</b>
Engineering	(7,406)	(7,702)	(9,482)	(1,529)		(182)	(177)	<b>(26,478)</b>
Construction				(58,990)	(75,669)	(78,696)	(69,658)	<b>(283,013)</b>
<b><u>Financing:</u></b>								
Rate Supported Debt							64,000	<b>64,000</b>
DC Debt							148,000	<b>148,000</b>
External Funding							108,000	<b>108,000</b>
<b>Total</b>	<b>(17,915)</b>	<b>(7,702)</b>	<b>(9,482)</b>	<b>(60,519)</b>	<b>(75,669)</b>	<b>(78,878)</b>	<b>250,165</b>	<b>0</b>
<b>Option 2: Delayed Approval and Funding Strategy</b>								
<b>In thousands</b>								
	<b>Rate Budget Approvals</b>							
	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027-2030</b>	<b>Total</b>
<b><u>Operating Budget</u></b>								
Transfer to Capital Reserve (Pay As You Go)	21,000	21,000	22,000					<b>64,000</b>
Operating Costs Placeholder			5,200	5,200	5,200	5,200	-	<b>20,800</b>
Operating Costs							5,200	
<b><u>Capital Budget</u></b>								
One-time Pay As You Go Renewal Projects	-	-	5,200	5,200	5,200	5,200	-	<b>20,800</b>
South Niagara Falls Wastewater Treatment Plant			320,000					<b>320,000</b>
Transfer from Capital Reserve to Project			(64,000)					<b>(64,000)</b>
DC Debt Funding			(148,000)					<b>(148,000)</b>
External Funding			(108,000)					<b>(108,000)</b>
<b><u>Capital Project Cashflow</u></b>								
	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027-2030</b>	<b>Total</b>
<b><u>Expenditure (Initiate \$34M in 2023, Remaining upon grant approval):</u></b>								
Class EA, Planning, Design & Property			(10,509)					<b>(10,509)</b>
Engineering			(7,406)	(7,702)	(9,482)	(1,529)	(359)	<b>(26,478)</b>
Construction						(58,990)	(224,023)	<b>(283,013)</b>
<b><u>Financing:</u></b>								
Reserves			64,000					<b>64,000</b>
DC Debt						148,000		<b>148,000</b>
External Funding							108,000	<b>108,000</b>
<b>Total</b>	<b>0</b>	<b>0</b>	<b>46,085</b>	<b>(7,702)</b>	<b>(9,482)</b>	<b>87,481</b>	<b>(116,382)</b>	<b>0</b>

Program	Project ID	Project Description	Original Project Request	Included in 2021 Capital Budget	(Partial) Deferral
Community Services	J_20001338	21 - LTC Homes - Machinery & Equipment	568,895	172,687	396,208
Community Services	J_20001339	21 - LTC Homes - Capital Improvements Replacement	634,474		634,474
Corporate Services	J_20001422	21-Desktop Infrastructure – Surplus Inventory	146,250		146,250
Corporate Services	J_20001423	21-Network Infrastructure – End of Life Wireless Infrastructure	53,000		53,000
Corporate Services	J_20001350	21-Code and Legislative Compliance Program	350,000	290,000	60,000
Corporate Services	J_20001424	21-Child Care Center - Welland Roof Replacement	250,000		250,000
Corporate Services	J_20001425	21-ANNUAL - All Sites Staff Accommodations	100,000		100,000
Corporate Services	J_20001426	21-Multiple Sites - Building Automation Redesign	100,000		100,000
Corporate Services	J_20001208	20-Ener-Meadows of Dorchester Lighting Retrofit	750,000		750,000
Corporate Services	J_20001427	21-Ener-NRHQ CE Lighting Retro	610,000		610,000
Corporate Services	J_20001209	NRHQ - Campbell West HVAC Investigation and Design	400,000		400,000
Corporate Services	J_20001217	NRHQ - Campbell East Windows	900,000		900,000
Corporate Services	J_20001429	21-NRHQ - Campbell West Window Replacement	400,000		400,000
Corporate Services	J_20001430	21-SAEO - Welland Roof Replacement	175,000		175,000
Corporate Services	J_20001431	21-SAEO - Welland HVAC Replacement Phase 2	820,000		820,000
Corporate Services	J_20001434	21-EMS - Ontario St. Base Parking Lot Refurbishment	300,000		300,000
Corporate Services	J_20000117	Long-trm Acc - EMS Central Hub	75,824,750		75,824,750
Corporate Services	J_20001211	NRPS Port Colborne - Generator Replacement	215,000		215,000
Corporate Services	J_20001466	21-NRPS 68 Church Demolition	2,700,000		2,700,000
Corporate Services	J_20001234	PW Thorold Yard - Asphalt Replacement	150,000		150,000
Corporate Services	J_20001436	Annual - Strategic Property Acquisitions	500,000		500,000
Niagara Regional Housing	J_20001397	21-NRH - Annual Units, Fencing, Electrical Systems, Windows & Doors Capital Programs	5,006,000		5,006,000
Public Health Emergency Serv	J_20001441	21-EMS Specialty Transport Units	413,136		413,136
Public Health Emergency Serv	J_20001443	21-EMS Fleet Vehicles	130,529		130,529
Public Health Emergency Serv	J_20001403	21 - EMS Fitness Equipment	50,000		50,000
Public Works - Levy	J_20000927	Thorold Yard Upgrades	500,000		500,000
Public Works - Levy	J_20001309	21 Ann-Patrol Yard Imprv	500,000		500,000
Public Works - Levy	J_20001310	21 Ann-Roads Equip Upgrade	500,000		500,000
Public Works - Levy	J_20001312	21 Ann-Railway Crossing Imprv	120,000		120,000
Public Works - Levy	J_20001313	21 Ann-Storm Sewers & Culverts	1,200,000		1,200,000
Public Works - Levy	J_20001320	21 Ann-Line Marking	300,000	200,000	100,000
Public Works - Levy	J_20001314	21 Ann-Illum Install&Upgrade	1,100,000		1,100,000
Public Works - Levy	J_20001315	21 Ann-Traffic Signal Program	4,050,000		4,050,000
Public Works - Levy	J_20001344	21 Ann-Intelligent Transportation System	1,000,000		1,000,000
Public Works - Levy	J_20001409	21 Ann-Traffic Radio System Upgrades	100,000		100,000
Public Works - Levy	J_20000930	Rds Fac Prog-Traf Cntrl Cntr	1,000,000		1,000,000
Public Works - Levy	J_10RC0816	Cpcty Imprv-Recon RR 57 Thorold Stone Rd ext east of Stanley Ave	6,120,000		6,120,000
Public Works - Levy	J_10RC0840	Rds Rehab RR81 Old Hwy 8 from Vinehaven Tr-23rd St	880,000		880,000
Public Works - Levy	J_10RC0939	Niagara South East West Arterial	500,000		500,000
Public Works - Levy	J_10RC1329	Cpcty Imprv - Casablanca Blvd Widening - Livingston to QEW	5,100,000		5,100,000
Public Works - Levy	J_10RC1354	Rds Rehab - Lakeshore Rd West Recon from Third St to Seventh St	9,750,000		9,750,000
Public Works - Levy	J_10RC1554	Cpcty Imprv - Glendale Ave Interchange at QEW	8,400,000		8,400,000
Public Works - Levy	J_10RC1563	Rds Rehab - RR 45 Creek Rd Reconstruction - RR 4 to RR 63	6,000,000		6,000,000
Public Works - Levy	J_20000145	Rds Rehab - RR 63 Canborough Rd - RR27 Wellandport Rd to Wellandport Community Centre	500,000		500,000
Public Works - Levy	J_20000486	Rds Rehab - RR 48 Niagara St - Carlton to Scott	580,000		580,000
Public Works - Levy	J_20000488	Rds Rehab - RR 87 Main St - Verdun Ave to Ontario St	2,150,000		2,150,000
Public Works - Levy	J_20000490	Cpcty Imprv - RR 56 Collier Rd, Highway 58 to Beavertams	300,000		300,000
Public Works - Levy	J_20000662	Int Imprv-RR81 King St at Main & Nineteenth-LN	1,500,000		1,500,000



Program	Project ID	Project Description	Original Project Request	Included in 2021 Capital Budget	(Partial) Deferral
Public Works - Levy	J_20000665	Struc Rehab - JR Stork Bridge - Bridge Rehab (Str. 038205)	6,000,000		6,000,000
Public Works - Levy	J_20000667	Rds Rehab - RR49 McLeod Rd Phase 2 - HEPC to Wilson	1,900,000		1,900,000
Public Works - Levy	J_20000896	Rds Rehab - RR 43 Bridge St - Victoria Ave to Erie	1,000,000		1,000,000
Public Works - Levy	J_20000897	Rds Rehab RR20 - South Grimsby Rd5 to Industrial Park Rd (Phase 4 and 5)	8,100,000		8,100,000
Public Works - Levy	J_20000900	Rds Rehab - RR 81 Main St - Oakes Rd N to Casablanca Blvd	5,000,000		5,000,000
Public Works - Levy	J_20000928	Int Impr - RR100 Four Mile Creek at York Rd, NOTL	500,000		500,000
Public Works - Levy	J_20001187	20-Cpcty Imprv-RR512 Livingston Ave Extension	1,000,000		1,000,000
Public Works - Levy	J_20001191	20-Cpcty Imprv-RR98 Montrose Rd from Lyon's Creek to Canadian	2,120,000		2,120,000
Public Works - Levy	J_20001192	Struc Rehab - Glendale Ave Bridge (089215)	1,000,000		1,000,000
Public Works - Levy	J_20001196	Struc Rehab - Lakeport Road (087210) and Frank Weir (087205)	250,000		250,000
Public Works - Levy	J_20001308	21 Ann-Misc Road Properties	200,000		200,000
Public Works - Levy	J_20001316	21 Ann-Roads Eng for Future	500,000		500,000
Public Works - Levy	J_20001318	21 Ann-Struc-Eng Stdy Fut Brdg	300,000		300,000
Public Works - Levy	J_20001345	Rds Rehab - RR3 Main St E Barber to Hwy 3	500,000		500,000
Public Works - Levy	J_20001404	Cpcty Imprv - RR 27 East Main St - Hwy 140 to Moyer Rd	250,000		250,000
Public Works - Levy	J_20001405	Struc Rehab - 16 Mile Creek Bridge - Deck Replace (039215)	300,000		300,000
Public Works - Levy	J_20001408	Struc Rehab - Stevensville Bridge (116215)	200,000		200,000
Public Works - Levy	J_20001410	Int Imprv-RR57 TSR at Dorchester	200,000		200,000
Public Works - Levy	J_20001411	Int Imprv-RR57 TSR@Montrose	200,000		200,000
Public Works - Levy	J_20001412	20-Cpcty Imprv-RR54 Rice Rd-Merritt to Thorold	500,000		500,000
Public Works - Levy	J_20001413	Rds Rehab - RR83 Carlton Rd Extension	500,000		500,000
Public Works - Levy	J_20001415	Int Imprv-RR81 St Paul W@Vansickle	100,000		100,000
Public Works - Levy	J_20001416	Struc Rehab - RR98 White Pigeon Bridge (098220)	100,000		100,000
Public Works - Levy	J_20001347	21 Ann-Plan Impl Complete St	300,000		300,000
Public Works - Levy	J_20001321	21 Ann-Fleet & Vehicle Replace	2,232,200		2,232,200
Public Works - Levy	J_20001417	21-NRHQ - Vehicle For Facilities Supervisor	40,000		40,000
Public Works - Levy	J_20001418	21-GO Transit - Vehicle For GO Maintainer	40,000		40,000
Public Works - Levy	J_20001419	LTC Homes - 2021 Capital Vehicles Replacement	66,144		66,144
Public Works - Levy	J_20001475	21-PH-Tobacco Enforcement Vehicles*	64,000		64,000
Public Works - Levy	J_20000494	NRT - Capital Acquisition	3,750,000		3,750,000
Total			180,909,378	662,687	180,246,691

\*external funding expedited the project after the project was deferred