



**Durham
Budget**

2021

2021 BUSINESS PLANS AND BUDGETS

CONSOLIDATED WATER SUPPLY AND SANITARY SEWERAGE

WORKS – WATER SUPPLY AND SANITARY SEWERAGE

UTILITY FINANCE

CORPORATE NON-DEPARTMENTAL – WATER SUPPLY AND SANITARY SEWERAGE

Presented to Finance and Administration Committee on December 8, 2020



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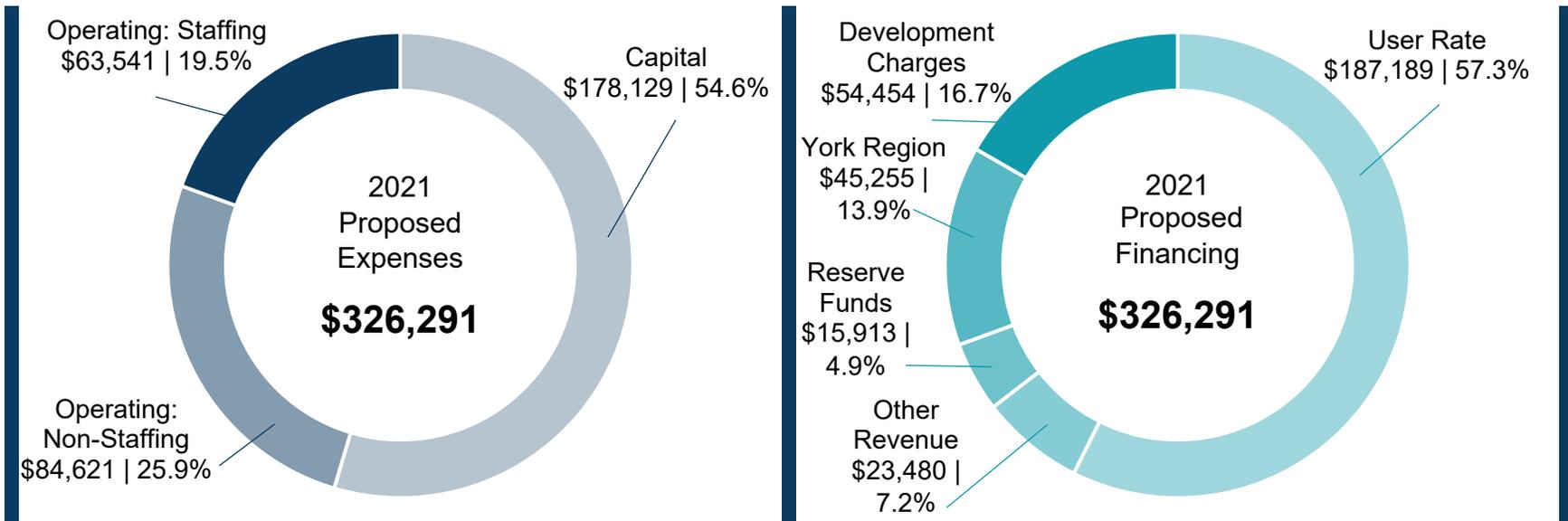
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WORKS - WATER SUPPLY AND SANITARY SEWERAGE

Plans, designs, constructs, operates and maintains Regional infrastructure related to the supply of drinking water and the protection of the water environment through the collection and treatment of sanitary sewerage.



Amounts are in \$,000's

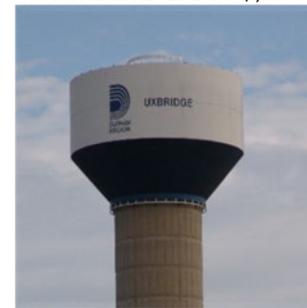


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Major Programs and Services

Water Supply

Watermain Cleaning and Repairs

Maintain and operate the Region's water distribution system by flushing watermains, cleaning through foam swabbing, repairing breaks, administering leak detection surveys and preventing corrosion of infrastructure through cathodic protection.

Valves and Hydrants

Maintain the Region's water valves and hydrants ensuring all are in good working condition.

Water Connections

Maintain the Region's water connection inventory to provide potable water for domestic use and fire protection.

Water Meter Repair and Testing

Maintain the Region's water meter inventory to accurately measure the consumption of water by replacing meters based on age. Other work includes the calibration, testing, repair and replacement of large meters as required.

Depot Operations

Support the delivery of water infrastructure maintenance activities including watermain repairs, valve and hydrant operations and water meter repair, calibration and replacement.

Water Supply Plants – Plants East

Serve Bowmanville, Newcastle, Orono and Blackstock (comprised of two surface water plants, six storage facilities, four municipal groundwater wells and three water pumping stations) by providing potable water which meets all quality requirements prescribed by the Ministry of the Environment, Conservation and Parks' (MECP) legislation and regulations, accomplished through continuous monitoring of water quality and flows.

Water Supply Plants – Plants Central

Serve Pickering, Ajax, Whitby, Oshawa and Courtice (Clarington) (comprised of three surface water plants, 13 water pumping stations and 11 storage facilities) by providing safe, potable water which meets all quality requirements prescribed by the MECP's legislation and regulations, accomplished through continuous monitoring of water quality and flows.

Major Programs and Services Continued

Water Supply Plants – Plants North

Serve the Townships of Brock, Scugog and Uxbridge (comprised of one surface water plant, 21 municipal groundwater wells, seven storage facilities and one water pumping station) by providing safe, potable water which meets all quality requirements prescribed by the MECP's legislation and regulations, accomplished through continuous monitoring of water quality and flows.

Sun Valley Co-Operative Water System

A private water system operated by the Region on behalf of the Sun Valley Co-operative comprised of 17 properties in the City of Oshawa to supply safe, potable water which meets all quality requirements prescribed by MECP's legislation and regulations accomplished through continuous monitoring of water quality and flows.

SCADA Systems

The centralized SCADA (Supervisory Control and Data Acquisition) Systems Group based at the Oshawa Water Supply Plant monitors, gathers and processes real time data to control plant processes, directly interacting with sensors, valves, pumps and motors while logging events for regulatory reporting requirements.

Engineering and Staff Support

Support the delivery of capital projects and initiatives through planning, design and construction activities, including advancing the servicing of key Regional employment lands, providing real estate services for infrastructure projects including well head protection land acquisitions, maintaining linear infrastructure data within GIS systems, coordinating development applications with impacts to Regional services, providing technical support including water conservation programming, energy management guidance, oversight to the Region's Source Water Protection programs and supplying financial and administrative support services to all divisions within the Works Department.

Facilities Management

Provide overall lifecycle management of all Regional facilities. Services include the design and construction of Regional facilities, delivery of major repair and renovation projects, lifecycle maintenance and replacement strategies, delivering corporate security services, and the ongoing and preventative maintenance and overall operation of Regional facilities, properties and grounds.

Administration

Provide the overall strategic planning and direction to all programs within the Works Department.

Major Programs and Services Continued

Headquarters Shared Costs – Works - Water Supply Portion

The allocated share of costs attributable to the Works Department – Water Supply for the operation of Regional Headquarters facility.

Construction of Municipal Services

Plan, design and construction of the water supply system major capital program.

Sanitary Sewerage

Cleaning, Repairs and Maintenance Holes

Maintain and operate the Region's sanitary sewerage collection system efficiently and effectively, undertaking spot repairs of damaged sanitary sewers, and scheduled cleaning of sanitary sewers and syphons.

Sewer Connections

Maintain the Region's sanitary sewer connection inventory efficiently and effectively, safeguarding the public and environment from any public health hazards and ensuring continuity of service.

Depot Operations

Support the delivery of sanitary sewerage infrastructure maintenance activities which include the maintenance, cleaning and repairs of sanitary sewers, maintenance holes and sewer connections.

Water Pollution Control Plants and Pumping Stations

The water pollution control plants and sanitary sewerage pumping stations treat and convey sanitary sewerage, ensuring it meets the discharge requirements prescribed by the MECP. The system is comprised of 11 treatment plants and 51 pumping stations spread across the Region.

Duffin Creek Water Pollution Control Plant

Operation of the plant, co-owned by the Regions of Durham and York, to treat sanitary sewage, ensuring it meets the discharge requirements prescribed by the MECP. The Duffin Creek Water Pollution Control Plant is one the largest water pollution control plants in Ontario.

Regional Environmental Laboratory

Operation of a certified laboratory, co-owned by the Regions of Durham and York, which provides testing services for water and wastewater monitoring for the Regions of Durham and York, local municipalities and private clients. Services are provided in accordance with the MECP License and laboratory accreditation for drinking water and wastewater requirements.

Major Programs and Services Continued

Engineering and Staff Support

Support the delivery of capital projects and initiatives through planning, design and construction activities, including advancing the servicing of key Regional employment lands, providing real estate services for infrastructure projects including well head protection land acquisitions, maintaining linear infrastructure data within GIS systems, coordinating development applications with impacts to Regional services, providing technical support including water conservation programming, energy management guidance, oversight to the Region's Source Water Protection programs and supplying financial and administrative support services to all divisions within the Works Department.

Facilities Management

Provide overall lifecycle management of all Regional facilities. Services include the design and construction of Regional facilities, delivery of major repair and renovation projects, lifecycle maintenance and replacement strategies, delivering corporate security services, and the ongoing and preventative maintenance and overall operation of Regional facilities, properties and grounds.

Administration

The overall strategic planning and direction to all programs within the Works Department.

Headquarters Shared Costs – Works - Sanitary Sewerage Portion

The allocated share of costs attributable to Works Department – Sanitary Sewerage for the operation of Regional Headquarters for the operation of Regional Headquarters facility.

Construction of Municipal Services

Plan, design and construction of the sanitary sewerage system major capital program.

Strategic Priorities

For 2021 some of the key priorities and planned actions focus on:

Environmental Sustainability



Accelerate the adoption of green technologies and clean energy solutions through strategic partnerships and investment with internal and external partners and academic institutions.



Continuation of Integrated Resource Recovery studies at water pollution control plants; implement programs to reduce emissions and use energy efficiently; and explore other energy resource recovery initiatives.



Protect, preserve and restore the natural environment including greenspaces, waterways, parks, trails, and farmlands by planning and implementing critical sanitary sewerage infrastructure identified through asset management planning.



Demonstrate leadership in sustainability and climate change action by mitigating the environmental impacts of projects and incorporating strategies in the construction and rehabilitation of Regional infrastructure and facilities by incorporating climate-friendly strategies.



Revitalize existing neighbourhoods and build complete communities that are walkable, well-connected, and have a mix of attainable housing through monitoring and assessing excess capacity available in existing sanitary sewer systems.

Strategic Priorities Continued

Economic Prosperity



Position Durham Region as the location of choice for business by servicing strategic employment lands; streamlining review and payment processes; and planning for growth.



Provide a supportive environment for agriculture and agri-food industries by maintaining beneficial re-use of municipal wastewater solids (biosolids) on agricultural lands; and working collaboratively with industry to promote growth while maintaining a sewer-use program.

Service Excellence



Optimize resources and partnerships to deliver exceptional quality services and value by continuing a “customer first” focus.



Collaborate for a seamless service experience by seeking new partnerships with local municipalities; developing a coordinated complaints log for Works to ultimately roll into myDurham311; and maintaining and expanding the service request system for addressing external concerns through a single point of contact.



Demonstrate commitment to continuous quality improvement and transparency through public engagement on all major public works initiatives in real time.

Strategic Priorities Continued



Leverage the Enterprise Maintenance Management System for a coordinated complaints log and tool for public requests for work; modernizing the review and approval of development engineering submissions through the PlanIT platform; and modernizing data management and automation within the water supply and water pollution control plants.

Key Targets for 2021

Water Supply

- Maintain and operate 2,615 kilometres of watermains - 2% system growth over 2020
- Maintain and operate 27,463 valves - 1% growth over 2020
- Inspect and maintain 16,291 fire hydrants - 1% increase over 2020 inventory
- 182,243 water supply connections maintained - 1% system growth over 2020
- Treat 68,456 megalitres of water - 4% increase over projections for 2020

Sanitary Sewerage

- 2,206 kilometres of gravity sanitary sewer maintained and operated - 1.5% system growth over 2020
- 64 kilometres of sanitary sewerage forcemains maintained and operated - consistent with 2020 inventory
- 95 siphons representing 9.5 kilometres of sanitary sewer maintained and operated
- 178,341 sanitary sewer connections maintained - 1% system growth over 2020
- Treat a total of 189,214 megalitres of sanitary sewerage, with 135,035 megalitres flowing through Duffin Creek Water Pollution Control Plant
- Analyze 70,000 samples for 250,000 tests at the Regional Environmental Laboratory - consistent with 2020 levels

Financial Details: Summary by Account (\$,000's)

	Durham Budget 2021			Variance	
	2020 Estimated Actuals	2020 Approved Budget	2021 Proposed Budget	\$	%
Expenses					
Operating Expenses					
Personel Expenses	57,400	60,230	63,541		
Personnel Related	1,369	2,269	2,168		
Communications	1,043	1,151	1,106		
Supplies	8,093	7,962	7,775		
Utilities	18,597	19,839	20,850		
Chemicals	7,007	7,205	8,126		
Computer Maintenance & Operations	780	744	893		
Materials & Services	7,906	7,755	8,180		
Buildings & Grounds Operations	4,995	4,136	4,164		
Equipment Maintenance & Repairs	3,640	4,003	4,095		
Vehicle Operations	3,932	3,907	3,854		
Professional Services	1,567	1,878	1,839		
Contracted Services	4,492	3,552	4,539		
Leased Facilities Expenses	39	41	43		
Financial Expenses	2,529	2,530	2,689		
Property Taxes	5,243	5,175	5,206		
Minor Assets & Equipment	638	638	12		
Major Repairs & Renovations	2,473	2,473	1,601		
Contribution to Reserves / Reserve Funds	525	525	250		
Headquarters Shared Costs	2,200	2,200	2,250		
Operating Expenses Subtotal	134,468	138,213	143,181	4,968	3.6%

Financial Details: Summary by Account (\$,000's) Continued

 Durham Budget 2021	2020 Estimated Actuals	2020 Approved Budget	2021 Proposed Budget	Variance	
				\$	%
Internal Transfers & Recoveries					
NextGen Fees	46	46	46		
Communications Charge	344	344	357		
Corporate IT Charge	321	321	321		
Corporate HR Charge	160	160	160		
Health Charge	-	-	25		
Works-General Administration Charge	2,989	2,989	3,074		
Works-Facilities Management Charge	1,379	1,439	1,432		
Recovery - Ajax WSP - Labour	(8)	(8)	(3)		
Recovery - Works-General Tax	(338)	(338)	(338)		
Recovery - Regional Environmental Lab	(93)	(93)	(93)		
Internal Transfers & Recoveries Subtotal	4,800	4,860	4,981	121	2.5%
Gross Operating Expenses	139,268	143,073	148,162	5,089	3.6%
Capital Expenses					
New	3,215	3,215	1,853		
Replacement	8,634	8,633	7,521		
Major Capital	145,159	145,159	168,755		
Capital Expenses Subtotal	157,008	157,007	178,129	21,122	13.5%
Total Expenses	296,276	300,080	326,291	26,211	8.7%

Financial Details: Summary by Account (\$,000's) Continued

	Durham Budget 2021			Variance	
	2020 Estimated Actuals	2020 Approved Budget	2021 Proposed Budget	\$	%
Revenues and Financing					
Operating Revenue					
Fees & Service Charges	(4,742)	(5,400)	(5,906)		
Sale of Publications	(10)	(23)	(23)		
Rents	(39)	(45)	(47)		
Sundry Revenue	(1,002)	(1,312)	(1,273)		
Revenue from Municipalities	(1,096)	(1,746)	(1,418)		
Recovery from York	(27,890)	(28,613)	(29,583)		
Recovery DRPS-Maple Grove Pumping Station	(5)	(5)	(6)		
Operating Revenue Subtotal	(34,784)	(37,144)	(38,256)	(1,112)	(3.0%)

Financial Details: Summary by Account (\$,000's) Continued

 Durham Budget 2021	2020 Estimated Actuals	2020 Approved Budget	2021 Proposed Budget	Variance	
				\$	%
Capital Financing					
Sewer Residential DC	(20,012)	(20,012)	(22,581)		
Sewer Commercial DC	(1,275)	(1,275)	(1,456)		
Sewer Industrial DC	-	-	(1,707)		
Water Residential DC	(20,824)	(20,823)	(26,536)		
Water Commercial DC	(678)	(678)	(714)		
Water Industrial DC	-	-	(1,460)		
Environmental Lab RF	-	-	(160)		
Water Rate Stabilization RF	(702)	(702)	-		
Sewer Rate Stabilization RF	(702)	(702)	-		
Servicing of Employment Lands RF	-	-	(1,218)		
Asset Management RF	(13,880)	(13,880)	(14,535)		
Recovery From York	(17,831)	(17,831)	(15,672)		
Developer Contribution	(7,540)	(7,540)	(14,792)		
Federal Grant	-	-	(15)		
Petition Recoverable	(1,864)	(1,864)	-		
Capital Financing Subtotal	(85,308)	(85,307)	(100,846)	(15,539)	(18.2%)
Total Revenues and Financing	(120,092)	(122,451)	(139,102)	(16,651)	(13.6%)
Works - Water Supply and Sanitary Sewerage User Rate Requirement	176,184	177,629	187,189	9,560	5.4%

* note that RF refers to Reserve Fund

Financial Details: Summary by Program (\$,000's)



Durham Budget 2021

	2020 Estimated Actuals	2020 Approved Budgets					2021 Proposed Budgets					Variance	
		Operating Expenses	Gross Capital	Subsidy Funding	Other Funding	Approved Budget	Operating Expenses	Gross Capital	Subsidy Funding	Other Funding	Proposed Budget	\$	%
Works - Water Supply													
1 Watermain Cleaning and Repairs	2,929	3,493	-	-	-	3,493	3,691	-	-	-	3,691	198	
2 Valves and Hydrants	2,751	2,991	-	-	(576)	2,415	3,042	-	-	(767)	2,275	(140)	
3 Water Connections	4,191	4,186	-	-	(462)	3,724	4,281	-	-	(489)	3,792	68	
4 Water Meter Repair and Testing	398	542	-	-	(127)	415	562	-	-	(131)	431	16	
5 Depot Operations	6,356	5,824	593	-	(84)	6,333	6,163	40	-	(141)	6,062	(271)	
6 Water Supply Plants - Plants East	3,542	3,151	296	-	(89)	3,358	3,368	235	-	(89)	3,514	156	
7 Water Supply Plants - Plants Central	13,783	14,131	303	-	(103)	14,331	14,226	2,348	-	(103)	16,471	2,140	
8 Water Supply Plants - Plants North	3,283	3,080	598	-	(100)	3,578	2,882	100	-	(100)	2,882	(696)	
9 Sun Valley Co-Operative Water System	-	29	-	-	(29)	-	29	-	-	(29)	-	-	
10 SCADA Systems	14	-	14	-	-	14	-	200	-	-	200	186	
11 Engineering and Staff Support	6,314	7,455	197	-	(621)	7,031	7,835	335	-	(617)	7,553	522	
12 Facilities Management	10,049	7,615	2,686	-	(731)	9,570	7,514	1,632	-	(29)	9,117	(453)	
13 Administration	317	319	-	-	-	319	335	-	-	-	335	16	
14 Headquarters Shared Cost - Works - Water Supply Portion	1,100	1,100	-	-	-	1,100	1,125	-	-	-	1,125	25	
15 Construction of Municipal Services	39,844	-	76,209	-	(36,364)	39,845	-	76,337	-	(34,445)	41,892	2,047	
Works - Water Supply Subtotal	94,871	53,916	80,896	-	(39,286)	95,526	55,053	81,227	-	(36,940)	99,340	3,814	4.0%

Financial Details: Summary by Program (\$,000's) Continued

		2020 Estimated Actuals	2020 Approved Budgets				Approved Budget	2021 Proposed Budgets				Variance		
			Operating Expenses	Gross Capital	Subsidy Funding	Other Funding		Operating Expenses	Gross Capital	Subsidy Funding	Other Funding	Proposed Budget	\$	%
Works - Sanitary Sewerage														
1	Cleaning, Repairs and Maintenance Holes	1,864	2,034	-	-	-	2,034	2,143	-	-	-	2,143	109	
2	Sewer Connections	2,156	3,254	-	-	(755)	2,499	3,418	-	-	(953)	2,465	(34)	
3	Depot Operations	3,613	3,228	470	-	(21)	3,677	3,407	40	-	(32)	3,415	(262)	
4	WPCPs and Pumping Stations	24,934	23,999	1,227	-	(243)	24,983	25,496	1,303	-	(264)	26,535	1,552	
5	Duffin Creek WPCP													
	(a) Management Committee	969	2,846	-	-	(1,880)	966	2,796	-	-	(1,840)	956	(10)	
	(b) Duffin Creek Plant	4,833	28,967	947	-	(24,772)	5,142	30,065	1,587	-	(26,158)	5,494	352	
	(c) Duffin Creek Tech Support	42	218	-	-	(177)	41	226	-	-	(184)	42	1	
	(d) Duffin Creek Administration	537	2,846	-	-	(2,309)	537	2,931	-	-	(2,384)	547	10	
	(e) Duffin Creek Facility	429	2,319	-	-	(1,882)	437	2,025	180	(15)	(1,775)	415	(22)	
	Total Duffin Creek WPCP	6,810	37,196	947	-	(31,020)	7,123	38,043	1,767	(15)	(32,341)	7,454	331	
6	Regional Environmental Laboratory	818	2,864	586	-	(2,989)	461	3,083	196	-	(2,819)	460	(1)	
7	Engineering and Staff Support	6,284	6,886	542	-	(930)	6,498	7,461	582	-	(895)	7,148	650	
8	Facilities Management	10,973	8,274	3,389	-	(708)	10,955	8,595	596	-	(5)	9,186	(1,769)	
9	Administration	311	322	-	-	-	322	338	-	-	-	338	16	
10	Headquarters Shared Cost -													
	Works - Sanitary Sewerage Portion	1,100	1,100	-	-	-	1,100	1,125	-	-	-	1,125	25	
11	Construction of Municipal Services	22,450	-	68,950	-	(46,499)	22,451	-	92,418	-	(64,838)	27,580	5,129	
Works - Sanitary Sewerage Subtotal		81,313	89,157	76,111	-	(83,165)	82,103	93,109	96,902	(15)	(102,147)	87,849	5,746	7.0%
Total Works - Water Supply and Sanitary Sewerage		176,184	143,073	157,007	-	(122,451)	177,629	148,162	178,129	(15)	(139,087)	187,189	9,560	5.4%

Financial Details: Summary of Capital (\$,000's)

 Durham Budget 2021	2020	2021	Forecast					Forecast
	Approved Budget	Proposed Budget	2022	2023	2024	2025	2026-2030	Total
Water Supply								
Capital Expenditures								
Linear Infrastructure	33,588	37,167	90,434	75,928	38,480	51,355	246,671	502,868
Building & Structures	34,557	15,556	113,893	74,432	277,338	61,184	134,842	661,689
Machinery & Equipment	8,199	24,075	22,409	6,174	7,262	2,638	7,318	45,801
Information Technology Infrastructure	529	380	1,061	5,650	459	5,420	2,295	14,885
Vehicles	616	244	350	38	18	19	87	512
Furniture & Fixtures	21	130	34	22	23	23	64	166
Allowances & Other Provisions	3,387	3,675	7,174	4,475	3,298	4,260	22,440	41,647
Capital Expenditure Subtotal	80,897	81,227	235,355	166,719	326,878	124,899	413,717	1,267,568
Capital Financing								
Water Residential DC	20,824	26,536	130,364	62,488	33,438	23,981	85,618	335,889
Water Commercial DC	678	714	3,937	2,251	829	695	2,562	10,274
Water Industrial DC	-	1,459	8,804	1,121	487	987	3,859	15,258
Reserve Fund - Asset Management	5,234	5,486	5,623	10,663	5,907	6,055	32,623	60,871
Reserve Fund - Water Rate Stabilization	702	-	-	13,598	53,049	-	19,508	86,155
Reserve Fund - Servicing of Employment Lands	-	250	-	-	-	-	-	-
Recovery From York	225	-	-	-	-	-	-	-
Petition Recoverable	1,864	-	-	-	-	-	-	-
Debentures - DC Funded	-	-	-	9,242	126,002	28,601	40,007	203,852
Other Financing	7,540	-	7,000	-	57,120	209	3,973	68,302
User Rate	43,830	46,782	79,627	67,356	50,046	64,371	225,567	486,967
Capital Financing Subtotal	80,897	81,227	235,355	166,719	326,878	124,899	413,717	1,267,568
Total Capital Water Supply	80,897	81,227	235,355	166,719	326,878	124,899	413,717	1,267,568

Financial Details: Summary of Capital (\$,000's) Continued

 Durham Budget 2021	2020 Approved Budget	2021 Proposed Budget	Forecast					Forecast Total
			2022	2023	2024	2025	2026-2030	
Sanitary Sewerage								
Capital Expenditures								
Linear Infrastructure	24,111	46,991	157,180	60,962	60,760	83,973	341,755	704,630
Building & Structures	9,941	16,921	48,090	91,737	62,925	27,183	444,415	674,350
Machinery & Equipment	36,847	27,116	74,821	61,939	32,932	7,180	95,791	272,663
Information Technology Infrastructure	715	1,828	2,483	1,724	2,075	294	2,255	8,831
Vehicles	551	44	256	38	18	19	87	418
Furniture & Fixtures	21	127	34	22	16	16	64	152
Allowances and Other Provisions	3,925	3,875	5,700	3,575	4,175	4,075	20,125	37,650
Capital Expenditure Subtotal	76,111	96,902	288,564	219,997	162,901	122,740	904,492	1,698,694
Capital Financing								
Sewer Residential DC	20,012	22,581	31,606	34,644	19,576	15,651	62,706	164,183
Sewer Commercial DC	1,275	1,456	2,771	1,800	1,505	1,344	6,012	13,432
Sewer Industrial DC	-	1,707	12,237	1,163	1,191	1,240	4,116	19,947
Reserve Fund - Environmental Lab	-	160	-	-	-	-	-	-
Reserve Fund - Sewer Rate Stabilization	702	-	21,130	26,968	16,763	-	65,157	130,018
Reserve Fund - Servicing of Employment Lands	-	968	-	-	-	-	-	-
Reserve Fund - Asset Management	8,646	9,049	21,575	9,507	9,745	9,988	53,815	104,630
Recovery From York	17,606	15,672	114,506	49,869	23,811	17,622	240,456	446,264
Developer Contribution	-	14,792	-	-	-	-	-	-
Federal Grant	-	15	-	-	-	-	-	-
Debentures - DC Funded	-	-	48,843	53,939	32,771	-	122,995	258,548
User Rate	27,870	30,502	35,896	42,107	57,539	76,895	349,235	561,672
Capital Financing Subtotal	76,111	96,902	288,564	219,997	162,901	122,740	904,492	1,698,694
Total Capital Sanitary Sewerage	76,111	96,902	288,564	219,997	162,901	122,740	904,492	1,698,694
Total Capital Water Supply and Sanitary Sewerage	157,008	178,129	523,919	386,716	489,779	247,639	1,318,209	2,966,262

Details of Budget Changes

	2021 Impact (\$ 000's)
Strategic Investments – Water Supply	
New positions – details of the 5.047 FTEs are provided in Staffing Details	425
Part-time salaries to deliver priority facility projects	48
Septic inspections to meet regulation requirements. These inspections are required once every five years	25
Professional services to complete research and compilation of the “Durham Standard”, a guidance document for the construction and renovation of Regional facilities	12
Janitorial increases related to increased sanitation measures	43
Hardware software maintenance for the Builterra software and component content management system software used in construction management	27
Additional provision to address increasing breakdown and repair costs for aging equipment	50
Net increase in capital investment – see detailed project listing in Appendix A	2,953
Net decrease in major repairs and renovations	(713)
Strategic Investments – Water Supply Subtotal	2,870
Base Adjustments – Water Supply	2021 Impact (\$ 000's)
Economic increase	860
Annualization of 4.371 FTEs approved in the 2020 budget	169
Inflationary increases	489
Removal of one-time 2020 items	(174)
Line-by-line review savings	(400)
Base Adjustments – Water Supply Subtotal	944
Net Changes - Water Supply	3,814

Details of Budget Changes Continued

Strategic Investments – Sanitary Sewerage	2021 Impact (\$ 000's)
New positions – details of the 2.909 FTEs are provided in Staffing Details	288
Part-time salary increases in the Corbett Creek WPCP to support the eRIS project implementation	44
Part-time salaries to deliver priority facility projects	68
Professional services to complete research and compilation of the “Durham Standard”, a guidance document for the construction and renovation of Regional facilities	38
Janitorial increases related to increased sanitation measures	61
Hardware software maintenance for the Builterra software and component content management system software used in construction management	16
Revenue decreases due to reduced billing volumes related to various activities	36
Technical training in depot operations to remain compliant with provincial regulatory guidelines	12
Additional provision to address increasing breakdown and repair costs for aging equipment	50
Coagulant chemical increase as more coagulant is required as part of improved plant processes at Corbett Creek WPCP	39
Increase in chemicals and water consumption due to completion of construction work and the implementation of changes to plant processes at Port Darlington WPCP	69
Sludge haulage and disposal increase based on review of historical actuals, end of construction at various plants	1,205
Net increase in capital investment – see detailed project listing in Appendix B	2,633
Net decrease in major repairs and renovations	(786)
Strategic Investments – Sanitary Sewerage Subtotal	3,773

Details of Budget Changes Continued

Base Adjustments – Sanitary Sewerage	2021 Impact (\$ 000's)
Economic increase	1,246
Annualization of 2.230 FTEs approved in the 2020 budget	70
Inflationary increases	788
Removal of one-time 2020 items	(165)
Line-by-line review savings	(86)
Miscellaneous adjustments	120
Base Adjustments – Sanitary Sewerage Subtotal	1,973
Net Changes – Sanitary Sewerage	5,746
Net Changes Works - Water Supply and Sanitary Sewerage	9,560

Staffing Details

Water Supply	Full Time Equivalents (FTE's)
2020 Approved Complement	<u>189.990</u>
Position Transfer	
Custodian position transferred to Regional Headquarters	(0.381)
Total Position Transfer	<u>(0.381)</u>
Proposed New Positions	
Maintenance Operators – to support the implementation of the new Integrated Water SCADA system, located at the central control system at the Ajax WSP from which all the water systems throughout the Region will be monitored and controlled 24/7/365.	2.000
Project Manager - responsible for the delivery of all employment lands servicing projects. This position received pre-budget approval by Regional Council through Report 2020-COW-23. (Note: position is shared with Sanitary Sewerage)	0.530
Project Supervisor – to support the review and coordination of development approvals. (Note: these two positions are shared with Sanitary Sewerage)	1.060
Project Supervisor – to support the design of environmental services. (Note: position is shared with Sanitary Sewerage)	0.530
Senior Project Coordinator - to support design reviews, tenders and supervision of capital construction budgets and deadlines. (Note: position is shared with Sanitary Sewerage and Works General Tax)	0.385
Project Manager - to provide leadership to capital facility projects including new builds, state of good repair, expansions and renovations. (Note: position is shared with Sanitary Sewerage, Works General Tax and Waste Management)	0.271
Works Technician 4 – to support the delivery of capital facility projects including new builds, state of good repair, expansions and renovations. (Note: position is shared with Sanitary Sewerage, Works General Tax and Waste Management)	0.271
Total Proposed New Positions	<u>5.047</u>
Water Supply Subtotal	<u>194.656</u>

Staffing Details Continued

Sanitary Sewerage	Full Time Equivalents (FTE's)
2020 Approved Complement	268.195
Position Transfer	
Custodian position transferred to Regional Headquarters.	(0.566)
Total Position Transfer	<u>(0.566)</u>
Proposed New Positions	
Project Manager - responsible for the delivery of all servicing of employment lands projects. This position received pre-budget approval by Regional Council through Report 2020-COW-23. (Note: position is shared with Water Supply)	0.470
Project Supervisor – to support the review and coordination of development approvals. (Note: these two positions are shared with Water Supply)	0.940
Project Supervisor – to support the design of environmental services. (Note: position is shared with Water Supply)	0.470
Senior Project Coordinator - to support design reviews, tenders and supervision of capital construction budgets and deadlines. (Note: position is shared with Water Supply and Works General Tax)	0.257
Project Manager - to provide leadership to capital facility projects including new builds, state of good repair, expansions and renovations. (Note: position is shared with Water Supply, Works General Tax and Waste Management)	0.386
Works Technician 4 – to support the delivery of capital facility projects including new builds, state of good repair, expansions and renovations. (Note: position is shared with Water Supply, Works General Tax and Waste Management)	0.386
Total Proposed New Positions	<u>2.909</u>
Sanitary Sewerage Subtotal	270.538
Total Complement Works - Water Supply and Sanitary Sewerage	465.194

Looking Forward

Water supply and sanitary sewerage systems support residents, businesses and institutions by providing public infrastructure, reliable service and expertise so that healthy and sustainable communities thrive. To support these commitments the Region continues to modernize operations through a variety of initiatives including:

- the implementation of the Enterprise Maintenance Management System resulting in a move from paper-based information processing to a comprehensive work management system, capturing more accurate maintenance activities and information;
- the utilization of technology such as drones, sonar and submersible cameras for inspections and assessments; and innovative mapping technology;
- implementation of recommendations from the Public Facing Service Modernization project, including web-based forms and payment options;
- continued enhancements to the online permitting system including adding additional permits to the system;
- active participation in the Low Carbon Fleet Strategy development and the development of the Corporate Climate Change Strategic Framework; and
- progress towards the establishment of the Durham Building Standard, providing guidelines including energy efficiency, greenhouse gas emission reductions and employee inclusion for all projects related to the construction or renovation/retrofit of Regional facilities.

The Region will continue to leverage long-term financial planning to chart a response to some of the significant challenges ahead which include: leading infrastructure renewal (in alignment with the Region's Asset Management Plan and prudent asset management practices), preparing for projected Regional growth and new development which will increase demands for Regional services, and major plant expansions and infrastructure construction projects (including the servicing of employment lands and infrastructure constructed to service developments in Seaton, West Whitby, and North Oshawa).

In alignment with Regional Council's commitment to confront climate change, a core element in the design and construction of Regional infrastructure is sustainability - using best practices and innovations developed through in-house research and partnerships with academia. The Region will continue to identify and evaluate potential investments in technology and systems – in partnership with local municipalities – to promote sustainable infrastructure and mitigate climate impacts.

Appendix A: Detailed 2021 Water Supply Capital Projects Listing

		Quantity	New / Replacement	2021 Proposed Financing								2021 Proposed Budget	Approved Funding Prior to 2021	Proposed 2022-2030	Total Proposed	
Other	Reserve/ Reserve Funds			Industrial DCs	Institutional DCs	Commercial DCs	New Residential DCs	Subsidy /Grant	Debenture	User Rate						
Water Supply System																
Linear Infrastructure																
1	Liberty St. from Longworth Ave. to Concession Rd. 3, Bowmanville	-	-	-	-	-	-	-	-	-	-	105	105	-	-	105
2	Bayly St. from Westney Rd. to Harwood Ave., Ajax	-	-	-	-	-	-	-	-	-	-	200	200	-	1,670	1,870
3	Victoria St. from Thicksen Rd. to South Blair St., Whitby	-	-	-	-	-	-	-	-	-	-	300	300	-	-	300
4	Rossland Rd. from Park Rd. to Simcoe St., Oshawa	-	-	-	-	-	-	-	-	-	-	200	200	-	920	1,120
5	Bowmanville Ave. from Highway No. 2 to Stevens Rd., Bowmanville	-	-	-	-	-	-	-	-	-	-	205	205	25	-	230
6	Brock St. from 300 m South of Manning Rd. to Rossland Rd., Whitby	-	-	-	-	-	-	-	-	-	-	215	215	1,115	-	1,330
7	Area Municipality Road Programs - Replacement of deficient watermains and/or construction of required works in conjunction with the Town of Ajax road program.	-	-	-	-	-	-	-	-	-	-	1,250	1,250	-	3,700	4,950
8	Area Municipality Road Programs - Replacement of deficient watermains and/or construction of required works in conjunction with the City of Oshawa road program.	-	-	-	-	-	-	-	-	-	-	1,774	1,774	-	9,900	11,674
9	Area Municipality Road Programs - Replacement of deficient watermains and/or construction of required works in conjunction with the Municipality of Clarington road program.	-	-	-	-	-	-	-	-	-	-	545	545	-	3,330	3,875
10	Area Municipality Road Programs - Replacement of deficient watermains and/or construction of required works in conjunction with the Township of Scugog road program.	-	-	-	-	-	-	-	-	-	-	50	50	-	1,170	1,220
11	Allowance for unknown Water Supply requirements in conjunction with area municipality road programs in various locations	-	-	-	-	-	-	-	-	-	-	200	200	-	1,800	2,000

Appendix A: Detailed 2021 Water Supply Capital Projects Listing

		Quantity	New / Replacement	2021 Proposed Financing								2021 Proposed Budget	Approved Funding Prior to 2021	Proposed 2022-2030	Total Proposed	
Other	Reserve/ Reserve Funds			Industrial DCs	Institutional DCs	Commercial DCs	New Residential DCs	Subsidy /Grant	Debenture	User Rate						
12	Watermain replacement in conjunction with the MTO's bridge works at Simcoe St. and Albert St	-	-	-	-	-	-	-	-	-	-	400	400	2,600	-	3,000
13	Water works to rectify identified system deficiencies independent of road programs in various locations (4 Projects)	-	-	-	-	-	-	-	-	-	-	450	450	-	-	450
14	Rehabilitation of existing watermains in various locations.	-	-	-	-	-	-	-	-	-	-	2,762	2,762	-	35,000	37,762
15	Replacement of a watermain on Glenanna Rd. from The Esplanade to Pickering Parkway, Pickering	-	-	-	-	-	-	-	-	-	-	770	770	-	-	770
16	Replacement of a watermain on Bayly St. from Westshore Blvd. to Mattins Rd., Pickering	-	-	-	-	-	-	-	-	-	-	350	350	-	2,450	2,800
17	Replacement of a watermain on Pickering Beach Rd. from Foord Rd. to Hewitt Cres., Ajax	-	-	-	-	-	-	-	-	-	-	150	150	590	-	740
18	Replacement of a watermain on Clements Rd. E. from Burcher Rd. E. to Dryer Dr., Ajax	-	-	-	200	-	-	-	-	-	-	-	200	-	1,300	1,500
19	Replacement of watermain on R.R. 26 (Thickson Rd. S.) from 84 m north of William Smith Dr. to 60 m south of William Smith Dr., Whitby	-	-	-	140	-	-	-	-	-	-	-	140	220	-	360
20	Replacement of watermain on High St. from Mary St. to Walnut St., Whitby	-	-	-	465	-	-	-	-	-	-	-	465	-	-	465
21	Replacement of watermain on Euclid St. from Dundas St. to 75 m north of John St., Whitby	-	-	-	180	-	-	-	-	-	-	-	180	-	-	180
22	Replacement of watermain on R.R. 53 (Harmony Rd.) from Adelaide Ave. to 200 m north of Adelaide Ave., Oshawa	-	-	-	-	-	-	-	-	-	-	140	140	310	-	450
23	Replacement of a watermain on Olive Ave from Simcoe St. to Drew St., Oshawa	-	-	-	-	-	-	-	-	-	-	300	300	1,350	-	1,650
24	Replacement of watermain on Marland Ave. from Grenfell St. to Park Rd., Oshawa	-	-	-	-	-	-	-	-	-	-	200	200	530	-	730
25	Replacement of a watermain on Veterans Rd. from R.R. 35 (Wilson Rd.) to R.R. 56 (Farewell St.), Oshawa	-	-	-	200	-	-	-	-	-	-	-	200	-	525	725

Appendix A: Detailed 2021 Water Supply Capital Projects Listing

		Quantity	New / Replacement	2021 Proposed Financing								2021 Proposed Budget	Approved Funding Prior to 2021	Proposed 2022-2030	Total Proposed	
Other	Reserve/ Reserve Funds			Industrial DCs	Institutional DCs	Commercial DCs	New Residential DCs	Subsidy /Grant	Debenture	User Rate						
26	Replacement of feedermain on Ritson Rd. from Oshawa Water Supply Plant Valve Chamber to Kawartha Ave., Oshawa	-	-	-	-	-	-	-	-	-	-	400	400	500	6,700	7,600
27	Replacement of a watermain on Ritson Rd. S. from Kawartha Ave. to Simcoe St. S., Oshawa	-	-	-	-	-	-	-	-	-	-	200	200	150	2,450	2,800
28	Replacement of a watermain on Ritson Rd. from Annis St. to Conant St., Oshawa	-	-	-	-	-	-	-	-	-	-	100	100	-	220	320
29	Replacement of a watermain on Douglas St. from Conant St. to Wolfe St., Oshawa	-	-	-	-	-	-	-	-	-	-	100	100	-	250	350
30	Replacement of watermain on First Ave. from Brock St. to Dominion St., Uxbridge	-	-	-	100	-	-	-	-	-	-	-	100	-	200	300
31	Replacement of watermain on Rosa St. from Paxton St. to dead-end, Port Perry	-	-	-	100	-	-	-	-	-	-	-	100	-	600	700
32	Replacement of watermain on Bay St. from Old Simcoe St. to Bigelow St., Port Perry	-	-	-	100	-	-	-	-	-	-	-	100	-	300	400
33	Replacement of watermain on Jane St. from Ida St. to 220 m north of Ida St., Sunderland	-	-	-	100	-	-	-	-	-	-	-	100	-	370	470
34	Replacement of watermain on Maple St. W. from River St. to dead-end, Sunderland	-	-	-	135	-	-	-	-	-	-	-	135	-	-	135
35	Replacement of watermain on Cameron St. from 215 m east of McRae St. to 750 m west of R.R. 2 (Simcoe St.), Cannington	-	-	-	281	-	-	-	-	-	-	-	281	-	529	810
36	Watermain on Concession Rd. 5 from Cedar Beach Rd. to 850 m east of Cedar Beach Rd., Beaverton	-	-	-	-	-	-	-	-	-	-	660	660	1,100	-	1,760
37	Replacement of watermain on Simcoe St. from Union St. to 480 m south of Union St., Beaverton	-	-	-	730	-	-	-	-	-	-	-	730	100	-	830
38	Replacement of watermain on Centre St. from Mara Rd. to James St., Beaverton	-	-	-	100	-	-	-	-	-	-	-	100	-	410	510
39	Replacement of watermain on Bay St. from Union St. to Osborne St., Beaverton	-	-	-	565	-	-	-	-	-	-	-	565	80	-	645
40	Replacement of watermain on Bay St. from Osborne St. to Mill St., Beaverton	-	-	-	340	-	-	-	-	-	-	-	340	60	-	400
41	Replacement of watermain on Church St. from Osborne St. to Mill St., Beaverton	-	-	-	500	-	-	-	-	-	-	-	500	70	-	570
42	Water meter installation and replacement and automatic meter reading deployment	-	-	-	-	-	-	-	-	-	-	2,000	2,000	-	46,800	48,800

Appendix A: Detailed 2021 Water Supply Capital Projects Listing

 Durham Budget 2021		Quantity	New / Replacement	2021 Proposed Financing								2021 Proposed Budget	Approved Funding Prior to 2021	Proposed 2022-2030	Total Proposed	
Other	Reserve/ Reserve Funds			Industrial DCs	Institutional DCs	Commercial DCs	New Residential DCs	Subsidy /Grant	Debenture	User Rate						
43	Depots - Replacement of polybutylene service connections in various locations	-	-	-	-	-	-	-	-	-	-	100	100	-	-	100
44	Replacement of lead service connection in various locations	-	-	-	-	-	-	-	-	-	-	500	500	-	29,000	29,500
45	Replacement of valves	-	-	-	-	-	-	-	-	-	-	360	360	-	6,350	6,710
46	Replacement of hydrants	-	-	-	-	-	-	-	-	-	-	200	200	-	3,600	3,800
47	Replacement of watermain on Mill St. from Church St. to Bay St., Beaverton	-	-	-	325	-	-	-	-	-	-	-	325	60	-	385
48	Replacement of watermain on Bay St. from Mill St. to Main St., Beaverton	-	-	-	525	-	-	-	-	-	-	-	525	70	-	595
49	Replacement of watermain on James St. from Main St. to Centre St./Highland Crt., Beaverton	-	-	-	100	-	-	-	-	-	-	-	100	-	240	340
50	Zone 2 feedermain on Taunton Rd. from Westney Rd. to 200 m west of Harwood Ave., Ajax	-	-	-	-	30	-	7	263	-	-	-	300	-	2,700	3,000
51	Zone 2 feedermain on William Jackson Dr. & Taunton Rd. from Earl Grey Ave. to Ravenscroft Rd., Pickering/ Ajax	-	-	-	-	51	1	11	438	-	-	-	501	400	5,500	6,401
52	Zone 1 feedermain from Whitby Water Supply Plant to Thornton Rd., Whitby/Oshawa	-	-	-	-	455	5	99	3,942	-	-	-	4,501	4,600	40,700	49,801
53	Zone 3 feedermain on Conlin Rd. from Anderson St. to Garrard Rd., Whitby	-	-	-	-	200	2	44	1,734	-	-	-	1,980	3,455	-	5,435
54	Watermain on Thornton Rd. from Conlin Rd. within the Northwood Employment Area, Oshawa	-	-	-	-	26	-	6	228	-	-	-	260	-	1,500	1,760
55	Zone 4 feedermain on Conlin Rd. from Harmony Rd. to Grandview St., Oshawa	-	-	-	-	168	2	37	1,454	-	-	-	1,661	-	-	1,661
56	Zone 3 feedermain on Conlin Rd. from Ritson Rd. to Wilson Rd., Oshawa	-	-	-	-	67	1	15	578	-	-	-	661	300	3,600	4,561
57	Zone 4 feedermain on Harmony Rd. from Conlin Rd. to New Zone 4 Water Pumping Station, Oshawa	-	-	-	-	490	5	103	4,249	-	-	-	4,847	-	-	4,847
58	Zone 4 feedermain from Proposed Zone 4 Water Pumping Station at Harmony Reservoir to Proposed Oshawa Zone 4 Reservoir, Oshawa	-	-	-	-	121	1	26	1,051	-	-	-	1,199	1,000	14,900	17,099

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		Quantity	New / Replacement	2021 Proposed Financing								2021 Proposed Budget	Approved Funding Prior to 2021	Proposed 2022-2030	Total Proposed	
				Other	Reserve/ Reserve Funds	Industrial DCs	Institutional DCs	Commercial DCs	New Residential DCs	Subsidy /Grant	Debenture					User Rate
59	Zone 1 feedermain on Baseline Rd. from Courtice Rd. to Trulls Rd. and Trulls Rd. from Baseline Rd. to Bloor St.	-	-	-	-	64	1	14	556	-	-	-	635	5,169	-	5,804
60	Watermain on Concession Rd. 5 to service the westerly portion of the Beaverton Avenue Employment Area A, Brock **	-	-	-	250	-	-	-	-	-	-	-	250	-	2,125	2,375
Linear Infrastructure Subtotal				-	5,436	1,672	18	362	14,493	-	-	15,186	37,167	23,854	230,809	291,830
Building and Structures																
61	Garrard Rd. Zone 3 Water Pumping Station - upgrades, Whitby	-	-	-	-	15	-	3	131	-	-	-	149	260	1,500	1,909
62	Proposed Zone 4 Pumping Station at the Thickson Rd. Reservoir, Whitby	-	-	-	-	88	1	19	759	-	-	133	1,000	850	6,200	8,050
63	Proposed Oshawa Zone 4 Water Storage Facility - 16 ML, Oshawa	-	-	-	-	193	2	42	1,672	-	-	391	2,300	2,932	11,300	16,532
64	Hortop Water Pumping Station - pumping station replacement, Oshawa	-	-	-	-	-	-	-	-	-	-	1,000	1,000	100	9,700	10,800
65	Concession St. Water Pumping Station Expansion - increasing pump capacity	-	-	-	-	515	5	112	4,444	-	-	324	5,400	600	-	6,000
66	Proposed Zone 2 Pumping Station at the Zone 1 Reservoir	-	-	-	-	95	1	21	823	-	-	60	1,000	550	7,000	8,550
67	Newcastle Water Supply Plant - demolition of plant No. 1	-	-	-	-	58	1	13	125	-	-	104	301	-	3,000	3,301
68	Proposed Zone 1 Reservoir 11 ML	-	-	-	-	76	1	17	663	-	-	43	800	3,408	8,900	13,108
69	Proposed Zone 2 Water Pumping Station	-	-	-	-	86	1	19	752	-	-	142	1,000	1,000	6,200	8,200
70	New Well and Pumphouse, Uxbridge	-	-	-	-	295	4	64	637	-	-	-	1,000	500	3,950	5,450
71	Cannington WSS new well and pumphouse, Brock	-	-	-	-	2	-	1	6	-	-	591	600	6,750	-	7,350
72	Wellhead protection at Regional well sites	-	-	-	-	-	-	-	-	-	-	400	400	-	7,200	7,600
73	Railed Walkway in Conditioning Tank	1	New	-	-	-	-	-	-	-	-	100	100	-	-	100
74	AED Units	1	New	-	-	-	-	-	-	-	-	1	1	-	-	1
75	Emergency Standby Generator	1	New	-	-	-	-	-	-	-	-	245	245	-	-	245
76	Install perimeter fencing and gate	1	New	-	-	-	-	-	-	-	-	115	115	-	-	115
77	Repoint where required and replace all damaged exterior bricks	1	Replacement	-	-	-	-	-	-	-	-	50	50	-	-	50
78	Chalk Lake Asphalt Repair	1	Replacement	-	-	-	-	-	-	-	-	95	95	-	-	95
Building and Structures Subtotal				-	-	1,423	16	311	10,012	-	-	3,794	15,556	16,950	64,950	97,456

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 Durham Budget 2021		Quantity	New / Replacement	2021 Proposed Financing								2021 Proposed Budget	Approved Funding Prior to 2021	Proposed 2022-2030	Total Proposed	
Other	Reserve/ Reserve Funds			Industrial DCs	Institutional DCs	Commercial DCs	New Residential DCs	Subsidy /Grant	Debenture	User Rate						
Machinery and Equipment																
79	Cherrywood Water Pumping Station upgrades - pumps and feedermain, Pickering	-	-	-	-	-	-	-	-	-	-	200	200	300	1,570	2,070
80	Grandview Water Pumping Station - Station upgrades Electrical System Study, Grounding Study, Replacement of the Motor Control Centre, Diesel transfer switch and Standby power	-	-	-	-	-	-	-	-	-	-	150	150	100	2,200	2,450
81	Grandview Water Pumping Station - variable frequency drive (VFD) to be installed on the pumps	-	-	-	-	-	-	-	-	-	-	600	600	-	-	600
82	Waverly Rd. Water Pumping Station - Station upgrades Electrical System Study, Grounding Study, Replacement of the Motor Control Centre, Diesel transfer switch and Standby power	-	-	-	-	-	-	-	-	-	-	200	200	100	2,100	2,400
83	Taunton Rd. Water Pumping Station and Reservoir - station improvements and replacement	-	-	-	-	-	-	-	-	-	-	100	100	100	2,000	2,200
84	Bowmanville Water Supply Plant - replacement of the standby power and upgrading the uninterrupted power supply (UPS)	-	-	-	-	-	-	-	-	-	-	3,500	3,500	850	-	4,350
85	Bowmanville Water Supply Plant - Disinfection upgrades	-	-	-	-	-	-	-	-	-	-	2,500	2,500	800	-	3,300
86	Concession St. Water Pumping Station - Station upgrades Electrical System Study, Grounding Study, Replacement of the Motor Control Centre, Diesel transfer switch and Standby power	-	-	-	-	-	-	-	-	-	-	2,200	2,200	100	-	2,300
87	Orono Water Supply System - Standpipe water storage tank recoating	-	-	-	-	-	-	-	-	-	-	100	100	460	-	560
88	Cannington Standpipe Water Storage Tank - Recoating	-	-	-	-	-	-	-	-	-	-	450	450	-	-	450
89	Beaverton Water Supply Plant - upgrades Electrical System Study, Grounding Study, Replacement of the Motor Control Centre, Diesel transfer switch, Standby power and uninterrupted power supply (UPS)	-	-	-	-	-	-	-	-	-	-	100	100	250	2,600	2,950
90	Automatic Bulk Water Dispensing System	-	-	-	-	-	-	-	-	-	-	2,000	2,000	4,540	10,000	16,540
91	Fuel Tank Compliance	-	-	-	-	-	-	-	-	-	-	8,400	8,400	2,400	-	10,800

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Other	Reserve/ Reserve Funds			Industrial DCs	Institutional DCs	Commercial DCs	New Residential DCs	Subsidy /Grant	Debenture	User Rate						
92	Safety upgrades to access ladders at various plants and pumping station	-	-	-	-	-	-	-	-	-	-	44	44	-	-	44
93	Dehumidifier Replacement - Additional Funding	1	Replacement	-	-	-	-	-	-	-	-	120	120	-	-	120
94	Regulatory Instrumentation Replacement and Maintenance - Plants East	1	Replacement	-	-	-	-	-	-	-	-	70	70	-	-	70
95	Regulatory Instrumentation Replacement and Maintenance - Plants North	1	Replacement	-	-	-	-	-	-	-	-	40	40	-	-	40
96	Regulatory Instrumentation Replacement and Maintenance - Plants Central	3	Replacement	-	-	-	-	-	-	-	-	30	30	-	-	30
97	Chamber Drainage- Additional Funding	1	Replacement	-	-	-	-	-	-	-	-	56	56	-	-	56
98	Axial Fan Replacement- Additional Funding	1	Replacement	-	-	-	-	-	-	-	-	160	160	-	-	160
99	HVAC Upgrades- Additional Funding	1	Replacement	-	-	-	-	-	-	-	-	310	310	-	-	310
100	Communication Upgrades - 10 WIFI Cellular Wireless Router Installations	10	New	-	-	-	-	-	-	-	-	35	35	-	-	35
101	Communication Upgrades - 17 WIFI Cellular Wireless Router Installations	17	New	-	-	-	-	-	-	-	-	60	60	-	-	60
102	Replace obsolete plant actuators	2	Replacement	-	-	-	-	-	-	-	-	200	200	-	-	200
103	Dataloggers	1	New	-	-	-	-	-	-	-	-	30	30	-	-	30
104	Chemical flowmeters	1	New	-	-	-	-	-	-	-	-	40	40	-	-	40
105	Motor Control Centre	1	Replacement	-	-	-	-	-	-	-	-	1,500	1,500	-	-	1,500
106	Dehumidification - Additional Funding	1	Replacement	-	-	-	-	-	-	-	-	365	365	-	-	365
107	Pump / Motor / Mixer Repair / Replacement	1	Replacement	-	-	-	-	-	-	-	-	50	50	-	-	50
108	Replace Variable Frequency Drive	1	Replacement	-	-	-	-	-	-	-	-	300	300	-	-	300
109	SCADA Services - Maintenance	1	Replacement	-	-	-	-	-	-	-	-	115	115	-	-	115
110	Survey GPS Instrument	1	Replacement	-	-	-	-	-	-	-	-	10	10	-	-	10
111	Uninterrupted Power Supply Replacement	1	Replacement	-	-	-	-	-	-	-	-	40	40	-	-	40
Machinery and Equipment Subtotal				-	-	-	-	-	-	-	-	24,075	24,075	10,000	20,470	54,545

Appendix A: Detailed 2021 Water Supply Capital Projects Listing

Durham Budget 2021		Quantity	New / Replacement	2021 Proposed Financing								2021 Proposed Budget	Approved Funding Prior to 2021	Proposed 2022-2030	Total Proposed	
				Other	Reserve/ Reserve Funds	Industrial DCs	Institutional DCs	Commercial DCs	New Residential DCs	Subsidy /Grant	Debenture					User Rate
Allowances and Other Provisions																
112	Asset Condition Assessments - Reports for the Vertical Assets	-	-	-	150	-	-	-	-	-	-	-	150	913	2,115	3,178
113	Asset Condition Assessment/ investigation on transmission pipe	-	-	-	150	-	-	-	-	-	-	-	150	700	1,457	2,307
114	Allowance for acquisition of easements	-	-	-	-	-	-	-	-	-	-	150	150	-	1,350	1,500
115	Allowance for engineering studies	-	-	-	-	-	-	-	-	-	-	150	150	-	2,100	2,250
116	Climate Change Strategy Allowance	-	-	-	-	-	-	-	-	-	-	150	150	-	150	300
117	Allowance for Vulnerability Assessments for Water Supply Plants	-	-	-	-	-	-	-	-	-	-	350	350	-	700	1,050
118	Preliminary engineering	-	-	-	-	-	-	-	-	-	-	100	100	-	900	1,000
119	Allowance for sundry extensions as per Council policy	-	-	-	-	-	-	-	-	-	-	15	15	-	135	150
120	Allowance for unknown requirements	-	-	-	-	-	-	-	-	-	-	100	100	-	900	1,000
121	Allowance for land severance review and drawing requirements	-	-	-	-	-	-	-	-	-	-	100	100	-	900	1,000
122	Allowance for Regional share for works in conjunction with residential subdivision development	-	-	-	-	147	1	32	1,281	-	-	-	1,461	-	13,140	14,601
123	Allowance for Regional share for works in conjunction with non-residential development	-	-	-	-	40	-	9	350	-	-	-	399	-	3,600	3,999
124	Well interference works	-	-	-	-	-	-	-	400	-	-	-	400	-	7,200	7,600
Allowances and Other Provisions Subtotal				-	300	187	1	41	2,031	-	-	1,115	3,675	1,613	34,647	39,935
Information Technology																
125	Power Laptop Computer	3	New	-	-	-	-	-	-	-	-	6	6	-	-	6
126	Laptop Computer	4	New	-	-	-	-	-	-	-	-	4	4	-	-	4
127	Computer Monitors	9	New	-	-	-	-	-	-	-	-	2	2	-	-	2
128	Computers & Monitors Refresh	1	Replacement	-	-	-	-	-	-	-	-	194	194	-	-	194
129	GIS Hardware (Monitors, backup devices and other)	1	Replacement	-	-	-	-	-	-	-	-	5	5	-	-	5
130	SCADA Workstation	1	Replacement	-	-	-	-	-	-	-	-	10	10	-	-	10
131	WATER SCADA - PC/OIT, Servers, Support WAN	1	Replacement	-	-	-	-	-	-	-	-	159	159	-	-	159
Information Technology Subtotal				-	-	-	-	-	-	-	-	380	380	-	-	380

Appendix A: Detailed 2021 Water Supply Capital Projects Listing

Durham Budget 2021	Quantity	New / Replacement	2021 Proposed Financing									2021 Proposed Budget	Approved Funding Prior to 2021	Proposed 2022-2030	Total Proposed
			Other	Reserve/ Reserve Funds	Industrial DCs	Institutional DCs	Commercial DCs	New Residential DCs	Subsidy /Grant	Debenture	User Rate				
Vehicles															
132 3/4 Ton Van low roof	1	New	-	-	-	-	-	-	-	-	14	14	-	-	14
133 Forklift	1	New	-	-	-	-	-	-	-	-	30	30	-	-	30
134 Sports Utility Vehicle	1	New	-	-	-	-	-	-	-	-	75	75	-	-	75
135 Medium Roof Height Van	1	New	-	-	-	-	-	-	-	-	125	125	-	-	125
Vehicles Subtotal			-	-	-	-	-	-	-	-	244	244	-	-	244
Furniture and Fixtures															
136 Office Furniture/Equipment/Technology	1	New	-	-	-	-	-	-	-	-	10	10	-	-	10
137 Chair and Ergonomic Upgrades	1	Replacement	-	-	-	-	-	-	-	-	1	1	-	-	1
138 Control Room Office Chairs	6	Replacement	-	-	-	-	-	-	-	-	3	3	-	-	3
139 Office Chairs	2	Replacement	-	-	-	-	-	-	-	-	1	1	-	-	1
140 Workstation Furniture	3	Replacement	-	-	-	-	-	-	-	-	115	115	-	-	115
Furniture and Fixtures Subtotal			-	-	-	-	-	-	-	-	130	130	-	-	130
Water Supply System Subtotal			-	5,736	3,282	35	714	26,536	-	-	44,924	81,227	52,417	350,876	484,520
DC Revenue Shortfall to be financed from User Revenue *	-	-	-	-	(1,823)	(35)	-	-	-	-	1,858	-	-	-	-
Total Capital Water Supply System			-	5,736	1,459	-	714	26,536	-	-	46,782	81,227	52,417	350,876	484,520

* The following is a list of projects with a DC shortfall to be financed from User Rate: 50-59, 61-63, 65-71, 122-123.

** This project has pre-budget approval.

Appendix B: Detailed 2021 Sanitary Sewerage Capital Projects Listing

		Quantity	New / Replacement	2021 Proposed Financing								2021 Proposed Budget	Approved Funding Prior to 2021	Proposed 2022-2030	Total Proposed	
				Other	Reserve/ Reserve Funds	Industrial DCs	Institutional DCs	Commercial DCs	New Residential DCs	Subsidy /Grant	Debenture					User Rate
Sanitary Sewerage																
Linear Infrastructure																
1	Bayly St. from Westney Rd. to Harwood Ave., Ajax	-	-	-	-	-	-	-	-	-	-	250	250	-	2,020	2,270
2	Bowmanville Ave. from Highway No. 2 to Stevens Rd., Bowmanville	-	-	-	-	357	5	77	1,236	-	-	-	1,675	2,300	-	3,975
3	Town of Ajax Road Program	-	-	-	-	-	-	-	-	-	-	360	360	-	5,640	6,000
4	City of Oshawa Road Program	-	-	-	-	-	-	-	-	-	-	50	50	-	9,900	9,950
5	Municipality of Clarington Road Program	-	-	-	-	-	-	-	-	-	-	50	50	-	2,700	2,750
6	Allowance for unknown sanitary sewerage requirements in conjunction with area municipality road programs in various locations	-	-	-	-	-	-	-	-	-	-	200	200	-	1,800	2,000
7	Sanitary sewerage works to rectify identified system deficiencies independent of road programs in various locations	-	-	-	-	-	-	-	-	-	-	578	578	-	5,850	6,428
8	Rehabilitation of existing sanitary sewers in various locations	-	-	-	-	300	-	-	-	-	-	-	300	-	3,862	4,162
9	Replacement of sanitary sewer on Euclid St. from Dundas St. to 75 m north of John St.	-	-	-	-	200	-	-	-	-	-	-	200	120	-	320
10	Replacement of sanitary sewer on Walnut St. from Euclid St. to Kent St., Whitby	-	-	-	-	195	-	-	-	-	-	-	195	-	-	195
11	Replacement of sanitary sewer on Donovan Cres from Walton Blvd. to 30 m east of Walton Blvd., Whitby	-	-	-	-	-	-	-	-	-	-	150	150	-	-	150
12	Replacement of sanitary sewer on High St. from Mary St. to Walnut St., Whitby	-	-	-	-	460	-	-	-	-	-	-	460	-	-	460
13	Replacement of sanitary sewer on Olive Ave from Simcoe St. to Drew St., Oshawa	-	-	-	-	-	-	-	-	-	-	150	150	1,340	-	1,490
14	Replacement of sanitary sewer on R.R. 22 (Bloor St.) from Wilson Rd. to Holland St., Oshawa	-	-	-	-	70	-	-	-	-	-	-	70	-	300	370
15	Replacement of sanitary sewer on Veterans Rd. from R.R. 35 (Wilson Rd.) to R.R. 56 (Farewell St.), Oshawa	-	-	-	-	150	-	-	-	-	-	-	150	-	650	800
16	Replacement of sanitary sewer on Ritson Rd. S. from Kawartha Ave. to Simcoe Street South, Oshawa	-	-	-	-	-	-	-	-	-	-	100	100	-	615	715

Appendix B: Detailed 2021 Sanitary Sewerage Capital Projects Listing

		Quantity	New / Replacement	2021 Proposed Financing								2021 Proposed Budget	Approved Funding Prior to 2021	Proposed 2022-2030	Total Proposed	
Other	Reserve/ Reserve Funds			Industrial DCs	Institutional DCs	Commercial DCs	New Residential DCs	Subsidy /Grant	Debenture	User Rate						
17	Replacement of sanitary sewer on Ritson Rd. South from Annis St. to Conant St., Oshawa	-	-	-	-	-	-	-	-	-	-	50	50	-	300	350
18	Central Duffin Collector (CDC) Brock Rd. Trunk Sanitary Sewer - Taunton Rd. to 500 m south of Brock Rd., Pickering	-	-	12,792	-	-	-	-	-	-	-	6,708	19,500	10,900	-	30,400
19	York/Durham Sewage System - Primary Trunk Sanitary Sewer Twinning, Pickering	-	-	1,000	-	213	3	46	738	-	-	-	2,000	-	253,050	255,050
20	Twinning of the forcemain from Liverpool Rd. Sanitary Sewage Pumping Station to Duffin Creek Water Pollution Control Plant, Pickering	-	-	-	-	162	2	35	558	-	-	163	920	15,588	-	16,508
21	West Whitby sub trunk on Dundas St. from Des Newman Blvd. to Halls Rd., Whitby	-	-	-	60	115	2	25	398	-	-	-	600	-	3,150	3,750
22	West Brooklin Trunk Sanitary Sewer from west of Cochrane St. to east of Highway No. 12, Whitby (Region's share)	-	-	-	-	1,436	20	310	4,976	-	-	-	6,742	608	10,100	17,450
23	Sanitary Sewer on Thornton Rd. from Conlin Rd. within the Northwood Employment Area, Oshawa	-	-	-	-	53	1	12	184	-	-	-	250	-	1,400	1,650
24	Thickson Rd. Sub-trunk Sanitary Sewer from Glengowan St. to Conlin Rd., Whitby (Region's share)	-	-	-	-	708	10	153	2,454	-	-	-	3,325	-	-	3,325
25	Forcemain on Conlin Rd. from Ritson Rd. to Harmony Rd., Oshawa	-	-	-	-	85	1	18	296	-	-	-	400	-	8,200	8,600
26	Courtice Sanitary Trunk Sewer - Phase 3, Courtice	-	-	-	-	938	13	202	3,247	-	-	-	4,400	28,901	-	33,301
27	Courtice Sanitary Trunk Sewer - Phase 6, Courtice	-	-	-	-	770	11	166	2,669	-	-	-	3,616	15,400	-	19,016
28	Sanitary Sewer on Concession Rd. 5 to service the westerly portion of the Beaverton Avenue Employment Area A, Brock	-	-	-	250	-	-	-	-	-	-	-	250	-	3,200	3,450
Linear Infrastructure Subtotal				13,792	1,685	4,837	68	1,044	16,756	-	-	8,809	46,991	75,157	312,737	434,885

Appendix B: Detailed 2021 Sanitary Sewerage Capital Projects Listing

Durham Budget 2021		Quantity	New / Replacement	2021 Proposed Financing								2021 Proposed Budget	Approved Funding Prior to 2021	Proposed 2022-2030	Total Proposed	
				Other	Reserve/ Reserve Funds	Industrial DCs	Institutional DCs	Commercial DCs	New Residential DCs	Subsidy /Grant	Debenture					User Rate
Building and Structures																
29	Seaton - Sanitary Sewage Pumping Station 4 and forcemain, Pickering	-	-	2,000	-	-	-	-	-	-	-	1,000	3,000	4,700	-	7,700
30	Carruthers Sanitary Sewage Pumping Station pump addition and Standby power, Ajax	-	-	-	-	392	5	85	1,358	-	-	-	1,840	260	-	2,100
31	Expansion of the Conlin Rd. Sanitary Sewage Pumping Station and twinning of the forcemain, Oshawa	-	-	-	-	213	3	46	738	-	-	-	1,000	3,296	68,800	73,096
32	Simcoe St. South Sanitary Sewage Pumping Station and forcemain replacement, Oshawa	-	-	-	-	151	2	33	524	-	-	40	750	288	4,100	5,138
33	Proposed Baseline Rd. Sanitary Sewage Pumping Station and forcemain, Courtice	-	-	-	-	192	3	41	664	-	-	-	900	-	3,500	4,400
34	Uxbridge Water Pollution Control Plant - Optimization Study, upgrades and rehabilitation works based on the condition assessment.	-	-	-	-	-	-	-	-	-	-	2,500	2,500	3,100	2,500	8,100
35	Water Street Sanitary Sewage Pumping Station - expansion / replacement	-	-	-	4,100	-	-	-	-	-	-	-	4,100	5,150	15,400	24,650
36	Port Perry Industrial Area Sanitary Sewage Pumping Station, forcemain and sanitary sewer, Port Perry	-	-	-	195	118	2	26	409	-	-	-	750	-	13,550	14,300
37	Sunderland Water Pollution Control Plant - Lagoon System	-	-	-	-	96	1	21	132	-	-	250	500	500	9,700	10,700
38	Cannington Water Pollution Control Plant - Lagoon System	-	-	-	-	96	1	21	132	-	-	250	500	1,500	9,700	11,700
39	Beaverton Employment lands Area B Sanitary Sewage Pumping Station and sanitary sewer	-	-	-	50	173	3	37	237	-	-	-	500	-	6,000	6,500
40	AED Units	1	New	-	-	-	-	-	-	-	-	1	1	-	-	1

Appendix B: Detailed 2021 Sanitary Sewerage Capital Projects Listing

		Quantity	New / Replacement	2021 Proposed Financing								2021 Proposed Budget	Approved Funding Prior to 2021	Proposed 2022-2030	Total Proposed	
				Other	Reserve/ Reserve Funds	Industrial DCs	Institutional DCs	Commercial DCs	New Residential DCs	Subsidy /Grant	Debenture					User Rate
41	Emergency Standby Generator	1	New	-	-	-	-	-	-	-	-	245	245	-	-	245
42	Boiler Tubes Replacement	1	Replacement	-	-	-	-	-	-	-	-	100	100	-	-	100
43	Install Electric Gates	1	Replacement	-	-	-	-	-	-	-	-	160	160	-	-	160
44	Repair/Retrofit Overhead Walkway	1	Replacement	-	-	-	-	-	-	-	-	25	25	-	-	25
45	Repoint where required and replace all damaged exterior bricks	1	Replacement	-	-	-	-	-	-	-	-	50	50	-	-	50
Building and Structures Subtotal				2,000	4,345	1,431	20	310	4,194	-	-	4,621	16,921	18,794	133,250	168,965
Machinery and Equipment																
46	Duffin Creek Water Pollution Control Plant - Digester mixing improvements and Motor Control Centre Replacement, Pickering	-	-	8,413	-	-	-	-	-	-	-	2,987	11,400	8,000	23,000	42,400
47	Duffin Creek Water Pollution Control Plant - Remedial works and improvements in various locations throughout the plant	-	-	4,000	-	-	-	-	-	-	-	1,000	5,000	500	11,000	16,500
48	Duffin Creek Water Pollution Control Plant - Blower Building 1 and 2 Control System Replacement	-	-	872	-	-	-	-	-	-	-	218	1,090	460	-	1,550
49	Liverpool Road Sanitary Sewage Pumping Station - communication, mechanical and process upgrades, Pickering	-	-	-	-	-	-	-	-	-	-	500	500	-	3,300	3,800
50	Southwood Sanitary Sewerage Pumping Station - flow meter installation, associated piping upgrades and twinning of the forcemain , Ajax	-	-	-	-	-	-	-	-	-	-	550	550	1,450	-	2,000
51	Madawaska Sanitary Sewerage Pumping Station - piping upgrades and flow meter installation, Oshawa	-	-	-	-	-	-	-	-	-	-	450	450	-	-	450
52	Cochrane Sanitary Sewage Pumping Station odour control upgrades, Whitby	-	-	-	-	-	-	-	-	-	-	550	550	350	-	900
53	Port Darlington Water Pollution Control Plant - Major Maintenance replacement work, Bowmanville	-	-	-	974	-	-	-	-	-	-	-	974	-	5,200	6,174
54	Lake Simcoe Water Pollution Control Plant - Diffused Air System replacement and associated system upgrades	-	-	-	1,200	-	-	-	-	-	-	-	1,200	3,050	-	4,250

Appendix B: Detailed 2021 Sanitary Sewerage Capital Projects Listing

Durham Budget 2021		Quantity	New / Replacement	2021 Proposed Financing								2021 Proposed Budget	Approved Funding Prior to 2021	Proposed 2022-2030	Total Proposed
				Other	Reserve/ Reserve Funds	Industrial DCs	Institutional DCs	Commercial DCs	New Residential DCs	Subsidy /Grant	Debenture				
55	Lake Simcoe Water Pollution Control Plant and associated sanitary sewerage pumping stations - PLC and SCADA system upgrades	-	-	-	600	-	-	-	-	-	-	600	-	850	1,450
56	Laidlaw, Cedar and Harbour St. Sanitary Sewage Pumping Station - Major Maintenance and replacement work	-	-	-	500	-	-	-	-	-	-	500	-	5,500	6,000
57	Harbour Sanitary Sewage Pumping Station - Pump and Motor Control Center	-	-	-	-	-	-	-	-	200	-	200	700	-	900
58	Fuel Tank Compliance	-	-	-	-	-	-	-	-	1,800	-	1,800	6,300	-	8,100
59	Sanitary Sewerage Pumping Station - piping upgrades and flow meter installation, at various locations	-	-	-	100	-	-	-	-	-	-	100	-	2,000	2,100
60	Safety upgrades to access ladders at various plants and pumping station	-	-	-	-	-	-	-	-	297	-	297	-	-	297
61	Stage 3 Headworks Conveyor Trough	1	Replacement	102	-	-	-	-	-	23	-	125	-	-	125
62	WAS Pump Replacement	2	Replacement	-	-	-	-	-	-	50	-	50	-	-	50
63	RAS Pump Replacement	1	Replacement	-	-	-	-	-	-	30	-	30	-	-	30
64	Arc Flash Study Review	1	New	-	-	-	-	-	-	200	-	200	-	-	200
65	Clarifier Gearbox Replacement	1	Replacement	-	-	-	-	-	-	130	-	130	-	-	130
66	Replacement Mixer - Dewatering Sludge Holding Tanks	1	Replacement	30	-	-	-	-	-	10	-	40	-	-	40
67	Dishwasher	1	Replacement	-	70	-	-	-	-	-	-	70	-	-	70
68	Stage 3 Effluent Building Spare Effluent Pump	1	New	24	-	-	-	-	-	6	-	30	-	-	30
69	Auto Titration System	1	Replacement	-	90	-	-	-	-	-	-	90	-	-	90
70	Stage 3 Headworks - Replacement Muffin Monster Conveyor	1	Replacement	122	-	-	-	-	-	28	-	150	-	-	150
71	Stage 3 Headworks - Grit Cyclone Auger	1	Replacement	49	-	-	-	-	-	11	-	60	-	-	60
72	Replacement Gators	2	Replacement	31	-	-	-	-	-	9	-	40	-	-	40
73	Grit Classifier Pump	1	Replacement	-	-	-	-	-	-	26	-	26	-	-	26
74	Electric Vehicle Charging Stations	2	New	12	-	-	-	-	-	3	-	15	-	-	15
75	Electric Vehicle Charging Stations - Federal Grant Funded	2	New	-	-	-	-	-	15	-	-	15	-	-	15

Appendix B: Detailed 2021 Sanitary Sewerage Capital Projects Listing

		Quantity	New / Replacement	2021 Proposed Financing								2021 Proposed Budget	Approved Funding Prior to 2021	Proposed 2022-2030	Total Proposed			
Other	Reserve/ Reserve Funds			Industrial DCs	Institutional DCs	Commercial DCs	New Residential DCs	Subsidy /Grant	Debenture	User Rate								
76	Variable Frequency Drive (VFD) Replacement - Additional Funding	1	Replacement	117	-	-	-	-	-	-	-	33	150	-	-	150		
77	Process Water Pumps	3	Replacement	-	-	-	-	-	-	-	-	48	48	-	-	48		
78	Electrical Equipment Replacements	1	Replacement	-	-	-	-	-	-	-	-	50	50	-	-	50		
79	Pump Replacements	1	Replacement	-	-	-	-	-	-	-	-	120	120	-	-	120		
80	Flow Meters	1	New	-	-	-	-	-	-	-	-	65	65	-	-	65		
81	RAS Pump Rebuild	1	Replacement	-	-	-	-	-	-	-	-	38	38	-	-	38		
82	Raw Sludge Pumps	1	Replacement	-	-	-	-	-	-	-	-	35	35	-	-	35		
83	Replace Actuators	6	Replacement	-	-	-	-	-	-	-	-	48	48	-	-	48		
84	Replace Multi Line Feeder Protection Relay	1	Replacement	-	-	-	-	-	-	-	-	100	100	-	-	100		
85	Laboratory Oven for Inorganics	1	Replacement	5	-	-	-	-	-	-	-	5	10	-	-	10		
86	Sluice Gates - Plant 2 & 3	2	New	-	-	-	-	-	-	-	-	40	40	-	-	40		
87	Communication upgrade to "Profinet"	1	Replacement	93	-	-	-	-	-	-	-	27	120	-	-	120		
88	Survey GPS Instrument	1	Replacement	-	-	-	-	-	-	-	-	10	10	-	-	10		
Machinery and Equipment Subtotal				13,870	3,534	-	-	-	-	-	-	15	-	9,697	27,116	20,810	50,850	98,776
Allowances and Other Provisions																		
89	Inflow/infiltration monitoring, studies and required remedial works in various locations	-	-	-	-	-	-	-	-	-	-	500	500	-	5,000	5,500		
90	Asset Condition Assessments - Reports for the Vertical Assets	-	-	-	200	-	-	-	-	-	-	-	200	1,303	2,325	3,828		
91	Climate Change Strategy Allowance	-	-	-	-	-	-	-	-	-	-	300	300	-	500	800		
92	Allowance for acquisition of easements	-	-	-	-	-	-	-	-	-	-	150	150	-	1,350	1,500		
93	Allowance for engineering studies	-	-	-	-	-	-	-	-	-	-	200	200	-	1,350	1,550		
94	Preliminary engineering	-	-	-	-	-	-	-	-	-	-	100	100	-	900	1,000		
95	Allowance for sundry extensions as per Council policy	-	-	-	-	-	-	-	-	-	-	15	15	-	135	150		
96	Allowance for unknown requirements	-	-	-	-	-	-	-	-	-	-	100	100	-	900	1,000		
97	Allowance for land severance review and drawing requirements	-	-	-	-	-	-	-	-	-	-	100	100	-	900	1,000		
98	Allowance for Regional share for works in conjunction with residential subdivision development	-	-	-	-	311	4	67	1,078	-	-	-	1,460	-	13,140	14,600		
99	Allowance for Regional share for works in conjunction with non-residential development	-	-	-	-	85	1	19	295	-	-	-	400	-	3,600	4,000		
100	Allowance for intensification	-	-	-	-	75	1	16	258	-	-	-	350	-	3,150	3,500		
Allowances and Other Provisions Subtotal				-	200	471	6	102	1,631	-	-	1,465	3,875	1,303	33,250	38,428		

Appendix B: Detailed 2021 Sanitary Sewerage Capital Projects Listing

		Quantity	New / Replacement	2021 Proposed Financing								2021 Proposed Budget	Approved Funding Prior to 2021	Proposed 2022-2030	Total Proposed	
				Other	Reserve/ Reserve Funds	Industrial DCs	Institutional DCs	Commercial DCs	New Residential DCs	Subsidy /Grant	Debenture					User Rate
Information Technology																
101	Power Laptop Computer	3	New	-	-	-	-	-	-	-	-	6	6	-	-	6
102	SCADA Access Laptop	3	New	-	-	-	-	-	-	-	-	8	8	-	-	8
103	Laptop Computer	4	New	-	-	-	-	-	-	-	-	4	4	-	-	4
104	Computer Monitors	9	New	-	-	-	-	-	-	-	-	2	2	-	-	2
105	Computers & Monitors Refresh	1	Replacement	-	-	-	-	-	-	-	-	167	167	-	-	167
106	Network cisco upgrade multiyear	1	Replacement	415	-	-	-	-	-	-	-	120	535	-	-	535
107	Computer Peripherals	1	Replacement	13	-	-	-	-	-	-	-	13	26	-	-	26
108	GIS Hardware (Monitors, backup devices and other)	1	Replacement	-	-	-	-	-	-	-	-	5	5	-	-	5
109	Programmable Logic Controllers (PLC) Upgrade	1	Replacement	58	-	-	-	-	-	-	-	17	75	-	-	75
110	Boiler Building PLC Replacement	1	Replacement	63	-	-	-	-	-	-	-	22	85	-	-	85
111	Programming/Hardware - SPS SCADA	1	Replacement	-	-	-	-	-	-	-	-	60	60	-	-	60
112	Demilitarized Zone for Wastewater Network	1	New	-	-	-	-	-	-	-	-	20	20	-	-	20
113	Monitor and Alarming Equipment and Software	1	New	-	-	-	-	-	-	-	-	90	90	-	-	90
114	Logic Controllers and Input Output Cards Replacement	1	Replacement	-	-	-	-	-	-	-	-	220	220	-	-	220
115	Replace end of life SCADA control system	2	Replacement	-	-	-	-	-	-	-	-	40	40	-	-	40
116	Control programming to update control screens	1	Replacement	-	-	-	-	-	-	-	-	25	25	-	-	25
117	Development Lab and Redundancy for Alarming	1	New	-	-	-	-	-	-	-	-	30	30	-	-	30
118	SCADA Servers	1	New	-	-	-	-	-	-	-	-	75	75	-	-	75
119	Failover Server farm and network storage	1	Replacement	116	-	-	-	-	-	-	-	33	149	-	-	149
120	Redundant historian DMZ	1	New	33	-	-	-	-	-	-	-	9	42	-	-	42
121	iFix programming high efficacy screen	1	New	50	-	-	-	-	-	-	-	14	64	-	-	64

Appendix B: Detailed 2021 Sanitary Sewerage Capital Projects Listing

Durham Budget 2021	Quantity	New / Replacement	2021 Proposed Financing								2021 Proposed Budget	Approved Funding Prior to 2021	Proposed 2022-2030	Total Proposed	
			Other	Reserve/ Reserve Funds	Industrial DCs	Institutional DCs	Commercial DCs	New Residential DCs	Subsidy /Grant	Debenture					User Rate
122 Server Replacement	1	Replacement	54	-	-	-	-	-	-	-	16	70	-	-	70
123 Mobile Tablets - All Plants	25	New	-	-	-	-	-	-	-	-	30	30	-	-	30
Information Technology Subtotal			802	-	-	-	-	-	-	-	1,026	1,828	-	-	1,828
Vehicles															
124 3/4 Ton Van low roof	1	New	-	-	-	-	-	-	-	-	14	14	-	-	14
125 Forklift	1	New	-	-	-	-	-	-	-	-	30	30	-	-	30
Vehicles Subtotal			-	-	-	-	-	-	-	-	44	44	-	-	44
Furniture and Fixtures															
126 Office Furniture/Equipment/Technology	1	New	-	-	-	-	-	-	-	-	10	10	-	-	10
127 Chair and Ergonomic Upgrades	1	Replacement	-	-	-	-	-	-	-	-	1	1	-	-	1
128 Office Chairs	2	Replacement	-	-	-	-	-	-	-	-	1	1	-	-	1
129 Workstation Furniture	3	Replacement	-	-	-	-	-	-	-	-	115	115	-	-	115
Furniture and Fixtures Subtotal			-	-	-	-	-	-	-	-	127	127	-	-	127
Sanitary Sewerage Subtotal			30,464	9,764	6,739	94	1,456	22,581	15	-	25,789	96,902	116,064	530,087	743,053
DC Revenue Shortfall to be financed from User Rate *	-	-	-	-	(4,626)	(87)	-	-	-	-	4,713	-	-	-	-
DC Revenue Shortfall to be financed from from Servicing of Employment Lands Reserve Fund **	-	-	-	413	(406)	(7)	-	-	-	-	-	-	-	-	-
Total Capital Sanitary Sewerage			30,464	10,177	1,707	-	1,456	22,581	15	-	30,502	96,902	116,064	530,087	743,053

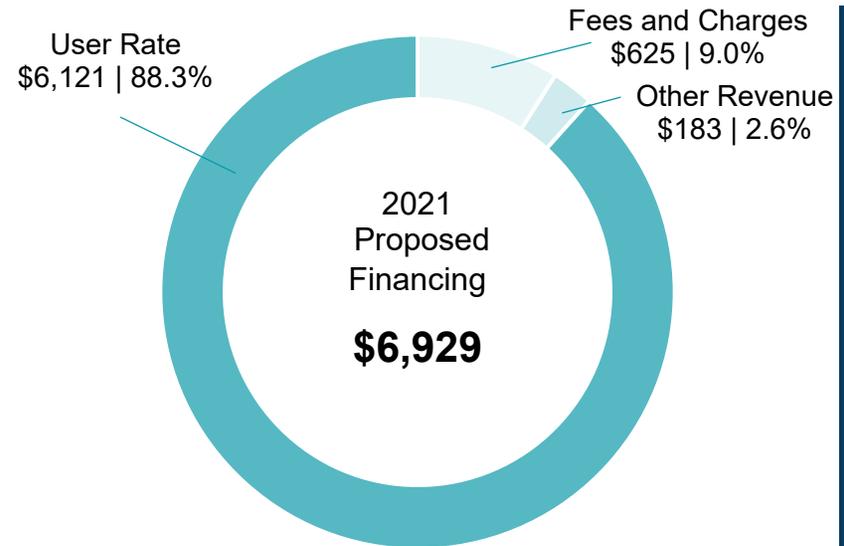
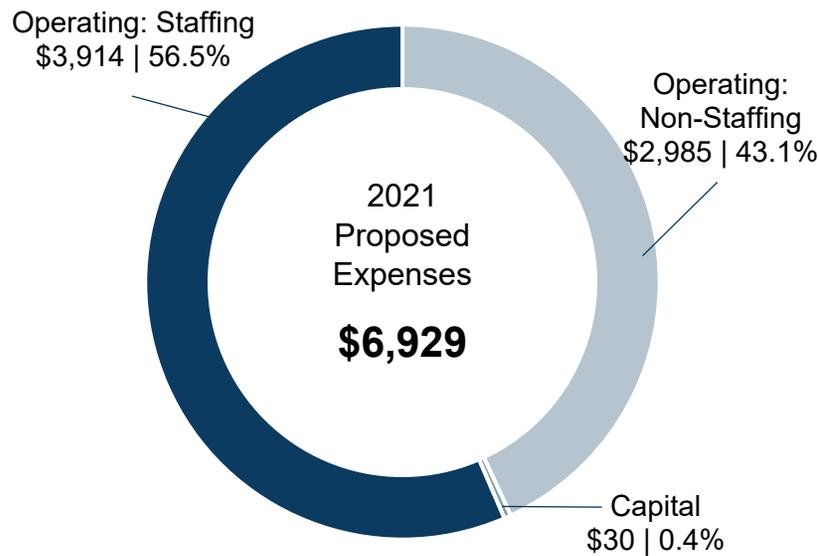
* The following is a list of projects with a DC shortfall to be financed from User Rate: 2, 19-27, 30-33, 37, 39, 99-101

** The following is a list of projects with a DC shortfall to be financed from Servicing of Employment Lands Reserve Fund: 21, 36, 39

*** The following is a list of projects with pre-budget approval: 28, 36, 39



Responsible for the billing, collecting and supporting of customers for the Region's water supply and sanitary sewerage programs



Amounts are in \$,000's

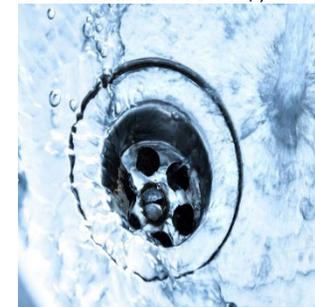


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Major Programs and Services

Utility Finance

Customer Service

Collect water and sanitary sewer user rate revenues and provide an efficient and effective customer service operation that meets the needs of our customers and maintains the Region's positive image.

Billing and Analysis

Invoice customers for water and sanitary sewer services provided by the Region of Durham as well as completing all meter reading, accounting transactions, revenue analysis and reporting requirements.

Headquarters Shared Cost – Utility Finance

The allocated share of costs attributable to Utility Finance for the operation of Regional Headquarters facility.

Strategic Priorities

For 2021 some of the key priorities and planned actions focus on:

Service Excellence



Expand meter reading – by transitioning to meter readers and the installation of fixed network radio frequency data collectors in Seaton – to improve the accuracy of readings and assess water consumption trends.



Launch monthly billing for the largest industrial, commercial, and institutional water supply and sanitary sewerage customers to better understand customer requirements and support long-term planning.

Strategic Priorities Continued



Champion paper-less billing by migrating customers to MyDurhamWater – the state-of-the-art water billing system and online customer portal

Key Targets for 2021

- Process 787,000 water supply and sanitary sewer customer payments – consistent with 2020 levels
- 18,000 customers enrolled in MyDurhamWater – approximately 10% of total customers
- Provide customer services to water and sanitary sewer customers, including responding to over 100,000 telephone inquiries, 24,000 emails and over 1,000 customer inquiries made in person
- 14,000 – ratio of accounts per customer service staff
- 0.03% - value of write-offs as a percentage of revenue

Financial Details: Summary by Account (\$,000's)

	2020 Estimated Actuals	2020 Approved Budget	2021 Proposed Budget	Variance	
				\$	%
Expenses					
Operating Expenses					
Personnel Expenses	3,549	3,917	3,914		
Personnel Related	7	45	44		
Communications	34	1,120	1,120		
Supplies	14	169	169		
Computer Maintenance & Operations	1,893	1,320	600		
Materials & Services	19	27	27		
Equipment Maintenance & Repairs	3	17	17		
Vehicle Operations	16	28	28		
Professional Services	9	110	110		
Contracted Services	1,288	450	450		
Financial Expenses	34	34	34		
Minor Assets & Equipment	-	4	4		
Major Repairs & Renovations	-	10	-		
Contribution to Reserves / Reserve Funds	12	12	45		
Headquarters Shared Costs	330	330	337		
Gross Operating Expenses	7,208	7,593	6,899	(694)	(9.1%)
Capital Expenses					
Replacement	90	90	30		
Capital Expenses Subtotal	90	90	30	(60)	(66.7%)
Total Expenses	7,298	7,683	6,929	(754)	(9.8%)

Financial Details: Summary by Account (\$,000's) Continued

 Durham Budget 2021	2020 Estimated Actuals	2020 Approved Budget	2021 Proposed Budget	Variance	
				\$	%
Revenues and Financing					
Operating Revenue					
Late Payment Charge	(201)	(575)	(575)		
Fees & Service Charges	(511)	(625)	(625)		
Sundry Revenue	(44)	(183)	(183)		
Recovery Sanitary Sewerage Stabilization Reserve Fund	(250)	(250)	-		
Recovery Water Supply Rate Stabilization Reserve Fund	(250)	(250)	-		
Operating Revenue Subtotal	(1,256)	(1,883)	(1,383)	500	26.6%
Capital Financing					
Recovery Reserves / Reserves Funds - Capital	(70)	(70)	-		
Capital Financing Subtotal	(70)	(70)	-	70	100%
Total Revenues and Financing	(1,326)	(1,953)	(1,383)	570	29.2%
Utility Finance User Rate Requirement	5,972	5,730	5,546	(184)	(3.2%)

* Note that Utility Finance is funded 50% by Water Supply and 50% by Sanitary Sewerage

Financial Details: Summary by Program (\$,000's)

	2020 Estimated Actuals	2020 Approved Budgets					2021 Proposed Budgets					Variance	
		Operating Expenses	Gross Capital	Subsidy Funding	Other Funding	Approved Budget	Operating Expenses	Gross Capital	Subsidy Funding	Other Funding	Proposed Budget	\$	%
Utility Finance													
1 Customer Service	2,421	3,036	13	-	(1,633)	1,416	2,647	15	-	(1,383)	1,279	(137)	
2 Billing and Analysis	3,221	4,227	77	-	(320)	3,984	3,915	15	-	-	3,930	(54)	
3 Headquarters Shared Cost - Utility Finance Portion	330	330	-	-	-	330	337	-	-	-	337	7	
Utility Finance - Subtotal	5,972	7,593	90	-	(1,953)	5,730	6,899	30	-	(1,383)	5,546	(184)	(3.2%)
Utility Finance Total	5,972	7,593	90	-	(1,953)	5,730	6,899	30	-	(1,383)	5,546	(184)	(3.2%)

* Note that Utility Finance is funded 50% by Water Supply and 50% by Sanitary Sewerage

Financial Details: Summary of Capital (\$,000's)

 Durham Budget 2021	2020	2021	Forecast					Forecast	
	Approved Budget	Proposed Budget	2022	2023	2024	2025	2026-2030	Total	
Utility Finance									
Capital Expenditures									
Information Technology	13	30	46	46	46	46	230	414	
Machinery & Equipment	7							-	
Vehicles	70		35	35	35	35	175	315	
Capital Expenditure Subtotal	90	30	81	81	81	81	405	729	
Capital Financing									
Reserves / Reserve Funds	70		35	35	35	35	175	315	
User Rate	20	30	46	46	46	46	230	414	
Capital Financing Subtotal	90	30	81	81	81	81	405	729	
Total Capital Utility Finance	90	30	81	81	81	81	405	729	

* Note that Utility Finance is funded 50% by Water Supply and 50% by Sanitary Sewerage

Details of Budget Changes

Base Adjustments	2021 Impact (\$ 000's)
Economic increases	152
One-time training requirements for new system	20
Removal of one-time items	(256)
Realignment to actuals	(79)
Line-by-line review savings	(21)
Base Adjustments Subtotal	(184)
<hr/>	
Net Changes	(184)

Staffing Details

Utility Finance	Full Time Equivalents (FTE's)
2020 Approved Complement (restated)	<u>36.5</u>
Proposed New Positions	-
Total Proposed New Positions	<u>-</u>
Total Complement Utility Finance	36.5

Looking Forward

As part of the Region's commitment to provide exceptional value to Durham taxpayers through responsive and effective customer service delivery the Region has launched its state-of-the-art billing system and online customer portal - My Durham Water - to provide enhanced water and sewage billing services.

This award-winning system was introduced to provide customers with access to their account and the ability to:

- View billing information online;
- Receive bills online through paperless e-billing;
- Choose from multiple payment options, including e-payments;
- Enter meter readings online;
- Communicate with the Region through multiple channels, such as secure email; and
- Seamlessly access the Region's website for rate and other water billing information.

Further – to increase the accuracy of customer billings the Region will be migrating towards the use of automatic meter readers.

Appendix A: Detailed 2021 Capital Projects Listing

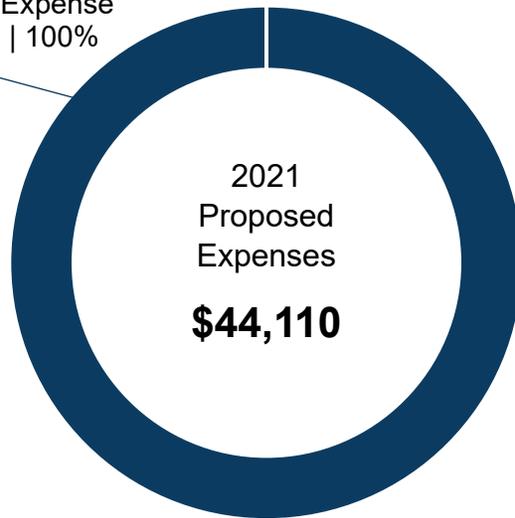
Durham Region Durham Budget 2021	Quantity	New / Replacement	2021 Proposed Financing									2021 Proposed Budget	Approved Funding Prior to 2021	Proposed 2022-2030	Total Proposed	
			Other	Reserve/ Reserve Funds	Industrial DCs	Institutional DCs	Commercial DCs	New Residential DCs	Subsidy /Grant	Debenture	User Rate					
Utility Finance																
Information Technology																
Laptop Computer	14	Replacement	-	-	-	-	-	-	-	-	-	30	30	-	414	444
Information Technology Subtotal			-	-	-	-	-	-	-	-	-	30	30	-	414	444
Utility Finance Subtotal			-	-	-	-	-	-	-	-	-	30	30	-	414	444
Total Capital Utility Finance			-	-	-	-	-	-	-	-	-	30	30	-	414	444

* Note that Utility Finance is funded 50% by Water Supply and 50% by Sanitary Sewerage



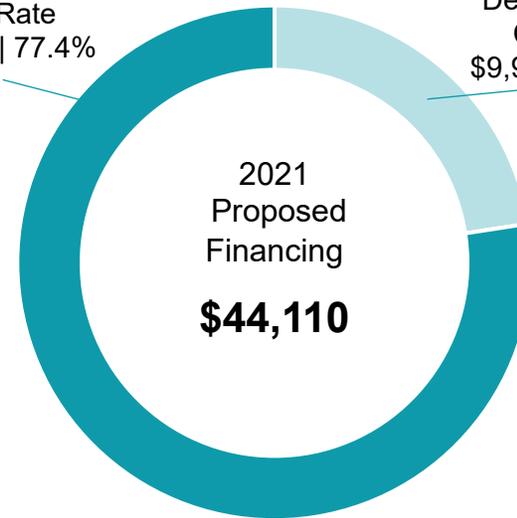
Corporate costs required to support the on-going operation of the Water Supply and Sanitary Sewerage systems

Program Expense
\$44,110 | 100%



User Rate
\$34,158 | 77.4%

Development
Charges
\$9,952 | 22.6%



Amounts are in \$,000's

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Major Programs and Services

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**Financial Details: Summary by Account
Summary by Program**

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Major Programs and Services

Corporate Non-Departmental – Water Supply

Providing financial assets and corporate resources to support the ongoing operation of the water supply system.

Corporate Non-Departmental – Sanitary Sewerage

Providing financial assets and corporate resources to support the ongoing operation of the sanitary sewerage system.

Strategic Priorities

For 2021 the key priority and planned action focus on:

Service Excellence



Responsible management of Regional assets to ensure uninterrupted support to the water supply and sanitary sewerage system.

Key Targets for 2021

- Continue to increase financing available for the rehabilitation and renewal of the Region's infrastructure in alignment with the Asset Management Plan and prudent asset management practices to maximize the value of assets over their life cycle
- Provide corporate resources to support the operation of the water supply system, effectively serving 180,300 water customers
- Provide corporate resources to support the operation of the sanitary sewerage system, effectively serving 175,500 sewer clients

Financial Details: Summary by Account (\$,000's)

 Durham Budget 2021	2020 Estimated Actuals	2020 Approved Budget	2021 Proposed Budget	Variance	
				\$	%
Expenses					
Operating Expenses					
Communications	72	102	102		
Debt Charges	22,705	22,705	15,792		
Professional Services	157	162	200		
Financial Expenses	1,303	1,434	1,425		
Contribution to Reserves / Reserve Funds	18,124	18,124	18,521		
Operating Expenses Subtotal	42,361	42,527	36,040	(6,487)	(15.3%)
Internal Transfers & Recoveries					
Net Corporate Charge	7,753	7,753	8,070		
Internal Transfers & Recoveries Subtotal	7,753	7,753	8,070	317	4.1%
Total Expenses	50,114	50,280	44,110	(6,170)	(12.3%)

Financial Details: Summary by Account (\$,000's) Continued

 Durham Budget 2021	2020 Estimated Actuals	2020 Approved Budget	2021 Proposed Budget	Variance	
				\$	%
Revenues					
Operating Revenue					
DC Revenues - for Debt Charges	(14,178)	(14,177)	(9,952)		
Recovery Sanitary Sewerage					
Stabilization Reserve Fund	(1,750)	(1,750)	-		
Operating Revenue Subtotal	(15,928)	(15,927)	(9,952)	5,975	37.5%
Total Revenues	(15,928)	(15,927)	(9,952)	5,975	37.5%
Corporate Non-Departmental - Water Supply and Sanitary Sewerage User Rate Requirement	34,186	34,353	34,158	(195)	(0.6%)

Financial Details: Summary by Program (\$,000's)

 Durham Budget 2021	2020 Estimated Actuals	2020 Approved Budgets					2021 Proposed Budgets					Variance	
		Operating Expenses	Gross Capital	Subsidy Funding	Other Funding	Approved Budget	Operating Expenses	Gross Capital	Subsidy Funding	Other Funding	Proposed Budget	\$	%
Corporate Non-Departmental – Water Supply Subtotal	13,270	13,923	-	-	(564)	13,359	13,845	-	-	(437)	13,408	49	0.4%
Corporate Non-Departmental – Sanitary Sewerage Subtotal	20,918	36,357	-	-	(15,363)	20,994	30,265	-	-	(9,515)	20,750	(244)	(1.2%)
Total Corporate Non-Departmental - Water Supply and Sanitary Sewerage	34,188	50,280	-	-	(15,927)	34,353	44,110	-	-	(9,952)	34,158	(195)	(0.6%)

Details of Budget Changes

Base Adjustments	2021 Impact (\$ 000's)
Economic increases	316
Inflationary increases	485
Line-by-line review savings	(59)
Removal of a one-time contribution from the User Rate Stabilization Reserve Fund that was required in 2020 to achieve the amendment by Finance and Administration Committee and Council to reduce the original recommended sanitary sewerage rate increase of 4.0 per cent to 2.3 per cent	1,750
Decrease in debt servicing costs funded by user rates resulting from lower than anticipated interest rates for the interfund note established in 2020 for the Newcastle Water Supply Plant	(255)
Decrease in debt servicing costs funded by user rates resulting from the retiring of debt for the Courtice Water Pollution Control Plant and the York Durham Sewer System	(2,432)
Base Adjustments Subtotal	(195)
Net Changes	(195)

Looking Forward

The Corporate Non-Departmental program (water supply and sanitary sewerage) is instrumental in delivering on the Region's commitment to provide exceptional value to Durham taxpayers in a responsive, effective and fiscally sustainable manner by supporting the on-going operation of critical infrastructure and the provision of front-line services to residents.