The Regional Municipality of Durham

Finance & Administration Committee Agenda

Council Chambers
Regional Headquarters Building
605 Rossland Road East, Whitby

Tuesday, December 8, 2020 **9:30 AM**

Please note: In an effort to help mitigate the spread of COVID-19, and to generally comply with the directions from the Government of Ontario, it is requested in the strongest terms that Members participate in the meeting electronically. Regional Headquarters is closed to the public, all members of the public may view the Committee meeting via live streaming, instead of attending the meeting in person. If you wish to register as a delegate regarding an agenda item, you may register in advance of the meeting by noon on the day prior to the meeting by emailing delegations@durham.ca and will be provided with the details to delegate electronically.

1. Roll Call

2. Declarations of Interest

3. Adoption of Minutes

A) Finance & Administration Committee meeting – November 10, 2020 Pages 5 - 12

4. Statutory Public Meetings

There are no statutory public meetings

5. Delegations

5.1 Susan deRyk, Interim President & Chief Executive Officer, Lakeridge Health re: Lakeridge Health Master Plan and Bowmanville Hospital Redevelopment

6. Presentations

6.1 Nancy Taylor, Commissioner of Finance, Nicole Pincombe, Director, Business Planning & Budgets and John Presta, Director of Environmental Services re: Report #2020-F-24: 2021 Business Plans and Budgets and Nine Year Capital Forecasts for the Consolidated Water Supply and Sanitary Sewerage Systems [Item 8.2 C)]; and, Report #2020-F-25: Recommended 2021 Water and Sanitary Sewer User Rates [Item 8.2 D)]

7. Administration

7.1 Correspondence

7.2 Reports

There are no Administration Reports to be considered

8. Finance

8.1 Correspondence

A) Correspondence from the Town of Ajax re: Support of Ambulatory Services at Ajax Pickering Hospital 13 - 15

Pulled from October 16, 2020 Council Information Package by Councillor Shaun Collier and Deferred at the November 10, 2020 Finance and Administration Committee meeting

Recommendation: Receive for information

B) Memorandum from the Works Committee re: Works Department – 2021 Water Supply and Sanitary Sewerage Business Plans and Budgets (2020-W-53) 16

Recommendation: Refer to consideration of Report #2020-F-24 [Item 8.2 C)]

8.2 Reports

A) Temporary Borrowing By-law for 2021 (2020-F-22) 17 - 18

B) 2021 Interim Regional Property Tax Levy (2020-F-23) 19 - 21

C) 2021 Business Plans and Budgets and Nine Year Capital Forecasts for the Consolidated Water Supply and Sanitary Sewerage Systems (2020-F-24) 22 – 43

Link to the Detailed Consolidated 2021 Business Plans and Budgets for Water Supply and Sanitary Sewerage Systems

D) Recommended 2021 Water and Sanitary Sewer User Rates (2020-F-25) 44 - 112

E) PRESTO Device Replacement (2020-F-26) 113 - 115

F) Durham Region Transit U-Pass Agreement Extension (2020-F-27) 116 - 119

G) Sole Source for Supplemental Operational Requirements for the On Demand Pilot for Durham Region Transit (2020-F-28) 120 - 123

9. Advisory Committee Resolutions

9.1 Durham Region Roundtable on Climate Change

A) Green Development Standards in the Region of Durham 124

Recommendation: Approval and subsequent recommendation to Regional Council

B) Mandate for a Renewed Durham Strategic Energy Alliance 124

Recommendation: Approval and subsequent recommendation to Regional Council

10. Confidential Matters

10.1 Reports

A) Confidential Report of the Commissioner of Corporate Services – Labour Relations/Employee Negotiations with respect to the Canadian Union of Public Employees (“CUPE”), Local 1785 (2020-A-24) Under Separate Cover

11. Other Business

12. Date of Next Meeting

Tuesday, January 12, 2021 at 9:30 AM

13. Adjournment

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Written information (either paper or electronic) that you send to Durham Regional Council or Committees, including home address, phone numbers and email addresses, will become part of the public record. This also includes oral submissions at meetings. If you have any questions about the collection of information, please contact the Regional Clerk/Director of Legislative Services.

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The Regional Municipality of Durham

MINUTES

FINANCE & ADMINISTRATION COMMITTEE

Tuesday, November 10, 2020

A regular meeting of the Finance & Administration Committee was held on Tuesday, November 10, 2020 in the Council Chambers, Regional Headquarters Building, 605 Rossland Road East, Whitby, Ontario at 9:30 AM. Electronic participation was offered for this meeting.

1. Roll Call

Present: Councillor Foster, Chair
Councillor Collier, Vice-Chair
Councillor Ashe
Councillor Drew
Councillor Leahy
Councillor Mulcahy
Councillor Nicholson
Regional Chair Henry
***all members of Committee, expect Councillor Foster and Regional Chair Henry, participated electronically**

Also Present: Councillor Highet
Councillor Smith

Staff Present: E. Baxter-Trahair, Chief Administrative Officer
D. Beaton, Commissioner of Corporate Services
N. Taylor, Commissioner of Finance
R. Inacio, Systems Support Specialist, Corporate Services - IT
R. Walton, Regional Clerk/Director of Legislative Services, attended for part of the meeting
L. Fleury, Legislative Officer and Deputy Clerk Pro Tem, Corporate Services – Legislative Services

2. Declarations of Interest

There were no declarations of interest.

Chair Foster asked Commissioner Taylor to provide an update on the Region's Budget virtual Townhall meeting. N. Taylor advised that the event was held on October 21, 2020 and over 12,000 residents participated.

3. Adoption of Minutes

Moved by Councillor Leahy, Seconded by Councillor Drew,
(81) That the minutes of the regular Finance & Administration Committee meeting held on Tuesday, October 13, 2020, be adopted.
CARRIED

4. Statutory Public Meetings

There were no statutory public meetings.

5. Delegations

5.1 Lorraine Sunstrum-Mann, Chief Executive Officer and Harry Deeg, Director of Finance and Administration, Grandview Children's Centre re: Grandview Children's Centre Presentation under the Region's Community Investment Grant Policy

Lorraine Sunstrum-Mann and Harry Deeg, participating electronically, appeared before the Committee with respect to the Grandview Children's Centre Presentation under the Region's Community Investment Grant Policy. A copy of their presentation was distributed electronically to the Committee.

Highlights of the presentation included:

- Our vision for the New Grandview
  - The new facility will be a Children's Treatment Centre that supports the seamless and coordinated provision of family-centred care for children and youth with physical, communication and developmental needs, and their families
- What does it take to build the new Grandview?
  - The P3 Model
  - Project Schedule
- Relocating Headquarters to Ajax
- Community Spaces
  - Pool and entrance
  - Meeting Rooms
  - Lobby program
  - Multi-use gym

    - Partner space
    - Exterior program
- A sense of “place”
    - Architectural identity
    - Architectural interiors
- Investing in our Community’s future
    - Region of Durham’s support
    - Community Investment Grant
    - The value for our community

L. Sunstrum-Mann stated that residents across all Durham communities continue to understand how important this facility is to families and remain very generous supporters of Grandview Kids. She added that in 2015 they requested an estimated $3 million through their “Believe” fundraising campaign and since then the project has been finalized and approved. She advised that Grandview is now in the position to formally request the Region of Durham’s Community Investment Grant in the amount of $5,035,000. She added that the figure is based on 2020 finalization of Grandview’s total project costs and the Community Investment Grant eligibility criteria.

L. Sunstrum-Mann stated that the new Grandview closely aligns with and supports the Region’s strategic goals. She added that the new facility provides an opportunity to address a number of current challenges facing Grandview and their ability to serve Durham’s children and youth.

L. Sunstrum-Mann advised that the demand for Grandview services is now 20,000 Durham Region families per year and opening a community-based facility, supporting an integrated mix of childhood development, and paediatric rehabilitation activities is required. She stated that a full continuum of community-based integrated care can prevent client deterioration/complications and vulnerable families can access appropriate low acuity resources and reduce the burden to the healthcare system. She added that Durham Region’s Community Investment Grant will support them in making this vision reality for the tens of thousands (and counting) of children, youth and families who rely on the services offered by Grandview.

L. Sunstrum-Mann responded to questions from the Committee.

Moved by Councillor Collier, Seconded by Councillor Ashe,
(82) That the request from Grandview Children’s Centre for a Community Investment Grant in the amount of $5,035,000.00 be referred to the 2021 budget process.

CARRIED

6. Presentations

There were no presentations.

7. Administration

7.1 Correspondence

There were no communications to consider.

7.2 Reports

A) Additional Lieu Time in Compensation of Overtime – Management/Exempt – COVID-19 Related (2020-A-22)

Report #2020-A-22 from D. Beaton, Commissioner of Corporate Services, was received.

D. Beaton responded to a question with respect to what lower-tier municipalities are doing for management/exempt staff to compensate for additional time and effort during the COVID-19 Pandemic. D. Beaton advised that he will obtain the information on this prior to the November 25th Council meeting.

Chair Foster requested that E. Baxter-Trahair also speak to her CAO counterparts about what each municipality is doing differently during COVID-19.

Moved by Councillor Drew, Seconded by Councillor Nicholson,
(83) That we recommend to Council:

That approval be given to the Commissioner of Corporate Services, in consultation with the Chief Administrative Officer, to authorize an additional 70 hours of lieu time to Management Employees, up to the Director role, to compensate them for their additional documented time and efforts incurred in maintaining Regional operations during the Emergency Declaration period and the COVID-19 Response efforts to date.

CARRIED

B) Extension of Belden Cabling Standardization, to Meet Certifications Established for Networking and Voice Over Internet Protocol Installations (2020-A-23)

Report #2020-A-23 from D. Beaton, Commissioner of Corporate Services, was received.

Moved by Councillor Collier, Seconded by Councillor Leahy,
(84) That we recommend to Council:

That the standardization of Belden for replacement, upgrade, addition, and new implementation of networking and Voice over Internet Protocol cabling for

Regional facilities be extended for an additional five years, until November 30, 2025.

CARRIED

8. Finance

8.1 Correspondence

A) Information Report #2020-INFO-88: 2019 Annual Investment Report

Staff responded to questions about the Region's investment portfolio including changes in legislation; the current mix of investments; and whether using debt as a financing tool has been considered. N. Taylor advised that she hopes to report back in the Spring on changes to how the investment portfolio is managed and she added that the budget will provide a better capital financing forecast.

Moved by Councillor Collier, Seconded by Regional Chair Henry,
(85) That Information Report #2020-INFO-88: 2019 Annual Investment Report, be received for information.

CARRIED

B) Correspondence from the Town of Ajax re: Support of Ambulatory Services at Ajax Pickering Hospital

Discussion ensued with respect to the correspondence regarding support of ambulatory services at Ajax-Pickering hospital and whether there was further information available about this matter.

Moved by Councillor Collier, Seconded by Councillor Nicholson,
(86) That correspondence from the Town of Ajax, re: Support for Ambulatory Services at Ajax Pickering Hospital, be received for information.

DEFERRED
(See Following Motion)

Moved by Regional Chair Henry, Seconded by Councillor Leahy,
(87) That correspondence from the Town of Ajax, re: Support for Ambulatory Services at Ajax Pickering Hospital, be deferred to the December 8, 2020 Finance & Administration Committee meeting for consideration.

CARRIED

Staff advised that they will obtain further information on this prior to it being considered at the December Finance & Administration Committee meeting.

C) Information Report #2020-INFO-100: 2019 Federal Gas Tax Annual Report

Councillor Collier asked for information with respect to the status of the road building pilot with Regional waste materials. E. Baxter-Trahair advised that she will request a status update memo from the Works Department for the November 25th Council meeting.

Moved by Councillor Collier, Seconded by Councillor Mulcahy,
(88) That Information Report #2020-INFO-100: 2019 Federal Gas Tax Annual Report, be received for information.

CARRIED

D) Correspondence from the Municipal Finance Officers' Association of Ontario re: One-year extension of deadlines in O. Reg. 588/17: Asset Management Planning for Municipal Infrastructure under the Infrastructure for Jobs and Prosperity Act, 2015 and Sample Resolution

Moved by Regional Chair Henry, Seconded by Councillor Mulcahy,
(89) That we recommend to Council:

Whereas the COVID-19 pandemic has had significant financial and operational impacts on Ontario municipalities;

And whereas municipalities have had to divert resources towards addressing the immediate needs of the pandemic and maintaining service delivery standards despite evolving restrictions and limited funds;

And whereas the Government of Ontario has delayed timelines with respect to several pieces of legislation;

And whereas the Government of Ontario has regulated municipal asset management through O. Reg. 588/17: Asset Management Planning for Municipal Infrastructure under the Infrastructure for Jobs and Prosperity Act, 2015;

And whereas O. Reg. 588/17 mandates that every municipality shall prepare an asset management plan in respect of its core municipal infrastructure assets by July 1, 2021, and in respect of all of its other municipal infrastructure assets by July 1, 2023;

And whereas the key components of an asset management plan as required by the regulation are:

1. Infrastructure asset inventory
2. Levels of service
3. Lifecycle management and financial strategy

And whereas there is a concern amongst Municipal Finance Officers' Association of Ontario (MFOA) members and their municipalities that current capacity

challenges (redeployment of staff, and lack of available resources) will result in limitations for purposeful asset management planning;

And whereas Ontario municipalities do not anticipate the current capacity challenges to be resolved in the short-term;

Now therefore be it resolved that the Region of Durham supports MFOA's letter to the Ministry of Infrastructure requesting a one-year extension of deadlines in O. Reg. 588/17: Asset Management Planning for Municipal Infrastructure under the Infrastructure for Jobs and Prosperity Act, 2015; so that all municipalities can focus on the immediate needs of the pandemic and engage in municipal asset management planning when capacity challenges are resolved.

CARRIED

8.2 Reports

A) Banking Agreement, Bank Signing Authority and Electronic Banking Transactions By-law Update and Repeal of Petty Cash By-law (2020-F-21)

Report #2020-F-21 from N. Taylor, Commissioner of Finance, was received.

Moved by Councillor Nicholson, Seconded by Councillor Mulcahy,
(90) That we recommend to Council:

A) That the Regional Chair and Regional Clerk be authorized to sign the Royal Bank of Canada Resolution regarding Banking form;

B) That a replacement by-law to designate persons for the purpose of signing cheques issued by the Region of Durham and to authorize electronic banking activities, generally in the form outlined in Attachment #1 to Report #2020-F-21 of the Commissioner of Finance, be approved and By-law #57-2008 be repealed;

C) That By-law #18-73, as amended by By-law #108-88, being a by-law governing the petty cash and imprest funds, be repealed; and,

D) That the Director of Legal Services be directed to prepare the necessary by-law.

CARRIED

9. Advisory Committee Resolutions

There were no advisory committee resolutions to be considered.

10. Confidential Matters

There were no confidential matters to be considered.

11. Other Business

11.1 Lakeridge Health Corporation Funding Requests

Regional Chair Henry noted that there are several upcoming projects to be undertaken by the Lakeridge Health Corporation and there is a need to discuss the long-term financial requests that may be coming forward. He stated that the Region previously had representation on the Lakeridge Health Board and suggested that perhaps this needs to be revisited. Regional Chair Henry requested that staff provide information at the next Committee meeting with respect to the potential future funding requests from Lakeridge Health Corporation and the possibility of having a Regional representative on their Board.

11.2 Provincial Budget – Business Education Tax

Chair Foster asked N. Taylor to provide information on the potential ramifications to the Region due to the reduction in the Business Education Tax rate. N. Taylor advised that despite the benefits, there will be a resulting negative impact to municipalities who have Payment in Lieu properties, particularly those with nuclear facilities. Councillor Ashe advised that Pickering has contacted MPP Bethlenfalvy in this regard. The potential for a motion to be presented to Regional Council on this matter was discussed.

12. Date of Next Meeting

The next regularly scheduled Finance & Administration Committee meeting will be held on Tuesday, December 8, 2020 at 9:30 AM in Council Chambers, Regional Headquarters Building, 605 Rossland Road East, Whitby.

13. Adjournment

Moved by Councillor Collier, Seconded by Councillor Mulcahy,
(91) That the meeting be adjourned.
CARRIED

The meeting adjourned at 10:27 AM

Respectfully submitted,

A. Foster, Chair

L. Fleury, Legislative Officer

TOWN OF AJAX
65 Harwood Avenue South
Ajax ON L1S 3S9
www.ajax.ca

The Honorable Doug Ford
Premier of Ontario
Legislative Building
Queen's Park
Toronto ON M7A 1A1
premier@ontario.ca

Sent by E-Mail

October 7, 2020

Re: **Support of ambulatory services at Ajax Pickering Hospital**

The following resolution was passed by Ajax Town Council at its special meeting held October 5, 2020:

WHEREAS Ajax Council and the Town of Ajax have been and remain strong supporters of our local Lakeridge Health hospital, and show this support by contributing annually through ongoing financial support totaling $1.6 million over 10 years, participating in the Mayors' Charity Golf Classic which has raised $4 million over 25 years, and continued advocacy efforts; and

WHEREAS Council has been advised that Lakeridge Health Corporation, through its regular business planning process, is working with internal members across the Lakeridge Health system to explore new and innovative ways to provide care; and

WHEREAS it is our understanding that one area of focus is the ambulatory care unit (ACU), which plays a critical role in diverting patients from emergency departments and supporting safe, and timely discharges; and

WHEREAS the Bowmanville, Oshawa and Ajax ACU sites are already functioning at 100% capacity and maximum efficiency with waiting lists for priority cases; and

WHEREAS it has been shared that the corporation is considering a 20% reduction to the ambulatory care budget, which would result in a cut of $625k to the Ajax Pickering Hospital ACU (which represents 67% of the total proposed cut of $975k), and have a far greater impact on patients, nursing staff and overall hospital care than the total 0.01% savings represented; and

WHEREAS any cuts in resources will have a direct effect on the high volume of patients that are seen and treated every day at the Ajax Pickering Hospital ACU, which provides critical services such as 24/7/365 emergency support, fracture clinics, shoulder clinics and plastic surgery program and specialty services and programs;

THEREFORE BE IT RESOLVED that:

1. Ajax Council reaffirms their unwavering support for the Ajax Pickering Hospital and the doctors that provide quality, timely and compassionate care to residents; and

2. That Ajax Council urges the leadership of Lakeridge Health to reconsider reducing resources at the ambulatory care units, knowing it will have serious consequences; and

3. That Lakeridge Health involve hospital and surgery leads in any discussions regarding service cuts and/or new approaches to care; and

4. That this motion be distributed to Premier Ford, Minister Elliott, all Durham Region MPPs and Durham Region municipalities.

If you require further information please contact me at 905-619-2529 ext. 3347 or sarah.moore@ajax.ca.

Sincerely,

Sarah Moore
Acting Manager of Legislative Services/Deputy Clerk

Copy: Mayor S. Collier
Regional Councillor M. Crawford
Minister C. Elliott
All Durham Region MPPs
All Durham Region municipalities

E-mail

Please see the attached resolution regarding the above subject matter that was endorsed by the Town of Ajax at our Council meeting held September 21, 2020.

Regards

Premier Ford
doug.fordco@pc.ola.org

Hon. Mark Holland, MP
Mark.Holland@parl.gc.ca

Hon. Rod Phillips, MPP
rod.phillips@pc.ola.org

Region of Durham
Chair@durham.ca

all Durham municipalities

Federation of Canadian Municipalities
info@fcm.ca

Association of Municipalities of Ontario
amo@amo.on.ca

If this information is required in an accessible format, please contact 1-800-372-1102 ext. 2097.

Memorandum

TO: Finance and Administration Committee

FROM: Sarah Glover, Committee Clerk

DATE: December 8, 2020

RE: Resolution adopted by the Works Committee at their meeting held on December 2, 2020

Corporate Services
Department –
Legislative Services

Works Department – 2021 Water Supply and Sanitary Sewerage Business Plans and Budgets (2020-W-53) [Item 8.2 C)]

Moved by Regional Chair Henry, Seconded by Councillor Smith,
That the Works Committee recommends to the Finance and Administration Committee for subsequent recommendation to Regional Council:

That the Works Department's portion of the 2021 Water Supply System and Sanitary Sewerage System Business Plans and Budgets be approved.

CARRIED

Sarah Glover

S. Glover
Committee Clerk

c. N. Pincombe, Director, Business Planning and Budgets
N. Taylor, Commissioner of Finance
R. Walton, Director, Legislative Services, Regional Clerk

If this information is required in an accessible format, please contact 1-800-372-1102 ext. 2304

The Regional Municipality of Durham Report

To:	Finance and Administration Committee
From:	Commissioner of Finance
Report:	#2020-F-22
Date:	December 8, 2020

Subject:

Temporary Borrowing By-Law for 2021

Recommendation:

That the Finance and Administration Committee recommends to Regional Council:

A) That the Regional Chair and the Treasurer be authorized in 2021 to borrow funds, not to exceed $500 million, in order to meet current expenditures and liabilities until such time as the general tax revenues and other revenues of the Region are received; and

B) That approval be granted for the requisite by-law(s).

Report:

1. Purpose

1.1 The purpose of this report is to obtain approval for the Region's 2021 Temporary Borrowing By-law.

2. Temporary Borrowing By-law

2.1 Each year, Regional Council is requested to grant authority to the Regional Chair and the Treasurer to borrow, on a temporary basis, funds that may be required to meet current expenditures and liabilities of the Region prior to the receipt of the Regional property taxes and other revenues. These borrowings may be in the form of external and/or internal sources including interfund transactions.

2.2 The legal authority for these borrowings is pursuant to Section 407 of the Municipal Act and allows municipalities to borrow amounts between January 1st and September 30th not to exceed 50% of total estimated annual revenues and to borrow amounts between October 1st and December 31st not to exceed 25% of total estimated annual revenues.

2.3 Based on the level of 2020 planned expenditures, the upper borrowing limit as dictated by the Province would be no more than $1.22 billion. Notwithstanding the Provincial limit, a review of potential Regional financial requirements for 2021 indicates that a maximum limit of $500 million, consistent with the 2020 limit, should be adequate for all purposes including internal interfund loans.

2.4 Historically, it has not been necessary for the Chair and the Treasurer to exercise this authority.

3. Relationship to Strategic Plan

3.1 This report aligns with/addresses the following strategic goals and priorities in the Durham Region Strategic Plan:

a. Goal 5.1 Service Excellence – Optimize Resources and Partnerships to Delivery Exceptional Quality Services and Value – by responsibly managing the Region's financial assets to deliver critical infrastructure and services for current and future generations.

4. Conclusion

4.1 The temporary borrowing authority is a legal requirement permitting the internal lending and borrowing of funds and provides the Region with contingency borrowing capacity in the event of unknown circumstances related to the collection of the Region's revenues.

4.2 The proposed 2021 limit of $500 million remains at the level approved for 2020.

Respectfully submitted,

Original Signed By
Nancy Taylor, BBA, CPA, CA
Commissioner of Finance

Recommended for Presentation to Committee

Original Signed By
Elaine C. Baxter-Trahair
Chief Administrative Officer

If this information is required in an accessible format, please contact 1-800-372-1102 ext. 2304

The Regional Municipality of Durham Report

To:	Finance and Administration Committee
From:	Commissioner of Finance
Report:	#2020-F-23
Date:	December 8, 2020

Subject:

2021 Interim Regional Property Tax Levy

Recommendation:

That the Finance and Administration Committee recommends to Regional Council:

A) That a 2021 interim Regional property tax levy be imposed on the lower-tier municipalities for all property tax classes;

B) That the amount due from each lower-tier municipality is estimated to be equivalent to 50% of their respective share of the Regional property taxes collected in 2020;

C) That the 2021 interim Regional property tax levy be paid by the lower-tier municipalities seven days subsequent to the instalment due dates established by each lower-tier municipality for the collection of their respective interim municipal property taxes;

D) That the Regional Clerk be requested to advise the lower-tier municipalities of the imposition of the 2021 interim Regional property tax levy for all property tax classes; and,

E) That approval be granted for the requisite by-law.

Report:

1. Purpose

1.1 The purpose of this report is to seek authorization for the 2021 interim property tax levy in advance of the approval of the 2021 Business Plans and Budgets.

2. Background

2.1 Section 316 (1) of the Municipal Act, 2001 provides that an upper-tier municipality may requisition, prior to the adoption of the final budget, from each lower-tier municipality, an amount not exceeding 50% of the prior year's final requisition adjusted for deferrals, cancellations or other relief.

2.2 A by-law adopted by an upper-tier municipality may require that sums requisitioned as an interim levy are to be remitted to the upper-tier municipality on specific dates.

3. Payments by the Lower-Tier Municipalities

3.1 Attachment #1 provides an estimate of the 2021 interim Regional property tax levy by each lower-tier municipality payable to the Region, based on 50% of the Regional property taxes requisitioned in 2020.

3.2 In order that the lower-tier municipalities do not experience cash shortages, it is recommended that the interim amounts owing to the Region for 2021 be due seven days subsequent to the due dates for payment of property taxes by individual property owners as established by each lower-tier municipality.

4. Relationship to Strategic Plan

4.1 This report aligns with/addresses the following strategic goals and priorities in the Durham Region Strategic Plan:

a. Goal 5.1 Service Excellence – to provide exceptional value to Durham taxpayers through responsive, effective and financially sustainable service delivery.

5. Conclusion

5.1 The 2021 interim Regional property tax levy is consistent with 2020 and is in line with the best practices of other Regional jurisdictions.

6. Attachments

6.1 Attachment #1: Estimate of 2021 Regional Interim Property Tax Levies

Respectfully submitted,

Original Signed By
Nancy Taylor, BBA, CPA, CA
Commissioner of Finance

Recommended for Presentation to Committee

Original Signed By
Elaine C. Baxter-Trahair
Chief Administrative Officer

The Regional Municipality of Durham
Estimate of 2021 Regional Interim Property Tax Levies
($,000's)

	Oshawa	Pickering	Ajax	Clarington	Whitby	Brock	Scugog	Uxbridge	Total
First (1st) Installment	36,945	30,081	31,336	22,649	37,043	2,833	6,298	7,401	174,586
Second (2nd) Installment	36,945	30,081	31,336	22,649	37,043	2,833	6,298	7,401	174,586
Total of Installments	**73,890**	**60,162**	**62,672**	**45,298**	**74,086**	**5,666**	**12,596**	**14,802**	**349,172**

Note:

(1) Includes General, Transit and Solid Waste Management Purposes

If this information is required in an accessible format, please contact 1-800-372-1102, ext. 2304

The Regional Municipality of Durham
Report

To:	Finance and Administration Committee
From:	Commissioner of Finance
Report:	#2020-F-24
Date:	December 8, 2020

Subject:

2021 Business Plans and Budgets and Nine Year Capital Forecasts for the Consolidated Water Supply and Sanitary Sewerage Systems

Recommendations:

That the Finance and Administration Committee recommends to Regional Council:

A) That the 2021 Business Plans and Budgets for the Water Supply System, with a total gross expenditure of $153.6 million (net user rate supported expenditure of $115.5 million) and related financing as set out below, be approved:

EXPENDITURES	2020 Gross Budget ($ 000's)	2021 Gross Budget ($ 000's)	Variance Incr/(Decr) ($ 000's)
Operations:			
Watermain Cleaning and Repairs	3,493	3,691	198
Valves and Hydrants	2,991	3,042	51
Water Connections	4,186	4,281	95
Water Meters	542	562	20
Depot Operations	5,824	6,163	339
Plants East	3,151	3,368	217
Plants Central	14,131	14,226	95
Plants North	3,080	2,882	(198)
Sunvalley	29	29	-
Engineering and Staff Support	7,455	7,835	380
Facilities Management	7,615	7,514	(101)
Administration	319	335	16
Headquarters Shared Costs	1,100	1,125	25
Utility Finance	3,797	3,449	(348)
Share of Regional Corporate Costs	12,229	12,534	305
Subtotal Operations	69,942	71,036	1,094
Capital/Debt Charges:			
TCA Capital	4,732	4,905	173
Construction of Municipal Services	76,209	76,337	128
Debt Charges	1,694	1,311	(383)
Subtotal Capital/Debt Charges	82,635	82,553	(82)
TOTAL EXPENDITURES	**152,577**	**153,589**	**1,012**
FINANCING			
Contributions from Reserve Funds:			
Residential Development Charges - Growth Related Capital	20,823	26,536	5,713
Commercial Development Charges - Growth Related Capital	678	714	36
Industrial Development Charges - Growth Related Capital	-	1,460	1,460
Industrial Development Charges - Debt Charges	536	415	(121)
Institutional Development Charges - Debt Charges	28	22	(6)
Water Rate Stabilization Reserve Fund	952	-	(952)
Asset Management Reserve Fund	5,234	5,486	252
Servicing of Employment Lands	-	250	250
Equipment Replacement Reserve	35	-	(35)
Fees and Service Charges	2,910	3,185	275
Financing From Others:			
Region of York - Construction of Municipal Services	225	-	(225)
Oversizing Costs Related to Seaton/Federal Lands	7,540	-	(7,540)
Frontage Charges - Petition Recoverable	1,864	-	(1,864)
Financing From Non-User Revenue Sources	**40,825**	**38,068**	**(2,757)**
User Revenues Financing (including frontage charges)	**111,752**	**115,521**	**3,769**
TOTAL FINANCING	**152,577**	**153,589**	**1,012**

B) That the Nine Year Capital Forecast for 2022 to 2030 inclusive, in the amount of $1.3 billion as detailed in the Water Supply System Capital Budget, be received for information;

C) That the 2021 Current and Capital Business Plans and Budgets for the Sanitary Sewerage System with a total gross expenditure of $223.7 million (net user rate supported expenditure of $111.3 million) and related financing as set out below, be approved:

	2020 Gross Budget ($ 000's)	2021 Gross Budget ($ 000's)	Variance Incr/(Decr) ($ 000's)
EXPENDITURES			
Operations:			
Cleaning, Repairs and Maintenance Holes	2,033	2,143	110
Sewer Connections	3,254	3,418	164
Depot Operations	3,228	3,407	179
WPCPs and Pumping Stations	23,999	25,496	1,497
Duffin Creek WPCP	37,197	38,043	846
Regional Environmental Laboratory	2,864	3,083	219
Engineering and Staff Support	6,886	7,461	575
Facilities Management	8,273	8,595	322
Administration	322	338	16
Headquarters Shared Costs	1,100	1,125	25
Utility Finance	3,796	3,450	(346)
Share of Regional Corporate Costs	15,346	15,783	437
Subtotal Operations	108,298	112,342	4,044
Capital/Debt Charges:			
Duffin Creek WPCP - TCA Capital	947	1,767	820
Regional Environmental Lab - TCA Capital	586	196	(390)
TCA Capital	5,673	2,536	(3,137)
Construction of Municipal Services	68,950	92,418	23,468
Debt Charges	21,011	14,482	(6,529)
Subtotal Capital/Debt Charges	97,167	111,399	14,232
TOTAL EXPENDITURES	**205,465**	**223,741**	**18,276**
FINANCING			
Contributions from Reserve Funds:			
Residential Development Charges - Growth Related Capital	20,013	22,581	2,568
Residential Development Charges - Debt Charges	11,521	8,103	(3,418)
Commercial Development Charges - Growth Related Capital	1,275	1,455	180
Commercial Development Charges - Debt Charges	1,552	873	(679)
Industrial Development Charges - Growth Related Capital	-	1,707	1,707
Industrial Development Charges - Debt Charges	532	532	-
Institutional Development Charges - Debt Charges	8	8	-
Sanitary Sewer Rate Stabilization Reserve Fund	2,702	-	(2,702)
Asset Management Reserve Fund	8,646	9,049	403
Servicing of Employment Lands		968	968
Equipment Replacement Reserve	35	-	(35)
Regional Environmental Lab Equipment Replacement Reserve	-	160	160
Fees and Service Charges	7,001	6,870	(131)
Financing From Others:			
Federal Grant		15	15
Region of York - TCA	16,566	1,387	(15,179)
Region of York - Construction of Municipal Services	1,040	14,285	13,245
Oversizing Costs Related to Seaton/Federal Lands	-	14,792	14,792
Region of York - Operating	28,444	29,142	698
Region of York Environmental Lab Operations	168	441	273
Financing From Non-User Revenue Sources	**99,503**	**112,368**	**12,865**
User Revenues Financing (including frontage charges)	**105,962**	**111,373**	**5,411**
TOTAL FINANCING	**205,465**	**223,741**	**18,276**

D) That the Nine Year Capital Forecast for 2022 to 2030 inclusive, in the amount of $1.7 billion as detailed in the Sanitary Sewerage System Capital Budget, be received for information;

E) That capital project approval be granted for expenditures and financing for the 2021 capital projects detailed in the Appendixes within the 2021 Consolidated Water Supply and Sanitary Sewerage Systems Business Plans and Budgets, where contract awards are consistent with the Regional Budget Management Policy; and

F) That the necessary By-laws with respect to the 2021 Current and Capital Business Plans and Budgets for the Consolidated Water Supply and Sanitary Sewerage Systems be presented to Regional Council.

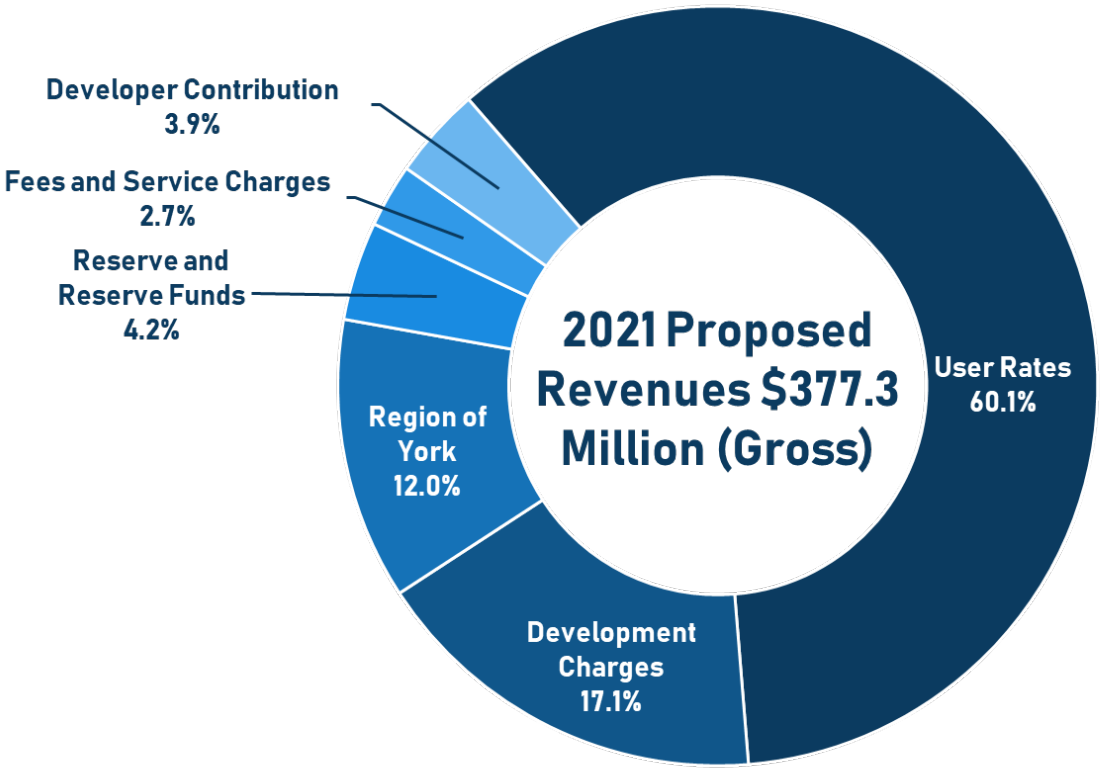
Report:

1. Overview of Recommended 2021 Water Supply and Sanitary Sewerage Systems Business Plans and Budgets

1.1 The consolidated gross 2021 Water Supply and Sanitary Sewerage Systems Business Plans and Budgets at $377.3 million ($153.6 million water and $223.7 million sewer) are included for approval and for recommendation to Regional Council on December 16, 2020. The recommended budgets require a total of $226.8 million in user rate revenue ($115.5 million water and $111.3 million sewer), consistent with the proposed water and sewer user rate increase of 0.75 per cent overall (0.40 per cent for water and 1.06 per cent for sewer).

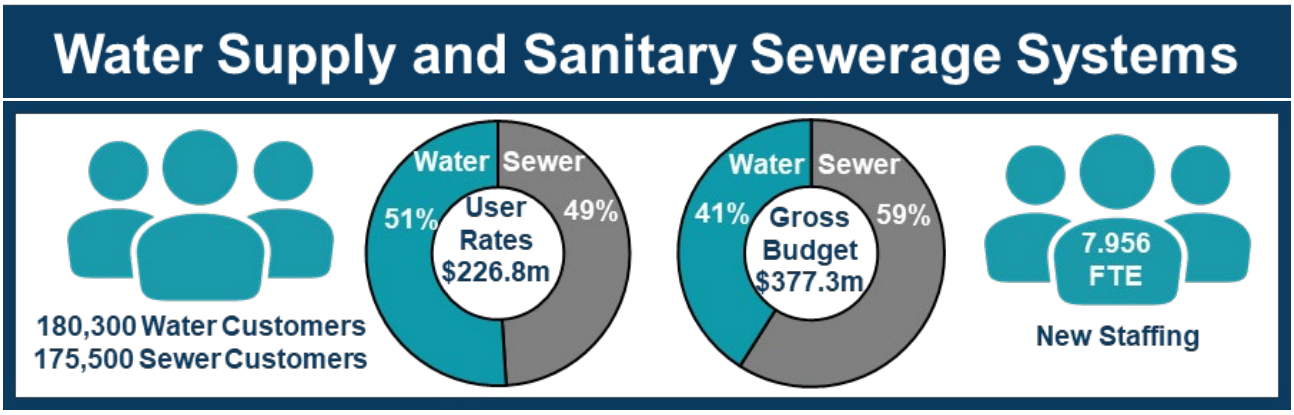
1.2 The 2021 Water Supply and Sanitary Sewerage Systems Business Plans and Budgets, with a proposed overall user rate increase of 0.75 per cent, provides for a number of base pressures and non-discretionary items. These are required for the continued operations of the water supply and sanitary sewerage systems in compliance with regulatory performance requirements. Strategic investments advance new infrastructure and operations to address growth and critical renewal and replacement of capital infrastructure to address state of good repair in alignment with asset management best practices.

1.3 The following pie chart provides greater detail on the financing of the $377.3 million Consolidated 2021 Water Supply and Sanitary Sewerage Systems Budget.



1.4 The 2021 Business Plans and Budgets for the Consolidated Water Supply and Sanitary Sewerage Systems, as recommended in this report, reflect the financial parameters of the proposed user rate increase (Report #2020-F-25).

2. Highlights of the 2021 Water Supply and Sanitary Sewerage Systems Business Plans and Budgets



Services:

Water Supply System

- Maintain and operate the Region's linear water distribution system in an efficient and cost effective manner for the Region's approximately 180,300 customers.
- Maintain all systems to meet regulations to ensure safe drinking water supply is delivered to the community.
- Plan, design, construct and operate water supply infrastructure.

Sanitary Sewerage System

- Maintain and operate the Region's Sewage Collection Systems to ensure safe and efficient treatment of effluent for the Region's approximately 175,500 customers.
- Maintain all systems to meet regulations to ensure the protection of the water environment.
- Plan, design, construct and operate sanitary sewerage infrastructure.

Utility Finance

- Set-up, maintain and issue billings for customer accounts related to water and sanitary sewerage. Receive, deposit and record approximately 787,000 water and sanitary sewer payments.
- 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.
- Obtain water meter readings associated with residential and non-residential customer accounts, as well as investigating and assisting customers to identify water consumption problems.

2020 Accomplishments:

Regional water supply and sanitary sewerage systems continue to provide safe drinking water and protect the water environment. Quality and environmental management systems support and integrate operations to meet regulatory performance requirements.

- 0 Boil Water Advisory days.
- 99.97 per cent compliance of drinking water test results.
- No sanitary sewage by-pass events.
- 100 per cent compliance of wastewater effluent results to protect water environment.
- Newcastle Water Supply Plant and Sanitary Sewage Pumping Station – construction commenced with completion target of 2023.
- Seaton Zone 4 Reservoir and Zone 5 Water Pumping Station (including Bulk Water Filling Station) – construction commenced with completion target of 2022.
- Restoration of Sludge Blending Tank at the Duffin Creek Water Pollution Control Plant
- Bayly Street Sanitary Sewage Pumping Station Mechanical Screen – construction commenced with completion target of April 2021.
- Regional Environmental Laboratory Upgrades – construction commenced with completion target of 2022.
- Data management modernization continues at Duffin Creek Water Pollution Control Plant with similar data management modernization efforts initiated in the Plant Operations Division for water supply and sanitary sewerage service areas.
- Launched the web-based customer portal, “My Durham Water”, enabling customers to have online access to their accounts to:
    - View billing information;
    - Enter meter readings online;
    - Choose from multiple payment options, including e-payments;
    - Receive bills online through paperless e-billing; and
    - Seamlessly access the Region’s website for rates and other water billing information.
- Recognized by CS Week for the Best Customer Information System (CIS) Implementation (Mid-Size) for the Region’s new water billing system and customer portal. This North American award recognizes implementations of customer information systems based on budget and schedule adherence, operational efficiency after go-live, innovative solutions and improved service levels.

Operating and Staffing:

- The proposed 2021 Operating Business Plans and Budgets for Water Supply and Sanitary Sewerage is $183.3 million (Water $71.0 million, Sewer $112.3 million).
- The following is a summary of the operating prioritizes and pressures:
  - Annualization of 6.601 FTE positions approved in 2020.
  - Additional temporary resources to deliver priority facility projects and support the eRIS project implementation for the modernization of data management at Corbett Creek WPCP.
  - Septic inspections to meet Source Water Protection regulatory requirements. These inspections are required once every five years.
  - Research and development of the “Durham Standard”, a guidance document for the construction and renovation of Regional facilities including measures to advance the Region’s climate change and energy conservation initiatives.
  - Modernization of the Region’s Business Planning and Budget process including system modernization.
  - Expand meter reading by continuing the transition to meter readers and the installation of fixed network radio frequency data collectors to improve the accuracy of readings and to assess water consumption trends.
- Priority staffing of 9 positions, shared with Works – General Tax and Solid Waste Management (5.047 FTE in Water Supply and 2.909 FTE in Sanitary Sewerage) at a combined 2021 cost of $713k or $1.123 million annualized for the Water Supply and Sanitary Sewerage Systems share. Details on the proposed positions are as follows:
  - Two 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. These two positions are solely for Water Supply (2.00 FTE) (Annualized cost of $236k).
  - Project Manager responsible for the delivery of all employment lands servicing projects. This position received pre-budget approval in principle by Regional Council through Report 2020-COW-23. This position is shared between Water Supply (0.530 FTE) and Sanitary Sewer (0.470 FTE) (Annualized cost of $166k).
  - Two Project Supervisors to support the review and coordination of development approvals. These two positions are shared between Water Supply (1.06 FTE) and Sanitary Sewer (0.940 FTE) (Annualized cost of $303k).
  - Project Supervisor to support the design of environmental services. This position is shared between Water Supply (0.530 FTE) and Sanitary Sewer (0.470 FTE) (Annualized cost of $151k).

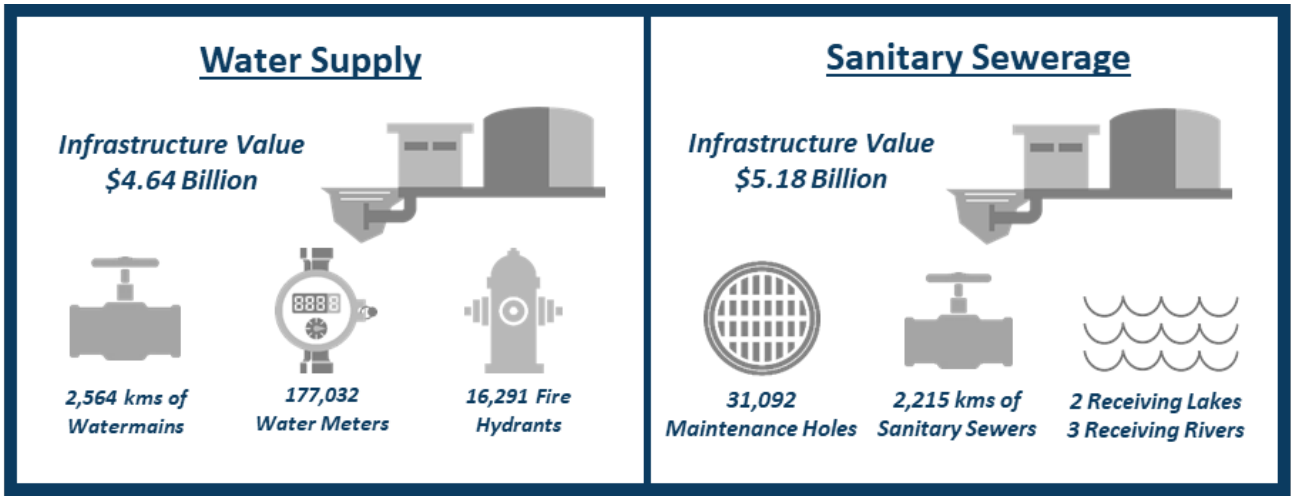
Operating and Staffing:

- Senior Project Coordinator to support design reviews, tenders and supervisor of capital construction budgets and deadlines. This position is shared with General Tax (0.358 FTE), Water Supply (0.385 FTE) and Sanitary Sewer (0.257 FTE) (Annualized cost of $78k).
- Project Manager to provide leadership to capital facility projects including new builds, state of good repair, expansions and renovations. This position is shared with General Tax (0.288 FTE), Water Supply (0.271 FTE), Sanitary Sewer (0.386 FTE) and Solid Waste (0.055 FTE). (Annualized cost of $109k).
- Works Technician 4 to support the delivery of capital facility projects including new builds, state of good repair, expansions and renovations. This position is shared with General Tax (0.288 FTE), Water Supply (0.271 FTE), Sanitary Sewer (0.386 FTE) and Solid Waste (0.055 FTE) (Annualized cost of $80k).

Risks, Uncertainties and Future Pressures:

- Financial impact of works needed to comply with Provincial and Federal Regulatory requirements associated with the Region's water supply and water pollution control plants (i.e. the *Clean Water Act*, and the *Lake Simcoe Protection Act*.
- Potential for further reduction in water usage resulting in lower revenue, without corresponding cost reductions.
- Market price impacts of volatility for input commodities including energy and chemicals.
- Growth across the Region, including development of several new communities in Seaton, West Whitby, North Oshawa, Bowmanville and Newcastle Village, that will increase the demand for services to support residents and businesses as well as the operational and maintenance requirements for Regional infrastructure.
- Asset management program investment requirements to replace aging and failing infrastructure which has reached or passed the end of its useful life.
- Impact of climate change on water and sanitary sewer systems infrastructure investment levels. Changing and unpredictable weather patterns impacting treatment operations as well as preventative and reactive maintenance activities for the regional water supply and sanitary sewerage linear infrastructure network.
- Annualization of new positions proposed in 2021 Water Supply and Sanitary Sewerage Systems Business Plans and Budgets will result in a $410k increase ($264k Water Supply and $146k Sanitary Sewerage) in the 2022 Business Plans and Budgets.

3. 2021 – 2030 Total Capital and Financing Plan



3.1 The 2021 and nine year Water Supply and Sanitary Sewerage Capital Forecast (2022 – 2030) is approximately $3.14 billion (approximately $1.35 billion for water supply and $1.79 billion for sanitary sewerage) as outlined in Table One.

Table One
Water Supply and Sanitary Sewerage Total Capital Forecast and Preliminary Financing Plan

Water Supply (in millions)	Proposed	Forecast					
Expenditures	**2021**	**2022**	**2023**	**2024**	**2025**	**2026 to 2030**	**2021 to 2030 Total**
Total Capital	$ 81.2	$ 235.4	$ 166.8	$ 326.9	$ 124.9	$ 413.9	**$ 1,349.2**
Expenditures Total	**$ 81.2**	**$ 235.4**	**$ 166.8**	**$ 326.9**	**$ 124.9**	**$ 413.9**	**$ 1,349.2**

Financing	**2021**	**2022**	**2023**	**2024**	**2025**	**2026 to 2030**	**2021 to 2030 Total**
Development Charges	$ 28.7	$ 143.1	$ 65.9	$ 34.8	$ 25.7	$ 92.0	**$ 390.1**
Asset Management Reserve Fund	$ 5.5	$ 5.6	$ 10.7	$ 5.9	$ 6.1	$ 32.6	**$ 66.4**
Treatment Plant / Rate Stabilization RF	$ -	$ -	$ 13.6	$ 53.0	$ -	$ 19.5	**$ 86.2**
Debenture Proceeds	$ -	$ -	$ 9.2	$ 126.0	$ 28.6	$ 40.0	**$ 203.9**
Servicing Of Employment Lands RF	$ 0.3						**$ 0.3**
Other Financing	$ -	$ 7.0	$ 0.0	$ 57.1	$ 0.2	$ 4.1	**$ 68.5**
User Revenues	$ 46.8	$ 79.7	$ 67.4	$ 50.1	$ 64.4	$ 225.7	**$ 534.0**
Financing Total	**$ 81.2**	**$ 235.4**	**$ 166.8**	**$ 326.9**	**$ 124.9**	**$ 413.9**	**$ 1,349.2**

Note: Totals in rows and columns may not add due to rounding

Sanitary Sewerage (in millions)	Proposed	Forecast					
Expenditures	**2021**	**2022**	**2023**	**2024**	**2025**	**2026 to 2030**	**2021 to 2030 Total**
Total Capital	$ 96.9	$ 288.6	$ 220.0	$ 162.9	$ 122.8	$ 904.7	**$ 1,796.0**
Expenditures Total	**$ 96.9**	**$ 288.6**	**$ 220.0**	**$ 162.9**	**$ 122.8**	**$ 904.7**	**$ 1,796.0**
Financing	**2021**	**2022**	**2023**	**2024**	**2025**	**2026 to 2030**	**2021 to 2030 Total**
Development Charges	$ 25.7	$ 46.6	$ 37.6	$ 22.3	$ 18.2	$ 72.8	**$ 223.3**
Servicing Of Employment Lands RF	$ 1.0						**$ 1.0**
Asset Management Reserve Fund	$ 9.0	$ 21.6	$ 9.5	$ 9.7	$ 10.0	$ 53.8	**$ 113.7**
Treatment Plant / Rate Stabilization RF	$ -	$ 21.1	$ 27.0	$ 16.8	$ -	$ 65.2	**$ 130.0**
Environmental Lab Reserve Fund	$ 0.2					$ -	**$ 0.2**
Debenture Proceeds	$ -	$ 48.8	$ 53.9	$ 32.8	$ -	$ 123.0	**$ 258.5**
Other Financing	$ 30.5	$ 114.5	$ 49.9	$ 23.8	$ 17.6	$ 240.5	**$ 476.9**
User Revenues	$ 30.5	$ 35.9	$ 42.1	$ 57.6	$ 76.9	$ 349.4	**$ 592.4**
Financing Total	**$ 96.9**	**$ 288.6**	**$ 220.0**	**$ 162.9**	**$ 122.8**	**$ 904.7**	**$ 1,796.0**

Note: Totals in rows and columns may not add due to rounding

4. Proposed 2021 Water Supply and Sanitary Sewerage Capital Budget and Financing

2021 Water Supply and Sanitary Sewerage Capital Budgets

4.1 The proposed 2021 Water Supply ($81.2 million) and Sanitary Sewerage ($96.9 million) Capital Budgets:

a) invest in new infrastructure to address anticipated growth;

b) reflect Council's pre-approved 2021 strategic investments in water supply and sanitary sewer infrastructure to pre-service designated employment areas (through approval of 2020-COW-23);

c) address infrastructure rehabilitation, renewal and replacement requirements based on an asset management approach;

d) ensure regulatory compliance;

e) invest in infrastructure addressing climate change mitigation and adaptation; and

f) allow all capital projects ready for construction to proceed.

4.2 A full listing of the proposed 2021 capital projects and associated financing are included in the proposed 2021 Consolidated Water Supply and Sanitary Sewerage Business Plans and Budgets.

Regional Investments in Pre-Servicing Designated Employment Areas and in New Expansion Infrastructure to Service Growth

4.3 The Region coordinated a study with area municipal staff to identify a priority list of employment lands requiring servicing. In September 2020, Regional Council approved a strategy to address the servicing of the priority list of employment lands (Report 2020-COW-23). The strategy approved advancing the EA and design work for four projects at an estimated cost of $2.35 million to be funded by development charges ($1.13 million) and the servicing of employment lands reserve fund ($1.22 million). These projects and financing have been included in the proposed 2021 Water Supply and Sanitary Sewerage Capital Budget.

4.4 At the Committee of the Whole meeting on September 16, 2020, the following motions were referred to the 2021 Water Supply System and Sanitary Sewerage System Budget process:

a) Detailed design and construction of an extension of the Zone 3 watermain and sanitary sewer north along Thornton Road from Conlin Road (conceptual estimate $5.1 million) with the Northwood Employment Area in the City of Oshawa so that it occurs concurrently with the construction of the road;

b) Detailed design and construction of the following infrastructure to service the Port Perry Employment Area (conceptional estimate $16.8 million);

- A new sanitary sewage pumping station near Reach Street and north Port Road;
- A forcemain from the new sanitary sewage pumping station to the Nonquon Water Pollution Control Plant;
- A new gravity sanitary sewer along Reach Street draining into the new sanitary sewerage pumping station; and
- A watermain from approximately 500 meters east of the future water storage facility connection, along Reach Street to the existing water supply system.

c) Detailed design and construction of sanitary sewer extension along the Hunt Street extension (conceptual estimate $5.75 million), upon completion of the Central Ajax Intensification Servicing and Transportation Study and concurrent with the construction of the road extension by the Town of Ajax.

4.5 City of Oshawa staff have confirmed the potential of proceeding with the detailed design of the reconstruction of Thornton Road in 2021. The proposed 2021 Water Supply System and Sanitary Sewerage System Capital Budget includes an allowance to proceed with the detailed design for the extension of services on Thornton Road with project construction included in year 2023 of the nine year capital forecast and subject to future budget approval.

4.6 The servicing of employment lands in Port Perry requires the Environmental Assessment (EA) to determine the location of the proposed sanitary sewage pumping station to finalize the servicing strategy. Once the conceptual servicing strategy has been determined then the scope for the project can be better defined. The proposed 2021 Water Supply System and Sanitary Sewerage System Capital budget includes the initiation of the EA with detailed design and construction allowances in the capital forecast in 2024 and 2027 respectively which is subject to future budget approvals. Implementation would be contingent on the timing of end users within the employment lands.

4.7 Staff from the Town of Ajax have indicated that the extension of Hunt Street is likely beyond the five year timeframe or more. The Region has made an allowance for engineering related to the watermain and sanitary sewer extensions for Hunt Street. The proposed 2021 Water Supply and Sanitary Sewerage Capital Budget includes potential construction allowances in 2025 which are subject to future budget approval.

4.8 The approved strategy also included identifying a list of water and sewer infrastructure projects for consideration in future Regional Business Plans and Budgets, to service identified Employment Lands. This analysis considered servicing costs, potential Employment Areas jobs generated and potential service delivery timeframes. These projects are included in the 2022-2030 Capital Forecast. The Interdepartmental Regional staff working group will report back on an annual basis on the progress of the recommended work elements and new recommendations for next steps as detailed design and development proceeds.

4.9 In addition, the 2021 Water Supply and Sanitary Sewerage Capital Budget also includes infrastructure investments to service growth including:

a) A total of $16.8 million for watermains and feedermains and $14.6 million for buildings and plants (Water Supply); and

b) A total of $42.0 million for trunk sanitary sewers and sanitary sewers and $16.3 million for buildings and plants (Sanitary Sewerage).

Addressing Asset Management Renewal Needs and Climate Considerations

4.10 Based on the most recent asset management data, there are approximately $16.7 million of water linear assets in very poor condition, and $30.1 million in poor condition. The proposed 2021 Water Supply Capital Budget includes $16.5 million in linear betterments and replacements (watermains, valves, connections), to address those assets in various conditions with differing risk profiles, and based on the ability to achieve access as part of Regional Road, Municipal Road, and MTO projects. In addition, there is also $3.2 million included for other linear replacements such as water meters and hydrants.

4.11 For Water Supply buildings and plant equipment (vertical assets), there is approximately $12.0 million included in the proposed 2021 Water Supply Capital Budget to address asset management needs.

4.12 Based on the most recent asset management data, there is approximately $19.2 million in sanitary sewerage linear assets that are in very poor condition and $53.8 million in poor condition. The proposed 2021 Sanitary Sewerage Capital Budget includes $4.8 million to address the priority sewer linear assets.

4.13 For Sanitary Sewerage buildings and plant equipment (vertical assets), there is approximately $23.0 million included in the proposed 2021 Sanitary Sewerage Capital Budget to address asset management needs.

4.14 In addition to above noted investments, the proposed 2021 capital budget also includes:

a) The continued provision of funding for asset condition assessments ($0.3 million for water and $0.2 million for sewer);

b) A new provision to develop climate change strategies in both water supply ($0.15 million) and sanitary sewerage ($0.3 million);

c) Continued provision of $0.5 million in funding for inflow and infiltration studies and work in the Sanitary Sewerage Capital Budget; and

d) $0.354 million in funding in the Water Supply Capital Budget for vulnerability assessments of water supply plants to climate related impacts.

Fuel Tanks and Generators (Regulatory Compliance)

4.15 The proposed 2021 Water Supply and Sanitary Sewerage Capital Budgets include $8.4 million and $1.8 million respectively, for upgrades to the diesel generators and tanks to meet regulatory requirements. The Ontario Technical Standards & Safety Authority (TSSA) regulates fuel tanks and other auxiliary systems for diesel generators in the province. The TSSA-administered regulations are continually evolving to ensure that these systems are safe. In addition, an inspection by a TSSA-certified inspector must be undertaken every 10 years and any deficiencies must be corrected. Currently, the Region's water and wastewater diesel generator systems are being inspected and work to correct any deficiencies is proceeding. This work includes replacement of fuel lines, replacement of fuel tanks, replacement of valves, installation of fire suppression, upgrades to SCADA, upgrading of exhaust piping, modification of containment systems, upgrades to filling systems and other various works. There are 68 water and wastewater facilities where diesel tanks are to be upgraded. The work commenced in 2020 and will be completed in two phases with final completion planned for 2022.

Proposed 2021 Water Supply and Sanitary Sewerage Capital Financing

4.16 The proposed 2021 water supply and sanitary sewerage capital financing is achievable and relies on:

a) The proposed overall user rate increase of 0.75 per cent;

b) The use of upfront Residential and Commercial DC's required to support the 2021 Water and Sanitary Sewerage Capital Programs;

c) The use of $1.5 million in Water Industrial DC's and $1.7 million in Sanitary Sewerage Industrial DC's to reduce pressure on user rate financing;

d) The use of $5.5 million in water asset management reserve fund financing and $9.0 million in sanitary sewerage asset management reserve fund financing which represents an increase of $0.7 million from the approved 2020 budget;

e) The inclusion of the pre-approved financing of servicing of the designated employment areas, including the use of Sanitary Sewerage Residential and Commercial DC's and funding from the Servicing of Employment Lands Reserve Fund (Report 2020-COW-23); and

f) No proposed debenture financing.

5. Capital Forecast and Preliminary Financing Plan

5.1 The Water Supply and Sanitary Sewerage Capital Forecast program (2022-2030) is based on servicing forecasted growth, addressing ongoing renewal, replacement and repair needs of existing infrastructure based on an asset management approach, and ensuring continued compliance with regulatory requirements.

5.2 There are a number of development areas being planned and implemented within each municipality. The proposed Water Supply and Sanitary Sewerage Capital Budget and Forecast identifies the required servicing infrastructure for the designated urban areas. Regional staff will continue to monitor the utilization of major water supply and sanitary sewage infrastructure to plan major infrastructure expansions, system capacity and reliability to service growth.

5.3 The 2022-2030 capital program also includes major building expansions for both the water supply system (e.g. expansion of the Ajax, Whitby and Bowmanville Water Supply Plants) and the sanitary sewage system (e.g. expansion of the Corbett Creek and Courtice Water Pollution Control Plants and the Conlin Road Sanitary Sewage Pumping Station).

5.4 The Region's ongoing and continuous asset management process analyzes asset data and publishes an annual Asset Management Report. This informs the annual business plans and budgets of infrastructure requirements, which is critical to ensure sound and timely investments are made to maintain the Region's existing assets at a level to meet service delivery expectations and minimize the cost of assets over their lifecycles. The Region's 2020 Asset Management Update Report (Report 2020-COW-24) and supporting data informed the development of the water supply and sanitary sewerage capital forecast (see Section 6 for more details).

5.5 A robust long-term preliminary financing plan was developed for the nine year water supply and sanitary sewerage capital forecast that utilized:

a) Growth projections to forecast future DC receipts and revenues available to finance the growth-related capital projects in the forecast program;

b) Use of reserve funds (e.g. water and sewer rate stabilization and asset management reserve funds) to finance the major capital projects and those projects required for asset management reasons without unduly placing pressure on user rate revenues and potentially reducing the need for debt and saving the Region debt interest financing costs;

c) The use of debt where feasible for large plant expansions;

d) Gradual and smooth annual increases in user rate revenues that are financially sustainable and affordable; and

e) Financial planning policies as approved in the Region's Long-Term Financing Planning Framework.

5.6 The resultant long-term preliminary financing plan (sources and timing of funding) is summarized in Table One above.

Opportunities to Use Reserve Funds

5.7 As shown in Table One, there are years where expenditures are significant due to large plant expansion projects. In accordance with the Long-Term Financial Planning Framework, the preliminary financing plan incorporates the sustainable use of water supply and sanitary sewerage treatment plant / rate stabilization reserve funds and asset management reserve funds for these large projects. Application of funding from the treatment plant / rate stabilization reserve funds will allow these projects to proceed forward balancing debenture requirements.

5.8 The following provides a summary of the proposed use of reserve fund financing and DCs for 2021 and the forecasted requirements based on the 2020 to 2030 capital forecast and financing strategy.

a) Development Charges - Water

- Proposed 2021 – Capital Program - $28.7 million
- Proposed 2021 – Debt Servicing Costs - $0.4 million
- 2022 to 2030 Capital Forecast – Capital Program - $361.5 million
- 2022 to 2030 Capital Forecast – Debt Servicing Costs - $149.4 million

b) Development Charges - Sewer

- Proposed 2021 – Capital Program - $25.7 million
- Proposed 2021 – Debt Servicing Costs - $9.5 million
- 2022 to 2030 Capital Forecast – Capital Program - $197.5 million
- 2022 to 2030 Capital Forecast – Debt Servicing Costs - $222.1 million

c) Water Asset Management Reserve Fund

- Proposed 2021 – Capital Program - $5.5 million
- 2022 to 2030 Capital Forecast – Capital Program - $60.9 million

d) Sewer Asset Management Reserve Fund

- Proposed 2021 – Capital Program - $9.0 million
- 2020 to 2030 Capital Forecast – Capital Program - $104.6 million

e) Servicing of Employment Lands

- Proposed 2021 - $1.2 million

f) Water Rate Stabilization Reserve Fund

- 2022 to 2030 Capital Forecast – Capital Program - $86.2 million

g) Sewer Rate Stabilization Reserve Fund

- 2022 to 2030 Capital Forecast – Capital Program - $130.0 million

5.9 The utilization of these reserve funds will be considered on an annual basis as part of the Region's long-term financial planning process with recommended draws presented to Regional Council through the annual Water Supply and Sanitary Sewerage Capital Budgets.

Potential Debt Financing Requirements and Considerations

5.10 Achieving the forecasted capital program and smoothing out the pressures on the user rate revenues as best as possible will also require the issuance of debt financing for large capital projects where there is an anticipated short fall in the Residential and Commercial DC receipts.

5.11 The 2022 to 2030 capital forecast outlined in Table One identifies the potential to issue approximately $462.4 million in debenture financing ($203.9 million for Water Supply and $258.5 million for Sanitary Sewerage). Table Two details the debt servicing costs and associated financing based on the current outstanding debt and the projected new debt contemplated in the 2022 to 2030 capital forecast.

Table Two
Consolidated Water Supply and Sanitary Sewerage – Debt Servicing Costs

Water Supply (in millions)	Proposed	Forecast					
Expenditures	**2021**	**2022**	**2023**	**2024**	**2025**	**2026 to 2030**	**2021 to 2030 Total**
Existing Debenture Payments	$ 1.3	$ 1.3	$ 1.3	$ 1.3	$ 1.3	$ 6.6	**$ 13.1**
Future Debt Payments	$ -	$ -	$ -	$ 1.2	$ 17.5	$ 126.8	**$ 145.5**
Expenditures Total	**$ 1.3**	**$ 1.3**	**$ 1.3**	**$ 2.5**	**$ 18.8**	**$ 133.4**	**$ 158.6**
Financing	**2021**	**2022**	**2023**	**2024**	**2025**	**2026 to 2030**	**2021 to 2030 Total**
Development Charges	$ 0.4	$ 0.4	$ 0.4	$ 1.6	$ 18.0	$ 129.0	**$ 149.9**
User Revenues	$ 0.9	$ 0.9	$ 0.9	$ 0.9	$ 0.9	$ 4.4	**$ 8.7**
Financing Total	**$ 1.3**	**$ 1.3**	**$ 1.3**	**$ 2.5**	**$ 18.8**	**$ 133.4**	**$ 158.6**

Note: Totals in rows and columns may not add due to rounding

Sanitary Sewerage (in millions)	Proposed	Forecast					
Expenditures	**2021**	**2022**	**2023**	**2024**	**2025**	**2026 to 2030**	**2021 to 2030 Total**
Existing Debenture Payments	$ 14.5	$ 13.0	$ 12.2	$ 11.5	$ 11.4	$ 32.2	**$ 94.8**
Future Debt Payments	$ -	$ -	$ 6.3	$ 13.3	$ 17.6	$ 124.0	**$ 161.2**
Expenditures Total	**$ 14.5**	**$ 13.0**	**$ 18.5**	**$ 24.9**	**$ 28.9**	**$ 156.2**	**$ 256.0**
Financing	**2021**	**2022**	**2023**	**2024**	**2025**	**2026 to 2030**	**2021 to 2030 Total**
Development Charges	$ 9.5	$ 9.2	$ 15.5	$ 22.4	$ 26.6	$ 148.4	**$ 231.7**
User Revenues	$ 5.0	$ 3.8	$ 3.0	$ 2.5	$ 2.3	$ 7.8	**$ 24.4**
Financing Total	**$ 14.5**	**$ 13.0**	**$ 18.5**	**$ 24.9**	**$ 28.9**	**$ 156.2**	**$ 256.0**

Note: Totals in rows and columns may not add due to rounding

5.12 With the proposed issuance of debenture financing for the residential and commercial DC shares of the major projects over the forecast, the future debt servicing commitments will be funded from future residential and commercial DC's. The following graphs provide the number of residential development charge receipts required to fund future debt servicing costs as compared to the ten-year residential units planning forecast. It is estimated that the future residential DC debt requirements could require up to 57 per cent of future water residential DC receipts and up to 70 per cent of future sanitary sewerage residential DC receipts.

Table Three – Water Supply

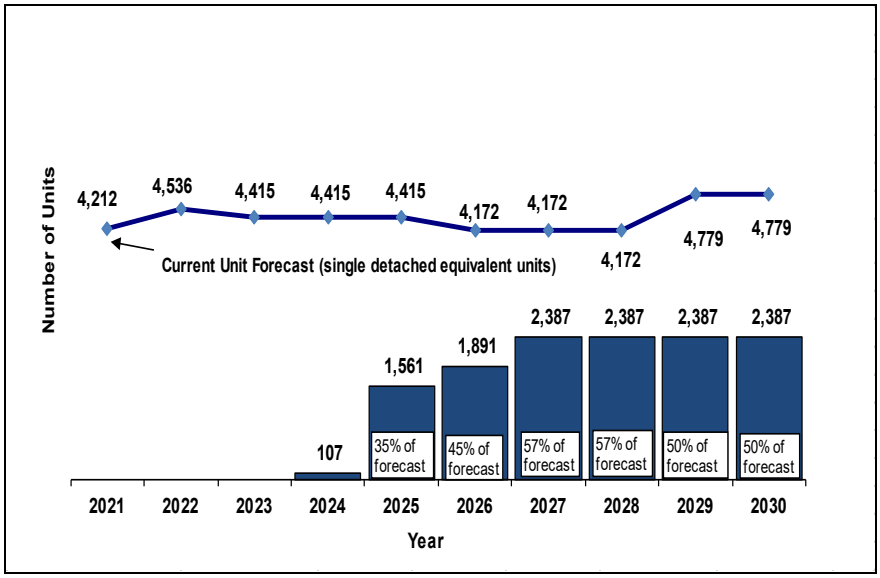
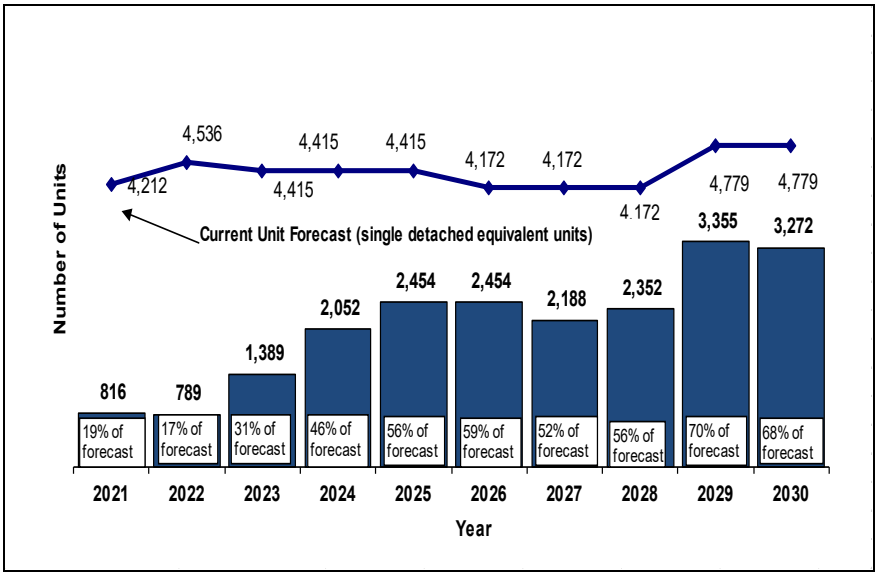


Table Four – Sanitary Sewerage



5.13 The risk to the Region with proceeding with large expansion projects that require debenture financing is that future development charge receipts are committed to pay future ongoing debt servicing costs. For example, if the Region experiences a significant housing market downturn, and receives less development charge receipts and revenues than forecasted, then there could be reduced DC funding available for future expansion projects as a significant share of DC receipts will be required to fund ongoing debt servicing costs.

User Rate Pressures

5.14 The pressures on future user rates over the forecast period as highlighted in the preliminary financing plan are the result of:

a) future replacement / rehabilitation needs as identified in the annual asset management report; and

b) significant growth-related capital projects that are required (i.e. plant expansions) where there is a potential development charge revenue shortfall that is projected to be funded by user rates.

5.15 Ongoing review of the capital forecast program, the timing of projects and use of financing strategies, including the use of reserve funds, debenture financing and pressures on user rate revenues, will be conducted as part of Region's annual business planning and budget process. Refinements will be based on rate of growth and new developments (impacting both growth related capital requirements and available DC receipts and revenues), evolving asset management needs to balance capital needs with availability of reserve funds, other financing strategies and affordable user rate increases.

6. Asset Management Considerations Over the Forecast Period

6.1 The Water Supply and Sanitary Sewerage Capital forecast identifies significant investment for the renewal of assets based on the results of the analysis of asset management needs as highlighted in the Region's most recent 2020 Asset Management Report. These include:

a) Over $199.4 million in water supply linear replacements / betterments;

b) Approximately $205.5 million in sanitary sewerage linear replacements/ betterments;

c) $63.0 million for various asset management programs, condition assessments, miscellaneous rehabilitation work, investigations, etc. for Water Supply;

d) $74.4 million for various asset management programs, condition assessments, miscellaneous rehabilitation work, investigations, etc. for Sanitary Sewerage;

e) Approximately $718.3 million for water supply buildings, plant and equipment expansions and renewal needs (repairs, replacements, rehabilitations, etc.); and

f) Over $953.2 million for sanitary sewerage buildings, plant and equipment expansions and renewal needs (repairs, replacements, rehabilitations, etc.).

6.2 As the water supply and sanitary sewerage asset infrastructure renewal needs get updated annually through the Region's continuous year-round asset management process and reported through the Asset Management Reports, these capital forecasts will be refined to include and prioritize the appropriate investments to address those updated asset management needs.

7. Climate Change

7.1 The Region's water supply and sanitary sewerage programs are significant components of the Region's corporate climate change initiatives. The Region's water supply and sanitary sewerage capital and operating programs provide mitigation and adaptation measures and strategies to address the Region's climate change initiatives. Climate change initiatives are underway within both water supply and sanitary sewer programs.

7.2 The ongoing capital projects being completed to address the asset management needs of the Region also serve to address climate change initiatives (i.e. reduce greenhouse gas emissions and increase the Region's adaptive capacity and resiliency to changes in climate). The following provides a list of capital works that will address climate change initiatives:

a) Replacement of deficient sanitary sewers to reduce infiltration of groundwater into the sanitary sewer collection system to mitigate flooding, inflow and infiltration;

b) Upgrades to plants and pumping stations which include electrical upgrades and standby power to operate systems during communications and electrical power failures;

c) Enhanced erosion protection at creek crossings to protect watermains and sanitary sewer systems;

d) Energy conservation measures are incorporated into asset management and financial planning processes; and

e) Investigation on recapturing of gases / steam generated from processing activities at the Region's WPCPs to heat plants which reduces greenhouse gas emissions (e.g. Biogas utilization at the Courtice, Corbett Creek and Duffin Creek WPCPs).

7.3 Corporately, staff are working on a Climate Change Master Plan for the Region which will further inform future capital forecasts.

7.4 In addition, the proposed 2021 Consolidated Water Supply and Sanitary Sewerage Business Plans and Budgets propose the following additional climate change initiatives:

a) Continued research and development of the “Durham Standard”, a guidance document for the construction and renovation of Regional facilities including measures to advance the Region’s climate change and energy conservation initiative.

b) $1.1 million for a climate change strategy for the Region’s water supply and sanitary sewerage assets; and

c) $1.8 million for vulnerability assessments of climate impacts on the Region’s water supply and sanitary sewerage assets.

8. Line-by-line Review

8.1 As part of the development of the proposed consolidated 2021 Water Supply and Sanitary Sewerage Systems Business Plans and Budget, departments completed a line-by-line review of historical actuals to identify 2021 base budget reductions that do not impact service levels.

8.2 The following base budget savings have been identified and are reflected in the proposed consolidated 2021 Water Supply and Sanitary Sewerage Systems Business Plans and Budget:

a) Works Water Supply System - $400,000

b) Works Sanitary Sewerage System - $86,000

c) Utility Finance - $21,000

d) Corporate Non-Departmental Water - $40,000

e) Corporate Non-Departmental Sewer - $19,000

f) Total - $566,000

9. Relationship to Strategic Plan

9.1 This report aligns with/addresses the following strategic goal and priorities in the Durham Region Strategic Plan.

a) Goal 5 Service Excellence – to provide exceptional value to Durham taxpayers through responsive, effective and fiscally sustainable services delivery. By responsibly managing the Region’s financial assets, the proposed 2021 Consolidate Water Supply and Sanitary Sewerage Business Plans and Budgets looks to optimize resources to deliver critical infrastructure and servicing for current and future generation.

10. Conclusion

10.1 The 2021 Water Supply and Sanitary Sewerage Systems Business Plans and Budgets can be financed within the proposed overall water supply and sanitary sewerage user rate increase of 0.75 per cent and other related funding including development charges and fees/charges.

10.2 Accordingly, the 2021 Business Plans and Budgets for Water Supply and Sanitary Sewerage Systems are recommended for approval.

11. Attachments

11.1 Detailed Consolidated 2021 Business Plans & Budgets for Water Supply and Sanitary Sewerage Systems are available on-line through the link provided on the December 8, 2020 Finance and Administration Committee agenda or in hard copy by contacting the Finance Department at (905) 668-7711 ext. 2305.

Respectfully submitted,

Original Signed By

Nancy Taylor, BBA, CPA, CA
Commissioner of Finance

Recommended for Presentation to Committee

Original Signed By

Elaine Baxter-Trahair
Chief Administrative Officer

If this information is required in an accessible format, please contact 1-800-372-1102 ext. 2304

The Regional Municipality of Durham Report

To:	Finance and Administration Committee
From:	Commissioner of Finance
Report:	#2020-F-25
Date:	December 8, 2020

Subject:

Recommended 2021 Water and Sanitary Sewer User Rates

Recommendations:

That the Finance and Administration Committee recommends to Regional Council:

A) That the 2021 Regional Water and Sanitary Sewer User Rates increase by 0.75 per cent for an average residential customer effective January 1, 2021, with the Regional water rates increasing by 0.40 per cent and the Regional sanitary sewer rates increasing by 1.06 per cent from the 2020 user rate levels as set out in Schedule 1 and Schedule 2 of this report respectively;

B) That the 2021 Raw Water rates for the Whitby raw water customer be increased by 0.40 per cent as set out in Schedule 1 of this report, effective January 1, 2021;

C) That the 2021 water charges for the Sun Valley Heights Homeowners Co-operative Water System be as set out in Schedule 3 of this report, effective January 1, 2021;

D) That the 2021 Regional Water and Sanitary Sewer Systems Miscellaneous Fees and Charges be as set out in Schedule 4 of this report, effective January 1, 2021;

E) That the 2021 fee schedule for laboratory services at the Regional Environmental Laboratory located at the Duffin Creek Water Pollution Control Plant be as set out in Schedule 5 of this report, effective January 1, 2021; and

F) That the Regional Solicitor be instructed to prepare the necessary by-laws to implement the foregoing recommendations.

Executive Summary:

1. Background

1.1 This report outlines the recommended Water and Sanitary Sewer User Rates to be effective January 1, 2021 including background on the parameters used in determining the recommended rates. This report is presented concurrently with the 2021 Business Plans and Budgets and Nine Year Capital Forecasts for the Consolidated Water Supply and Sanitary Sewerage Systems Report (Report 2020-F-24) which describes the proposed 2021 operating and capital works, nine year capital forecast and associated financing.

1.2 The Region's water and sanitary sewer user rates are reviewed annually, and recommendations are made to Council in December, prior to a January 1st implementation of the approved user rates. It is imperative that user rates be approved in 2020 in order that they can be implemented with the first customer billings commencing early January 2021.

1.3 The water and sanitary sewage systems are “User Pay” as property taxes are not used to fund water and sanitary sewage systems costs.

1.4 Public notification that the proposed 2021 water and sanitary sewer user fees and related charges will be considered by the Finance and Administration Committee on December 8, 2020 and by Regional Council on December 16, 2020, was provided twice in local newspapers throughout the Region during the weeks of November 9th and 23rd, 2020 and was posted on the Region’s website.

2. 2021 Recommended Water and Sanitary Sewer User Rate Increases

2.1 The recommended 0.40 per cent water user rate increase and 1.06 per cent sanitary sewer user rate increase (0.75 per cent combined for an average residential customer) supports an increase in net user rate supported expenditures of 3.37 per cent for water and 5.10 per cent for sanitary sewage.

2.2 The current 2020 and recommended 2021 Water and Sanitary Sewer User Rates are provided in Schedule 1 and Schedule 2 of this report respectively. The recommended 2021 Regional Water and Sanitary Sewer Rate increase of 0.75 per cent for an average residential customer reflects an annual increase of approximately $7.72 per year.

2.3 The recommended user rates are based on the proposed 2021 operating and capital costs and associated financing which are outlined in detail in the 2021 Business Plans and Budgets and Nine Year Capital Forecasts for the Consolidated Water Supply and Sanitary Sewerage Systems Report (Report 2020-F-24), as well as customer and consumption projections described below.

2.4 For water, the user rate increase of 0.40 per cent is required to finance a proposed 2021 net user rate supported budgeted net expenditure increase of $3.77 million or 3.37 per cent over 2020, which will allow for:

- A net operating cost increase of $1.07 million mainly for annual economic and inflationary increases for services and supplies, annualization of 4.371 Full Time Equivalents (FTEs) from 2020 and 5.047 new FTEs for 2021;
- A user rate capital program/contribution increase of $2.96 million; and
- A slight decrease in debt servicing costs funded by user rates of $0.26 million resulting from lower than anticipated interest rates for the interfund note established in 2020 for the Newcastle Water Supply Plant.

2.5 For sanitary sewer, the user rate increase of 1.06 per cent is required to finance a proposed 2021 user rate supported budgeted net expenditure increase of $5.41 million or 5.1 per cent over 2020, which will allow for:

- A net operating cost increase of $3.45 million mainly for annual economic and inflationary increases for services and supplies, annualization of 2.230 Full Time Equivalents (FTEs) from 2020 and 2.909 new FTEs for 2021;
- A capital program/contribution increase of $2.64 million in the user rate supported contribution;
- A decrease in debt servicing costs funded by user rates of $2.43 million due to debt retirement related to the Courtice Water Pollution Control Plant and the York Durham Sewage System; and
- The removal of the one-time contribution from the Sewer Rate Stabilization Reserve Fund of $1.75 million 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. The recommended 2021 sewer rate increase brings the sewer user rate back to full cost recovery.

3. Basis for the Proposed 2021 User Rates

3.1 The projected data used to develop the 2021 user rates includes the following:

Projected Data Used to Develop 2021 Water & Sanitary Sewer User Rates

Parameter	Water	Sanitary Sewage
Customers		
- Number	181,293	176,592
- Growth from 2020 Actual	1.00%	1.05%
Consumption/Flow		
- Cubic metres (millions)	55.00	52.86
- Increase from 2020 Budget	4.4%	4.3%
User Rate Revenue Requirements		
- Total Expenditures	$115,489,700	$111,335,400
- Increase from 2020 Budget	3.4%	5.1%
User Rate Change Required		
- Percent	**0.40%**	**1.06%**
- Impact on Revenue of 1% Rate Change	**$1,150,000**	**$1,102,000**

- **Impact of a 1 per cent Rate Change** - Any change in either expenditures or other revenues by $1,150,000 for water or $1,102,000 for sanitary sewer is equivalent to a 1 per cent change in the respective user rate.

3.2 The 2021 growth in the number customers is projected at 1.00 per cent for water and 1.05 per cent for sanitary sewer.

3.3 Billed water consumption for 2021 is projected as follows:

- **Overall –** Total billed 2021 water consumption and sanitary sewage flows are both projected to increase with the residential component increasing and the industrial, commercial, institution (ICI) component decreasing.

- **Residential** – Residential consumption represents almost 75 per cent of water consumption and is the main driver in water consumption projections. Residential water consumption has two components: Basic day-to-day usage year-round (Base Consumption) and seasonal usage, with Base Consumption representing the larger share.

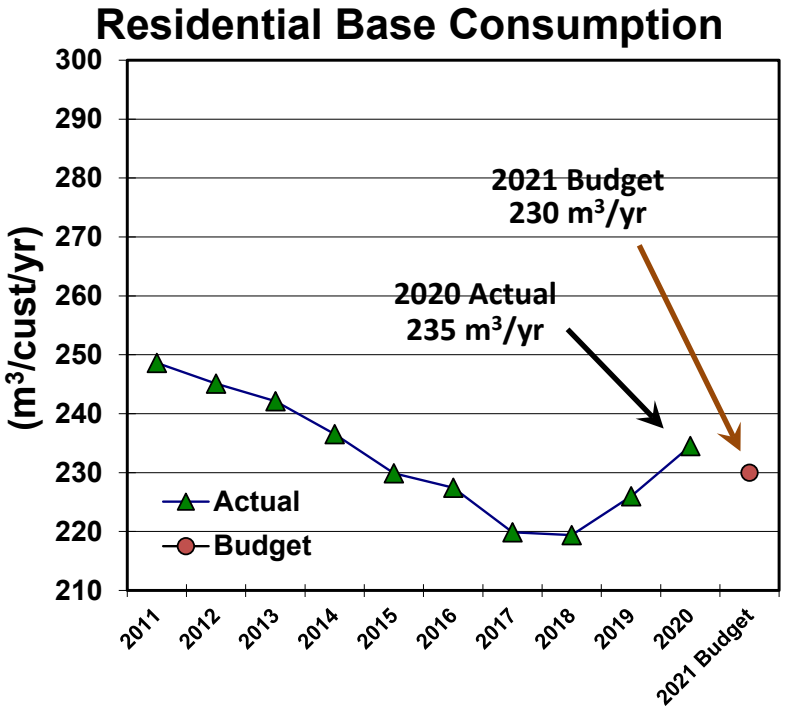
  Base Consumption is recalculated for each year using data up to May. This data excludes seasonal summer usage. The following figure on Residential Base Consumption illustrates the Residential Base Consumption trend for the last 10 years. From 2000 until 2017 Residential Base Consumption per customer has steadily decreased at a rate of about 2.4 per cent per year. Contributing factors to this decline in Base Consumption include the water efficient fixtures required in new construction by the Provincial Building Code and the popularity of more water efficient appliances.

  Starting in 2018, data suggested a levelling off, with 2019 and 2020 showing an increase in Residential Base Consumption to 226 m^3/year in 2019 and 235 m^3/year projected in 2020. The increase in consumption in 2020 is in large part attributable to the impact of the COVID-19 pandemic, where an increasing number of individuals were working and attending school remotely from home.

It is difficult to predict the impact that the COVID-19 pandemic will have on Base Residential Consumption in 2021. For purposes of calculating the proposed 2021 user rates, it was assumed that the COVID-19 pandemic will continue to have a positive impact on 2021 Residential Base Consumption. The 2021 proposed user rates reflect projected 2021 Residential Base Consumption at 230 m^3/customer/year.

Should actual Residential Base Consumption be lower than projected in 2021, funding from the Water Rate Stabilization Reserve Fund and the Sewer Rate Stabilization Reserve Fund will be required to finance any resulting deficits.

It is important to note that this higher rate of Residential Base Consumption is not anticipated to continue post pandemic and future Business Plans and Budgets and User Rates will need to be adjusted to reflect updated lower consumption projections.



Total residential consumption also includes a seasonal component. The projected seasonal usage for 2021 is 10 m^3/customer/year, an increase from the 6.5 m^3/customer/year assumed in prior years. The projected 2021 seasonal consumption of 10 m^3/customer/year was set based on average historical levels.

Based on a combined basic and seasonal usage (240 m^3/customer/year) and customer growth of 1 per cent, total residential water consumption is budgeted to increase by 7.6 per cent (sewer by 7.4 per cent) over 2020 Budget levels.

- **Non-Residential (ICI) Consumption Share** – ICI consumption share relative to residential usage is projected to decrease to 23 per cent in 2021 (actual 2019 was 26 per cent). Overall total ICI consumption is projected to decrease by 5.0 per cent for water and 5.5 per cent for sanitary sewer.

- **Small to Medium Size ICI Water Users** – Although 1st block consumption is projected to remain fairly stable, consumption in the second-rate block is projected to decrease.

- **Large Water Users** – Based on current large customer consumption levels, it is projected that 2021 3rd block consumption will be roughly equal to that budgeted for 2020.

4. Customer Impacts

4.1 **Average Residential Customer Impact** – Based on the assumptions outlined above for customer growth and consumption and the proposed budgetary increases, the 2021 water user rates are proposed to increase by 0.40 per cent and sanitary sewer user rates are proposed to increase by 1.06 per cent over the approved 2020 user rate levels. The combined proposed water and sewer user rates results in an increase of $1.93 or 0.75 per cent on a quarterly bill ($7.72 per annum) for the average residential customer as outlined in the following table.

2021 Proposed Regional User Rate Charges Typical Residential Customer Impact				
Annual Water Consumption		52,800	gallons/year	
		240.0	m^3/year	
Billings ($/quarter)				
	2020 Actual	2021 Proposed	Increase	
Water	$125.57	$126.09	$0.52	0.40%
Sewage	$132.57	$133.98	$1.41	1.06%
Total ($/quarter)	$258.14	$260.07	$1.93	0.75%
Annual Billing ($/year)	$1,032.56	$1,040.28	$7.72	0.75%

4.2 **Large Industry Customer Impact** - The proposed 2021 water and sanitary sewer user rates result in a bi-monthly increase of $718 or 0.80 per cent for a large industry customer (a customer in the top 25 users) using 227,272 m^3 annually (50 million gallons) as indicated below:

2021 Proposed Regional User Rate Charges Large Industrial Customer Impact				
Annual Water Consumption		50,000,000	gallons/year	
		227,272	m^3/year	
Billings ($ bimonthly)				
	2020 Actual	2021 Proposed	Increase	
Water	$35,626	$35,768	$142	0.40%
Sewage	$54,150	$54,726	$576	1.06%
Total ($ bimonthly)	$89,776	$90,494	$718	0.80%
Annual Billing ($/year)	$538,656	$542,964	$4,308	0.80%

5. Competitiveness of Durham's Water and Sanitary Sewage Rates

5.1 **Residential customers -** Of the 13 larger municipalities surveyed across Ontario, Durham's 2020 Regional water and sanitary sewer charges are below the average at the 5th lowest.

5.2 **Large users** – Similarly, of the 13 larger municipalities surveyed across Ontario, the Region's 2020 water and sanitary sewer rates were the 3rd lowest for a large user. The Region's declining block rates reflect the Region's reduced unit cost of servicing large customers.

5.3 Durham's average residential water and sanitary sewer charges compare favourably with other municipal water and sanitary sewer rates as well as other utility costs.

5.4 A frequently used metric for assessing affordability compares water and sanitary sewer charges to average family income. A US Environmental Protection Agency report on drinking water affordability lists a number of studies which suggest an affordability threshold for water and/or sanitary sewer charges in the range of 1.5 per cent to 2.5 per cent of average annual income. Durham's combined water and sewer service costs for an average customer are below the threshold at about 1 per cent of the average Oshawa census family income.

5.5 Although these measures indicate that the Region's water and sanitary sewer charges are generally affordable, they do not fully address the issue of affordability for all customers. Over the course of 2021, staff will continue to study the affordability of water and sanitary sewer rates including considering whether there are alternative measures which should be considered to address the affordability of the water and sanitary sewer charges on various segments of the customer base.

6. Other Fees & Charges

6.1 **Schedule 1 – Recommended Raw Water Rate** – The Region operates a raw water system in Whitby which is supplied from the Whitby Water Supply Plant. This raw water system currently serves one large industrial customer (Gerdau Ameristeel Corporation). Due to lower costs, raw water is charged at a lower volumetric rate than the potable water rates. The 2021 raw water rate is proposed to increase by 0.40 per cent, aligned with the increase in the potable water rate and is included in Schedule 1. The proposed 2021 raw water rate is approximately 38 per cent of the 3rd block potable water rate.

6.2 **Schedule 3 – Sun Valley Heights Homeowners Co-operative Water System Proposed Charges** – The charges for this local community system serving 17 customers are separate from the Regional water and sewage rates. Based on an analysis of total costs related to this local system, it is recommended that no change be made to the current rates and the 2020 Sun Valley rates continue to be applied to Sun Valley customers in 2021 ($429 per quarter or $1,716/year).

6.3 **Schedule 4 – Recommended Miscellaneous Fees & Charges** – This schedule includes a number of fee categories, which are each reviewed annually. For item number 36 (Water from Water Supply Plants, Water Pollution Control Plants, Works Depots and Bulk Filling Stations), it is recommended that the unit cost of water be increased by 0.40 per cent, consistent with the proposed water rate increase. Also, it is recommended that the schedule be updated for item 36 to indicate that the "New Account Fee" does not apply for new accounts set up for the use of the new Bulk Water Filling Station at the Oshawa/Whitby Depot. This proposed adjustment is necessary as a result of the completion of the new bulk filling station at the Oshawa/Whitby Depot. Customers using the bulk water filling station at the Oshawa/Whitby Depot will be responsible for setting up their own account and therefore no fee for an account set-up is required. There are no other changes recommended to the Miscellaneous Fees and Charges for 2021.

6.4 **Schedule 5 – Recommended Laboratory Fees** – The recommended 2021 Fee Schedule for Laboratory Services at the Regional Environmental Laboratory is provided in Schedule 5. The proposed 2021 Fee Schedule includes fees for four new tests that have been added and the removal of fees for three tests no longer offered.

7. Projected User Rate Considerations Over the Forecast Period (2022 – 2030)

7.1 Based upon projections to 2030, it is estimated that the combined water and sanitary sewer user rate increases of approximately 4 per cent to 6 per cent on average per year may be required over the forecast period depending on future customer growth, water consumption, operating and capital costs. Staff continue to review operating requirements and long-term capital forecast and financing plans to refine these estimates. Information available through modeling under the Region's business planning and budget modernization initiative will allow for better refinement of projected rate increases for future years.

7.2 These projections will be impacted by various factors including:

- Customer growth that may be lower than that experienced over the last number of years;
- Potential for reductions in residential base water consumption and thus related revenues without a resulting offsetting reduction in costs. The 2021 proposed user rates assume an increase in residential base consumption to 230 m^3/customer per year. This increase, in large part, is attributable to the continued impact that the COVID-19 pandemic is projected to have on residential base consumption with individuals continuing to work and attend school remotely from home. It is anticipated that this increased rate of residential base consumption will not continue post pandemic and future Business Plans and Budgets and User Rates will need to be adjusted to reflect updated residential base consumption. In addition, any economic decline could result in lower system utilization with consequent decreases in water and sanitary sewer user rate revenues;
- Market price impacts and volatility, including energy costs, and related equipment and supplies; and

- Significant investments are required in water supply and sanitary sewerage infrastructure to meet growth related, asset management, climate change adaptation/mitigation and regulatory requirements. The 2022 to 2030 Capital Forecast is discussed in Report 2020-F-24 – 2021 Business Plans and Budgets and Nine-Year Capital Forecasts for the Water Supply and Sanitary Sewerage Systems.

8. Schedules of Rates & Fees

8.1 The recommended Durham Region 2021 water and sanitary sewer user rates, fees and charges are set out in the attached schedules, as follows:

- The recommended 2021 Water User Rates are 0.40 per cent higher than the 2020 rates and are set out in Schedule 1.
- The recommended 2021 Raw Water Rate for the Whitby raw water customer is 0.40 per cent higher than 2020 and is set out in Schedule 1.
- The recommended 2021 Sanitary Sewage User Rates are 1.06 per cent higher than the 2020 rates and are set out in Schedule 2.
- The recommended 2021 Water Rate for the Sun Valley Heights Homeowners Co-operative Water System is set out in Schedule 3.
- The recommended 2021 Water & Sanitary Sewer Systems Miscellaneous Fees & Charges are set out in Schedule 4.
- The recommended 2021 Fee Schedule for Laboratory Services at the Regional Environmental Laboratory located at the Duffin Creek WPCP is set out in Schedule 5.

9. Relationship to Strategic Plan

9.1 This report aligns with/addresses the following strategic goals and priorities in the Durham Region Strategic Plan:

a) Goal 5 Service Excellence – To provide exceptional value to Durham taxpayers through responsive, effective and fiscally sustainable service delivery. By responsibly managing the Region's financial assets, the proposed 2021 User Rates for Water Supply and Sanitary Sewerage look to optimize resources to deliver critical infrastructure and services for current and future generations.

10. Conclusion

10.1 The proposed 2021 Regional Water and Sanitary Sewer User Rates reflect a combined increase of 0.75 per cent for an average residential customer effective January 1, 2021, with the Regional water rates increasing by 0.40 per cent and the Regional sanitary sewer rates increasing by 1.06 per cent.

10.2 The proposed combined water and sanitary sewer user rate increase results in an increase of $1.93 on a quarterly bill ($7.72 per annum) for an average residential customer.

10.3 The proposed rate increases are based on projected customer growth of 1.00 per cent in water customers and 1.05 per cent in sewer customers with residential base consumption increasing to 230 m^3/customer/year and seasonal usage at 10 m^3/customer/year.

10.4 The 2021 Proposed Business Plans and Budgets for Consolidate Water Supply and Sanitary Sewerage can be accommodated within the 2021 proposed Regional Water and Sanitary Sewer User Rates recommended in this report.

10.5 The Commissioner of Works has reviewed this report and concurs with its recommendations.

11. Attachments

Schedule 1 – Recommended 2021 Water User Rates

Schedule 2 – Recommended 2021 Sanitary Sewer User Rates

Schedule 3 – Recommended 2021 Water Rate for the Sun Valley Heights Homeowners Co-operative Water System

Schedule 4 – Recommended 2021 Water & Sanitary Sewer Systems Miscellaneous Fees & Charges

Schedule 5 – Recommended 2021 Fee Schedule for Laboratory Services at the Regional Environmental Laboratory Located at the Duffin Creek WPCP

Original Signed By

Nancy Taylor, BBA, CPA, CA
Commissioner of Finance

Recommended for Presentation to Committee:

Original Signed By

Elaine Baxter-Trahair
Chief Administrative Officer

Schedule 1 - Recommended 2021 Water User Rates

REGIONAL MUNICIPALITY OF DURHAM

Water User Rate Schedule — 2021 Rate Increase = 0.40%

Monthly

Effective January 1, 2021

Volumetric Charges

Block	Consumption Range				Current 2020		Proposed 2021	
	From		To	Units				
First Block	0	to	45	cubic metres/month	$1.137	/cubic metre	$1.142	/cubic metre
	0	to	10,000	gallons/month	$5.170	/1,000 gallons	$5.191	/1,000 gallons
	0	to	1,600	cubic feet/month	$3.221	/100 cubic feet	$3.234	/100 cubic feet
Second Block	46	to	4,500	cubic metres/month	$0.967	/cubic metre	$0.971	/cubic metre
	10,001	to	1,000,000	gallons/month	$4.397	/1,000 gallons	$4.415	/1,000 gallons
	1,601	to	160,000	cubic feet/month	$2.739	/100 cubic feet	$2.751	/100 cubic feet
Third Block		Over	4,500	cubic metres/month	$0.888	/cubic metre	$0.892	/cubic metre
		Over	1,000,000	gallons/month	$4.037	/1,000 gallons	$4.053	/1,000 gallons
		Over	160,000	cubic feet/month	$2.515	/100 cubic feet	$2.525	/100 cubic feet

Basic Charges ($/month)

Meter/Fire Line Size		Service Charge		Minimum Charge		Unmetered Fire Line Charge	
		Current	Proposed	Current	Proposed	Current	Proposed
Inches	mm	2020	2021	2020	2021	2020	2021
Standard	Standard	$19.11	$19.19	n/a	n/a	n/a	n/a
1-inch	25-mm	$38.84	$39.00	$65.00	$65.00	$14.76	$14.82
1 ½-inch	38-mm	$82.68	$83.01	$124.00	$125.00	$19.84	$19.92
2-inch	51-mm	$178.56	$179.27	$239.00	$240.00	$38.40	$38.55
2 ½-inch	64-mm	n/a	n/a	n/a	n/a	$50.88	$51.08
3-inch	76-mm	$313.89	$315.15	$410.00	$411.00	$67.46	$67.73
4-inch	102-mm	$624.15	$626.65	$808.00	$811.00	$134.93	$135.47
5-inch	127-mm	n/a	n/a	n/a	n/a	$181.17	$181.89
6-inch	152-mm	$1,160.01	$1,164.65	$1,476.00	$1,481.00	$249.15	$250.15
8-inch	203-mm	$1,977.56	$1,985.47	$2,425.00	$2,435.00	$415.15	$416.81
10-inch	254-mm	$3,218.06	$3,230.93	$3,841.00	$3,857.00	$662.46	$665.11
12-inch	305-mm	n/a	n/a	n/a	n/a	$934.03	$937.77

Flat Rate (includes consumption)

	Current 2020	Proposed 2021
Monthly/unit	$44.96	$45.15
Quarterly/unit	$134.88	$135.45
Annually/unit	$539.52	$541.80

Other - Raw Water Rate — **Recommended Raw Water Rate Increase: 0.40%**

		Current 2020		Proposed 2021	
All volumes	cubic metres	$0.339	/cubic metre	$0.341	/cubic metre
	gallons	$1.542	/1,000 gallons	$1.548	/1,000 gallons

Late payment charge is 2%. A bill payment is late if not made within 16 days of the date on which the bill is issued.

Schedule 2 - Recommended 2021 Sanitary Sewer User Rates

REGIONAL MUNICIPALITY OF DURHAM

Sewage User Rate Schedule **2021 Rate Change 1.06%**

Monthly

Effective January 1, 2021

Volumetric Charges

Block	Consumption Range				Current		Proposed	
	From		To	Units	2020		2021	
First Block	0	to	45	cubic metres/month	$1.848	/cubic metre	$1.867	/cubic metre
	0	to	10,000	gallons/month	$8.398	/1,000 gallons	$8.487	/1,000 gallons
	0	to	1,600	cubic feet/month	$5.232	/100 cubic feet	$5.287	/100 cubic feet
Sewer rate expressed as a % of water rate					*162.4%*		*163.5%*	
Second Block	46	to	4,500	cubic metres/month	$1.626	/cubic metre	$1.643	/cubic metre
	10,001	to	1,000,000	gallons/month	$7.390	/1,000 gallons	$7.468	/1,000 gallons
	1,601	to	160,000	cubic feet/month	$4.604	/100 cubic feet	$4.653	/100 cubic feet
Sewer rate expressed as a % of water rate					*168.1%*		*169.2%*	
Third Block		Over	4,500	cubic metres/month	$1.366	/cubic metre	$1.381	/cubic metre
		Over	1,000,000	gallons/month	$6.211	/1,000 gallons	$6.277	/1,000 gallons
		Over	160,000	cubic feet/month	$3.869	/100 cubic feet	$3.911	/100 cubic feet
Sewer rate expressed as a % of water rate					*153.9%*		*154.9%*	

Basic Charges ($/month)

	Service Charge		Minimum Charge		Flat Rate/unit	
Meter	Current	Proposed	Current	Proposed	Current	Proposed
	2020	2021	2020	2021	2020	2021
Standard	$7.24	$7.32	No minimum charge		$49.23	$49.76
All other sizes						
Monthly	$7.24	$7.32	$49.00	$50.00	$49.23	$49.76
Quarterly	$21.72	$21.96			$147.69	$149.28
Annually	$86.88	$87.84			$590.76	$597.12

Late payment charge is 2%. A bill payment is late if not made within 16 days of the date on which the bill is issued.

Schedule 3 - Recommended 2021 Water Charges for the Sun Valley Heights Homeowners Co-operative Water System

Sun Valley Home Owners Co-Operative
2021 Projected Costs

Cost Item	Budget 2020	Projected Cost 2021
	$	$
Hydro Electricity	2,000	2,000
Property Taxes	500	500
Laboratory Costs	2,255	2,255
Vehicle	2,870	2,870
Operator & Reports	16,847	16,847
Operation Materials	2,600	2,600
Maintenance Materials & Other	600	600
Machinery and Equipment	1,550	1,550
TOTAL	**29,222**	**29,222**
Monthly charges per property owner (billings sent quarterly)	**$143**	**$143**
Annual cost per property owner	**$1,716**	**$1,716**

Schedule 4 - Recommended 2021 Water & Sanitary Sewer Systems Miscellaneous Fees & Charges

THE REGIONAL MUNICIPALITY OF DURHAM

WATER & SANITARY SEWER SYSTEMS MISCELLANEOUS CHARGES

(Excludes Any Applicable Taxes – except where noted)

Schedule 4 - Recommended 2021 Miscellaneous Charges Item Number & Description	By-Law Schedule Reference		Existing 2020 Charges		Recommended 2021 Charges
	Water By-law #89-2003	Sewer By-law #90-2003	Water $	Sewer $	Note: Changes are in Bold $
SERVICE CONNECTION RELATED CHARGES					
1) Water Service Connection Charges, for single family and semi-detached residential lots including those for pre-installed stubs:	D1				
a) 19mm (3/4") diameter					
- Base Rate – Apr 1 – Nov 30			3,700.00		3,700.00
- Winter Rate – Dec 1 – Mar 31			4,810.00		4,810.00
b) 25mm (1") diameter					
- Base Rate – Apr 1 – Nov 30			4,600.00		4,600.00
- Winter Rate – Dec 1 – Mar 31			5,980.00		5,980.00
2) Water Service Connections, not covered above, including apartment buildings (from duplexes to multi floor buildings), townhouses and condominiums on blocks of land or recreational, institutional, commercial and industrial buildings:	D2		Actual Cost		Actual Cost
a) 19-mm (3/4") diameter minimum charge			3,700.00		3,700.00
b) 25-mm (1") diameter minimum charge			4,600.00		4,600.00
3) Inspection of an installation of a separate fire line on private property	D3		125.00		125.00
4) Sanitary Sewer Service Connection Charges for single family and semi-detached residential lots for pre-installed stubs 100 or 125mm (4" or 5") diameter:		C1			
- Base Rate (Apr 1 – Nov 30)				3,843.00	3,843.00
- Winter Rate (Dec 1 – Mar 31)				5,005.00	5,005.00
5) Sanitary Sewer Service Connections, not covered above, including apartment buildings (from duplexes to multi-floor buildings), townhouses and condominiums on blocks of land or recreational, institutional, commercial and industrial buildings:		C2		Actual Cost	Actual Cost
- Minimum Charge				3,843.00	3,843.00
6) Storm Sewer Service Connections:		C3		Actual Cost	Actual Cost
- Minimum Charge				3,843.00	3,843.00

Schedule 4 - Recommended 2021 Miscellaneous Charges Item Number & Description	By-Law Schedule Reference		Existing 2020 Charges		Recommended 2021 Charges
	Water By-law #89-2003	Sewer By-law #90-2003	Water $	Sewer $	Note: Changes are in Bold $
7) Reuse of Water/Sewer Service Connection where building has been or will be demolished or removed: - Inspection fee	D4	C4	125.00	125.00	125.00 each
- Where a disused Water/Sewer Service Connection is to be replaced by the Region			See above service connection charges		
8) Disconnecting, rendering inoperable, reconnecting or restoring Water/Sewer connection	D5	C5	Actual Cost		Actual Cost
FRONTAGE CHARGES (see Notes 1 to 6)					
9) Frontage charges for non-standard watermain sizes and frontage charges for watermain projects initiated by petition.	E1 & E2		Actual Cost		Actual Cost
10) Standard 150-mm (6-inch) diameter Watermain (Note 3) - /metre - /foot	E1 & E2		 460.00 140.21		 460.00 140.21
11) Standard 200-mm (8-inch) diameter Watermain - /metre - /foot	E1 & E2		 528.00 160.93		 528.00 160.93
12) Standard 300-mm (12-inch) diameter Watermain - /metre - /foot	E1 & E2		 570.00 173.74		 570.00 173.74
13) Frontage charges for non-standard Sanitary Sewer sizes and frontage charges for Sanitary Sewer projects initiated by petition.		D1 & D2		Actual Cost	Actual Cost
14) Standard 200-mm (8-inch) diameter Sanitary Sewer (Note 3) - /metre - /foot		D1 & D2		 507.00 154.53	 507.00 154.53
15) Standard 250-mm (10-inch) diameter Sanitary Sewer - /metre - /foot		D1 & D2		 575.00 175.26	 575.00 175.26
16) Standard 300-mm (12-inch) diameter Sanitary Sewer - /metre - /foot		D1 & D2		 637.00 194.16	 637.00 194.16
Note (1) – Property owners requiring non-standard main sizes charged actual cost.					
Note (2) – Frontage charges may be financed at an annual interest rate of the prime rate of the Region's financial institution plus 1.5% for a payment term of 10 or 15 years. The payment term is at the option of the Property Owner. Frontage charges shall be added to the Property Owner's Water and Sewer bill and will be billed and collected in the same manner as Water and Sewer Rates.					
Note (3) – Residential frontage charges to be assessed on the basis of a standard 150-mm (6-inch) diameter watermain and a standard 200-mm (8-inch) diameter sanitary sewer.					
Note (4) – Any frontage charges for non-standard main sizes, or any extraordinary circumstances, be assessed by the Commissioners of Finance and Works on a case by case basis to ensure full cost recovery.					
Note (5) – Rate may vary if estimated construction costs vary significantly from the rates noted above.					

Schedule 4 - Recommended 2021 Miscellaneous Charges Item Number & Description	By-Law Schedule Reference		Existing 2020 Charges		Recommended 2021 Charges
	Water By-law #89-2003	Sewer By-law #90-2003	Water $	Sewer $	Note: Changes are in Bold $
Note (6) – Frontage charges for petition projects shall be based on actual costs.					
MISCELLANEOUS CHARGES					
17) Water Shut Off/Turn On					
Initiated by Customer:	F1	E1			
During normal Regional working hours:					
- Shut Water Off			80.00		80.00
- Turn Water On			80.00		80.00
- Shut Off & Turn On During Same Call			80.00		80.00
After normal Regional working hours:			120.00		120.00
- Shut Water Off			120.00		120.00
- Turn Water On			120.00		120.00
- Shut Off & Turn On During Same Call					
Initiated by Region:					
For failure by the Customer to arrange with the Region for meter installation, replacement, repair or inspection or meter reading (off or on, each)			80.00		80.00
For Water Shut Off Notification prior to shut off action being taken			25.00 for both		25.00 for both
For Water Shut Off for collection action, (water not necessarily shut off) for non-payment of Water/Sewer bill, or any Regional invoice, or for violation of any provision of the Water System/Sewer System By-laws (water not necessarily shut off)			94.00 for both		94.00 for both
Turn Water On			80.00 for both		80.00 for both
18) Standby charge while water service is shut off but not disconnected or water service is available for fire protection purposes but not connected	F2		Standard Service Charge		Standard Service Charge
19) Testing of Water Meter					
Initiated by Customer: - Deposit	F3		210.00		210.00
Fee where the meter is found to measure the flow of water within or below AWWA Specifications					
- Up to a maximum size of 25mm			210.00		210.00
- Over 25mm			Actual Cost		Actual Cost
Fee if meter is found to measure the flow of water above AWWA specifications			No Charge		No Charge
20) Unmetered water used for construction (building purposes) per service	F4		222.00		222.00

Schedule 4 - Recommended 2021 Miscellaneous Charges Item Number & Description	By-Law Schedule Reference		Existing 2020 Charges		Recommended 2021 Charges
	Water By-law #89-2003	Sewer By-law #90-2003	Water $	Sewer $	Note: Changes are in Bold $
21) Drawing Regional water from hydrant for purposes other than fire protection (All Users)	F5				
- /cubic metre			3.88		3.88
- /1,000 gallons			17.64		17.64
- Deposit			1,800.00		1,800.00
- Administrative Charge			134.77		134.77
- Minimum Charge per Month			1,800.00		1,800.00
- Valve installation/removal			109.25		109.25
22) Repair or replacement of frozen, damaged or missing water meter	F6				
- Up to a maximum size of 19mm (3/4")			210.00		210.00
- Over 19mm (3/4")			Actual Cost		Actual Cost
23) Thawing of service pipes	F7		No Charge		No Charge
24) Thawing of private hydrants or unmetered Fire Lines	F8		Actual Cost		Actual Cost
25) Cleaning sanitary sewer services		E3		No Charge	No Charge
26) Repair to or renewal of sanitary building sewers		E4		No Charge	No Charge
27) Supplying Statement of Account	F9	E5	35.00 for both		35.00 for both
28) Charge for Regional Solicitor providing information	F10	E6	94.00 for both		94.00 for both
29) Processing of Dishonoured Payments	F11	E7	48.00 for both		48.00 for both
30) Account Payment Transfer Fee	F12	E8	11.00 for both		11.00 for both
31) New Account & Change of Occupancy Fee	F13	E9	42.00 for both		42.00 for both
32) Charge for Late Payment of Water/Sewer Surcharge Rates	F14	E10	2%		2%
33) Lien Administration Fee	F15	E11	50.00 for both		50.00 for both
34) Installation and removal of anti-tampering devices on fire hydrants & curb stops	F16		138.00		*138.00*
35) Cross Connection Control Program Test Report	New		25.00		*25.00*
36) Water from Water Supply Plants, Water Pollution Control Plants, Works Depots & Bulk Filling Stations	F17				
- /cubic metre			3.22		**3.23**
- /1,000 gallons			14.64		**14.69**
- Service Charge $/month			21.00		21.00
- New Account Fee*			42.00		42.00
- Key Deposit			218.80		218.80
- Refundable on return of key (based on fee in year Key Deposit made)			181.64		181.64
- Access card			36.45		36.45
* **The new account fee does not apply to new accounts set up by customers for the use of the Bulk Water Filling Station at the Oshawa/Whitby Depot**					

Schedule 4 - Recommended 2021 Miscellaneous Charges Item Number & Description	By-Law Schedule Reference		Existing 2020 Charges		Recommended 2021 Charges
	Water By-law #89-2003	Sewer By-law #90-2003	Water $	Sewer $	Note: Changes are in Bold $
37) Fire Flow tests:					
- Full test (May 1 – Oct 31)	F18		467.20		467.20
- Full test (Nov 1 – Apr 30)			812.90		812.90
- Opening Hydrants (May 1 – Oct 31)			320.30		320.30
- Opening Hydrant (Nov 1 – Apr 30)			652.80		652.80
38) Sewage Surcharge and Compliance Agreements		E12		1,885.00	1,885.00
39) Disposal of Septic Tank and Holding Tank Waste and the disposal of Water Pollution Control Plant Sludge:		E2			
a) Hauled Domestic Waste					
- /cubic metre				19.56	19.56
- /1,000 gallons				88.93	88.93
b) Sludge from WPCP within the Regions of York and Durham and trucked to the incineration facilities at Duffin Creek WPCP					
- /cubic metre				16.19	16.19
- /1,000 gallons				73.59	73.59
c) Annual charge for registration of Haulers (up to 10 vehicles)				175.00	175.00
- Additional stickers if more than 10 vehicles, or replacement stickers – per sticker				10.20	10.20
d) ICI Sector areas (discharges up to 50,000 gallons)				522.75	522.75
e) ICI Sector areas (discharges of 50,001 to 100,000 gallons)				1,024.59	1,024.59
40) Copies of By-laws Water System, Sewer System and Sewer Use (+ Applicable taxes)	F19	E13	20.50/copy		20.50/copy
41) Sewer TV Inspection Reports and Videos per report or video (+ Applicable taxes)		E14		21.51	21.51
42) Sewer Use By-law Agreement extra strength waste ($/kg.)				0.53	0.53
43) Sewer Appeal Application per request		E15		950.00	950.00

Schedule 5 - Recommended 2021 Fee Schedule for Laboratory Services at the Regional Environmental Laboratory Located at the Duffin Creek WPCP

THE REGIONAL MUNICIPALITY OF DURHAM 2021 FEES AND CHARGES WORKS DEPARTMENT - ENVIRONMENTAL LABORATORY			2021 Changed Bold
Description		2020 Rate (before appl. Taxes)	2021 Rate (before appl. Taxes)
Laboratory Fees Page 1 of 10		$	$
ONTARIO DRINKING WATER REGULATION 170/03 PACKAGES			
Microbiological			
Presence/Absence Test (P/A for TC, EC)		$14.30	$14.30
Treated Water (P/A, HPC or BKD)		$26.50	$26.50
Well Water/Raw/Reg.319 (TC, EC)		$27.50	$27.50
Well Water/Treated/Distribution (TC, EC, HPC)		$37.70	$37.70
Single test by membrane filtration (e.g. MFHPC, MFTC)		$13.30	$13.30
Test for E. coli by membrane filtration		$14.30	$14.30
Inorganic Chemical			
All Parameters required under O.Reg. 170/03 Schedule 23 plus additional metals		$80.60	$80.60
(Al, As, B, Ba, Cd, Co, Cr, Cu, Fe, Hg, Mn, Mo, Ni, Pb, Sb, Se, U, Zn)			
Inorganic Ions required under O.Regulation 170/03		$79.60	$79.60
(F, NO2, NO3, Na)			
Inorganic Ions required under O.Reg. 170/03 plus additional Ions		$79.60	$79.60
(Hardness*, Ca, Mg, Na, K, Ammonia, F, Cl, Br, NO2, NO3, PO4, SO4)			
(Nitrite, Nitrate)		$52.00	$52.00
(Sodium)		$34.70	$34.70
(Fluoride)		$34.70	$34.70
(Lead testing as required under O.Regulation 170)		$35.70	$35.70
(Lead testing as required under O.Regulation 243) - For Standing & Flushed		$150.00	$150.00
Organic Chemical			
THMs (Trihalomethanes)		$102.00	$102.00
bromodichloromethane	bromoform		
dibromochloromethane	chloroform		
THM (Total)			
All Parameters required under Schedule 24		$1,400.00	$1,400.00
(Includes all Parameters described under the following test CODES listed in this book -			
VOC, OC, TRIAZ, OP, PHENAC, CHLORPHEN, CARBUREA, GLYPH, DIPARA, PCB)			
Combined Packages			
York Region Drinking Water Package A		$1,285.20	$1,285.20
(Includes DW2M (less TURB), Hg, B, Ba, U, VOC, OC, TRIAZ, OP, PHENAC,			
CHLORPHEN, CARBUREA, GLYPH, DIPARA, PCB)			
*Calculation included (no charge).			

THE REGIONAL MUNICIPALITY OF DURHAM

2021 FEES AND CHARGES

WORKS DEPARTMENT - ENVIRONMENTAL LABORATORY

Description		2020 Rate (before appl. Taxes)	2021 Changed Bold 2021 Rate (before appl. Taxes)
Laboratory Fees Page 2 of 10		**$**	**$**
MICROBIOLOGICAL TESTS			
O.Regulation 170/03			
Presence/Absence Test (P/A for TC, EC)		$14.30	$14.30
Treated Water (P/A, HPC or BKD)		$26.50	$26.50
Well Water/Raw/Reg.319 (TC, EC)		$27.50	$27.50
Well Water/Treated/Distribution (TC, EC, HPC)		$37.70	$37.70
Raw Water Intake, Municipal (TC, EC, BKD)		$32.60	$32.60
Treated/Distribution Water (TC, EC, BKD, HPC)		$42.80	$42.80
Single test by membrane filtration (e.g. MFHPC, MFTC)		$13.30	$13.30
Test for E. coli by membrane filtration		$14.30	$14.30
New Mains			
New Water Mains (TC, EC, BKD, HPC)		$42.80	$42.80
Waste Water			
E.coli (Final Effluent)		$16.30	$16.30
E.coli (Sludge / Cake)		$30.60	$30.60
Faecal Streptococci	**New Test**	N/A	**$16.30**
Final Effluent (TC, EC)		$30.60	$30.60
Final Effluent (TC, EC, FS)		$40.80	$40.80
Microscopic Examination		$100.00	$100.00
Recreational Water			
E.coli (Lake/Beach/Creek/Pond/River)		$14.30	$14.30
Lakes / Bathing beaches (TC, EC, FS)		$37.70	$37.70
Any Single Membrane Filtration Test (eg. FC - MFFC, AE - MFAE, PS, SA etc.)		$25.50	$25.50
Raw and Treated Water			
Algae Enumeration and Identification		$100.00	$100.00
Algae by Microscopic Particulate Analysis		$500.00	$500.00
Microcystin		$153.00	$153.00
F Specific Coliphages		$200.00	$200.00
Mycology (Fungi)			
Fungal Enumeration		$25.00	$25.00
Fungal Identification (Consultation Required)		$130.00	$130.00
Air Quality (Microbial - Bacteria, Yeasts & Molds)		$75.00	$75.00
Enumeration of Bacteria, Yeast and Molds by RODAC plates (BHI & SAB/MEA)		$75.00	$75.00
Protozoa Testing			
Cryptosporidium and Giardia (MBCG)		$816.00	$816.00
Cryptosporidium, Giardia and Microscopic Particulate Analysis (MBCGMPA)		$1,100.00	$1,100.00
Pigment Bearing Algae and Diatoms (MBPBAD)		$500.00	$500.00
Cryptosporidium, Giardia and Pigment Bearing Algae and Diatoms (MBCGPBAD)		$1,100.00	$1,100.00
Sterility (Spore) Testing			
Bacillus subtilis (DRY)		$50.00	$50.00
Bacillus stearothermophilus (STEAM)		$50.00	$50.00
Other Bacteriological Groups			
Private Wells (TC, EC)(Signed Report faxed next day)		$76.50	$76.50
Iron Bacteria - Presence/Absence		$75.00	$75.00
Sulphur Bacteria - Presence/Absence		$75.00	$75.00
Iron & Sulphur Bacteria - Presence/Absence		$125.00	$125.00
Enumeration for (TC, EC, FC, HPC, BKD, PS, AE or FS) per parameter		$51.00	**N/A**

THE REGIONAL MUNICIPALITY OF DURHAM

2021 FEES AND CHARGES

WORKS DEPARTMENT - ENVIRONMENTAL LABORATORY

Description	2020 Rate (before appl. Taxes)		2021 Changed Bold 2021 Rate (before appl. Taxes)	
Laboratory Fees Page 3 of10	**$**	**$**	**$**	**$**
GENERAL INORGANIC TESTS	**Water**	**S/S/S**	**Water**	**S/S/S**
pH, Conductivity, Alkalinity Total (CaCO3)	$27.50	$32.60	$27.50	$32.60
Alkalinity, Total (CaCO3)	$16.30	$21.40	$16.30	$21.40
Alkalinity, Total (CaCO3) (plus hydroxide, carbonate and bicarbonate)	$20.00	$26.00	$20.00	$26.00
Conductivity	$11.20	$16.30	$11.20	$16.30
pH	$11.20	$16.30	$11.20	$16.30
Fluoride by Ion Selective Electrode	$21.40	$27.50	$21.40	$27.50
Total Residual Chlorine	$11.20	$19.40	$11.20	$19.40
Free Residual Chlorine	$11.20	$19.40	$11.20	$19.40
Colour	$16.30	$19.40	$16.30	$19.40
Turbidity	$16.30	$19.40	$16.30	$19.40
Biochemical Oxygen Demand (BOD5)	$35.70	$42.80	$35.70	$42.80
Carbonaceous Biochemical Oxygen Demand (cBOD5)	$35.70	$42.80	$35.70	$42.80
Chemical Oxygen Demand (COD)	$31.60	$37.70	$31.60	$37.70
Dissolved Organic Carbon (DOC)	$29.60	$37.70	$29.60	$37.70
Cyanide (Total)	$40.80	$47.90	$40.80	$47.90
Cyanide (Free)	$40.80	$47.90	$40.80	$47.90
Phenol	$37.70	$45.90	$37.70	$45.90
Sulphide (S2-)	$37.70	$45.90	$37.70	$45.90
Dissolved Solids, Fixed Dissolved Solids, Voltaile Dissolved Solids*	$26.50	N/A	$26.50	N/A
Total Suspended Solids (SS)	$15.30	$17.30	$15.30	$17.30
Total Suspended Solids, Fixed Suspended Solids, Volatile Suspended Solids*	$21.40	$24.50	$21.40	$24.50
Total Solids (TS)	$13.30	$15.30	$13.30	$15.30
Total Solids, Fixed Total Solids, Volatile Total Solids*	$19.40	$21.40	$19.40	$21.40
Total Dissolved Solids, Total Suspended Solids, Total Solids	$35.70	$42.80	$35.70	$42.80
Total Oil & Grease	$53.00	$63.20	$53.00	$63.20
Total / Mineral / Animal & Vegetable* Oil & Grease	$80.60	$96.90	$80.60	$96.90
Volatile Acids	$30.60	$30.60	**N/A**	**N/A**

S/S/S = Sewage, Sludge and Soil
*Calculation included (no charge).

THE REGIONAL MUNICIPALITY OF DURHAM

2021 FEES AND CHARGES

WORKS DEPARTMENT - ENVIRONMENTAL LABORATORY

Description		2020 Rate (before appl. Taxes)		2021 Changed Bold 2021 Rate (before appl. Taxes)	
Laboratory Fees Page 4 of 10		$	$	$	$
GENERAL INORGANIC TESTS		Water	S/S/S	Water	S/S/S
Ion Chromatography					
Hardness*,Ca,Mg,Na,K,Ammonia,F,Cl,Br,NO2,NO3,PO4,SO4		$79.60	$95.90	$79.60	$95.90
F,Cl,Br,NO2,NO3,PO4,SO4		$52.00	$62.20	$52.00	$62.20
Hardness*,Ca,Mg,Na,K,Ammonia		$52.00	$62.20	$52.00	$62.20
Any One of the Above Single Elements by IC		$34.70	$40.80	$34.70	$40.80
Nutrients by Segmented Flow Analyzer					
NH3+NH4, PO4, NO2, NO2+NO3, TKN, TP		$98.90	$118.30	$98.90	$118.30
NH3+NH4, PO4, NO2, NO2+NO3		$59.20	$70.40	$59.20	$70.40
TKN, TP		$59.20	$70.40	$59.20	$70.40
Any One of the Above Single Nutrients by SFA		$38.80	$46.90	$38.80	$46.90
Ultra Low Dissolved PO4 (clean water only)		$66.30	N/A	$66.30	N/A
Metals					
Mercury (Hg) by Cold Vapour AA		$35.70	$42.80	$35.70	$42.80
Acid Soluble Metals by ICP (Al, Fe, Mn, Pb, Zn)		$40.80	N/A	$40.80	N/A
Cation Scan by ICP (B,Ba,Be,Ca,K,Li,Mg,Na,SiO3,Sr,U)		$40.80	N/A	**N/A**	N/A
Cation Scan by ICP (Ca, Mg, Na, K, Hardness*)	New Test	N/A	N/A	**$52.00**	N/A
Heavy Metals Scan by ICP: Al, As, Cd, Co, Cr, Cu, Fe, Mn, Mo, Ni, Pb, Se, Sb, Zn		$54.10	$64.30	$54.10	$64.30
Heavy Metals Scan by ICP: As, Cd, Co, Cr, Cu, Mo, Ni, Pb, Se, Zn		N/A	$64.30	N/A	$64.30
Regulation 170 Metals: Al, As, B, Ba, Cd, Co, Cr, Cu, Fe, Mn, Mo, Ni, Pb, Sb, Se, U, Zn		$76.50	N/A	$76.50	N/A
Any One of the Above Single Metals by ICP-OES or ICP-MS		$35.70	$42.80	$35.70	$42.80
(Lead testing as required under O.Regulation 170)		$35.70	N/A	$35.70	N/A
(Lead testing as required under O.Regulation 243)		$75.00	N/A	$75.00	N/A
Other elements such as (Ag, Ti, V, Tl, etc.)					
are available as single element requests.					
S/S/S = Sewage, Sludge and Soil					
* = Calculation Included (no charge)					

THE REGIONAL MUNICIPALITY OF DURHAM

2021 FEES AND CHARGES

WORKS DEPARTMENT - ENVIRONMENTAL LABORATORY

Description	2020 Rate (before appl. Taxes)	2021 Changed Bold 2021 Rate (before appl. Taxes)
Laboratory Fees Page 5 of 10	**$**	**$**
INORGANIC MONITORING PACKAGES		
Drinking Water		
Drinking Water Package #1	$96.90	$96.90
(pH, conductivity, alkalinity, chloride, fluoride, bromide, nitrite, nitrate, phosphate, sulphate, calcium, magnesium, sodium, potassium, ammonia, hardness*, ionic balance*, total anions*, total cations*, calculated dissolved solids*, calculated conductivity*, langelier index*)		
Drinking Water Package #2	$149.90	$149.90
(colour, turbidity, Al, Fe, Mn, Pb, Zn) (pH, conductivity, alkalinity, chloride, fluoride, bromide, nitrite, nitrate, phosphate, sulphate, calcium, magnesium, sodium, potassium, ammonia, hardness*, ionic balance*, total anions*, total cations*, calculated dissolved solids*, calculated conductivity*, langelier index*)		
Drinking Water Package #2 with expanded metals	$174.40	$174.40
(colour, turbidity, Al, As, Cd, Co, Cr, Cu, Fe, Mn, Mo, Ni, Pb, Sb, Se, Zn) (pH, conductivity, alkalinity, chloride, fluoride, bromide, nitrite, nitrate, phosphate, sulphate, calcium, magnesium, sodium, potassium, ammonia, hardness*, ionic balance*, total anions*, total cations*, calculated dissolved solids*, calculated conductivity*, langelier index*)		
Drinking Water Package #3	$262.20	$262.20
Colour, (Al, Sb, As, Ba, B, Cd, Cr, Co, Cu, Fe, Pb, Mn, Mo, Ni, Se, U, Zn), Hg pH, Conductivity, Alkalinity, (Ca, Mg, K, Na, NH3, Hardness*) (Br, Cl, F, NO2, NO3, [NO2+NO3]*, SO4, PO4), DOC, TKN		
Landfill Monitoring		
Surface Water	$370.30	$370.30
(BOD, COD, colour, phenol, total solids, suspended solids, dissolved solids*, pH, conductivity, alkalinity, fluoride, chloride, bromide, nitrite, nitrate, sulphate, phosphate, calcium, magnesium, sodium, potassium, ammonia, hardness*, total cations*, total anions*, ionic balance*, calculated dissolved solids*, calculated conductivity*, langelier index*, dissolved organic carbon, total kjeldahl nitrogen, total phosphorus, Al, As, Cd, Co, Cr, Cu, Fe, Mn, Mo, Ni, Pb, Sb, Se, Zn)		
(Filtration of Raw Landfill samples)	$35.70	$35.70
*Calculation included (no charge).		

THE REGIONAL MUNICIPALITY OF DURHAM

2021 FEES AND CHARGES

WORKS DEPARTMENT - ENVIRONMENTAL LABORATORY

Description	2020 Rate (before appl. Taxes)	2021 Changed Bold 2021 Rate (before appl. Taxes)
Laboratory Fees Page 6 of 10	**$**	**$**
INORGANIC MONITORING PACKAGES		
Sewer Use By-law	$475.00	$475.00
Complete Inorganic Package		
BOD, suspended solids, total kjeldahl nitrogen, total phosphorus, pH, fluoride		
sulphate, phenol, cyanide, Total/Mineral/Animal & Vegetable Oil & Grease		
Hg, Ag, Al, As, Cd, Co, Cr, Cu, Fe, Mn, Mo, Ni, Pb, Sb, Se, Sn, Ti, Zn		
Sewage and Industrial Waste		
Monitoring Package #1	$42.80	$42.80
(BOD5, suspended solids)		
Monitoring Package #2	$100.00	$100.00
(BOD5, susp. solids, total kjeldahl nitrogen, total phosphorus)		
Monitoring Package #2 plus Metals	$161.20	$161.20
(BOD5, susp. solids, total kjeldahl nitrogen, total phosphorus		
Al, As, Cd, Co, Cr, Cu, Fe, Mn, Mo, Ni, Pb, Sb, Se, Zn)		
Monitoring Package #3	$149.90	$149.90
(BOD5, susp. solids, total kjeldahl nitrogen, total phosphorus		
ammonia+ammonium, nitrite, nitrite+nitrate, diss. phosphate)		
Monitoring Package #3 plus Metals	$211.10	$211.10
(BOD5, susp. solids, total kjeldahl nitrogen, total phosphorus		
ammonia+ammonium, nitrite, nitrite+nitrate, diss. phosphate		
Al, As, Cd, Co, Cr, Cu, Fe, Mn, Mo, Ni, Pb, Sb, Se, Zn)		
Monitoring Package #4	$197.90	$197.90
(BOD5, CBOD5, susp. solids, total kjeldahl nitrogen, total phosphorus		
ammonia+ammonium, nitrite, nitrite+nitrate, diss. phosphate, pH		
Al, As, Cd, Co, Cr, Cu, Fe, Mn, Mo, Ni, Pb, Sb, Se, Zn)		
Monitoring Package #4 plus Metals	$262.10	$262.10
(BOD5, CBOD5, susp. solids, total kjeldahl nitrogen, total phosphorus		
ammonia+ammonium, nitrite, nitrite+nitrate, diss. phosphate, pH		
Al, As, Cd, Co, Cr, Cu, Fe, Mn, Mo, Ni, Pb, Sb, Se, Zn)		
Sludge		
Sludge Monitoring Package #1	$116.30	$116.30
(total solids, total kjeldahl nitrogen, total phosphorus,		
ammonia+ammonium, nitrite, nitrite+nitrate, diss. phosphate)		
Sludge Monitoring Package #1 plus Metals	$177.50	$177.50
(total solids, total kjeldahl nitrogen, total phosphorus,		
ammonia+ammonium, nitrite, nitrite+nitrate, diss. phosphate		
Hg, As, Cd, Co, Cr, Cu, Mo, Ni, Pb, Se, Zn)		
Sludge Monitoring Package #2 (Agrisludge)	$204.00	$204.00
(total solids, ashed total solids, volatile total solids*,		
total kjeldahl nitrogen, total phosphorus, ammonia+ammonium		
nitrite + nitrate, Hg, As, Cd, Co, Cr, Cu, K, Mo, Ni, Pb, Se, Zn)		
*Calculation included (no charge).		

THE REGIONAL MUNICIPALITY OF DURHAM 2021 FEES AND CHARGES WORKS DEPARTMENT - ENVIRONMENTAL LABORATORY			2021 Changed Bold
Description		2020 Rate (before appl. Taxes)	2021 Rate (before appl. Taxes)
Laboratory Fees Page 7 of 10		**$**	**$**
ORGANIC MONITORING PACKAGES			
Drinking / Surface / Ground Water and Wastewater			
THMs (Trihalomethanes)		$102.00	$102.00
bromodichloromethane	bromoform		
dibromochloromethane	chloroform		
THM (Total)			
BTEX by Purge & Trap GC/MS		$80.60	$80.60
benzene	ethylbenzene		
m,p-xylene	o-xylene		
toluene	Xylene (Total)		
Taste & Odour		$250.00	$250.00
geosmin	2-methylisoborneol (MIB)		
2-isobutyl-3-methoxypyrazine	2-isopropyl-3-methoxypyrazine		
2,3,6-trichloroanisole	2,4,6-trichloroanisole		
Haloacetic Acids (Disinfection By-Products)		$300.00	$300.00
bromochloroacetic acid	dibromoacetic acid		
dichloroacetic acid	monobromoacetic acid		
monochloroacetic acid	trichloroacetic acid		
Volatile Organic Compounds		$128.50	$128.50
benzene	cis-1,2-dichloroethylene		
bromodichloromethane	trans-1,2-dichloroethylene		
bromoform	dichloromethane		
bromomethane	1,2-dichloropropane		
carbon tetrachloride	cis-1,3-dichloropropylene		
chlorobenzene	trans-1,3-dichloropropylene		
chlorodibromomethane	ethylbenzene		
chloroethane	styrene		
chloroform	1,1,2,2-tetrachloroethane		
chloromethane	toluene		
tetrachloroethylene (perchloroethylene)	1,1,1-trichloroethane		
1,2-dibromoethane(ethylene dibromide)	1,1,2-trichloroethane		
1,2-dichlorobenzene	trichloroethylene		
1,3-dichlorobenzene	trichlorofluoromethane		
1,4-dichlorobenzene	vinyl chloride		
1,1-dichloroethane	o-xylene		
1,2-dichloroethane	m,p-xylene		
1,1-dichloroethylene	THM (Total)		
methyl tert-butyl ether (MTBE)	xylene (Total)		
methyl ethyl ketone (MEK)	2-hexanone		
methyl isobutyl ketone (MIBK)	acetone		
1,1,1,2-tetrachloroethane	1,2,4-trichlorobenzene		
Pesticide/Herbicide Analysis			
Organochlorine Pesticides		$123.40	$123.40
aldrin	endosulphan I		
a-BHC	endosulphan II		
b-BHC	endosulphan sulphate		
g-BHC (Lindane)	endrin		
a-chlordane	heptachlor		
g-chlordane	heptachlor epoxide		
p,p'-DDD	methoxychlor		
p,p'-DDE	mirex		
p,p'-DDT	oxychlordane		
o,p'-DDT	trifluralin		
dieldrin	toxaphene		

THE REGIONAL MUNICIPALITY OF DURHAM 2021 FEES AND CHARGES WORKS DEPARTMENT - ENVIRONMENTAL LABORATORY			2021 Changed Bold
Description		2020 Rate (before appl. Taxes)	2021 Rate (before appl. Taxes)
Laboratory Fees Page 8 of 10		**$**	**$**
ORGANIC MONITORING PACKAGES			
Pesticide/Herbicide Analysis			
Triazine Herbicides		$107.10	$107.10
alachlor (Lasso)	metolachlor		
ametryn	metribuzin (Sencor)		
atraton	prometon		
atrazine	prometryn		
cyanazine (Bladex)	propazine		
desethyl atrazine	simazine		
Organophosphorus Pesticides		$107.10	$107.10
chlorpyrifos (Dursban)	malathion		
chlorpyrifos-methyl (Reldan)	methyl parathion		
diazinon	mevinphos (Phosdrin)		
dichlorvos	parathion		
dimethoate	phorate (Thimet)		
ethion			
fenchlorphos (Ronnel)	terbufos		
guthion (Azinphos-methyl)			
benzo(a)pyrene			
Phenoxy Acid Herbicides		$161.20	$161.20
2,4-dichlorophenoxyacetic acid (2,4-D)	MCPA		
bromoxynil			
dicamba	picloram		
diclofop-methyl			
Chlorophenols		$161.20	$161.20
2,4-dichlorophenol	2,3,4,6-tetrachlorophenol		
2,4,6-trichlorophenol			
Carbamate & Phenyl Urea Pesticides/Herbicides		$239.70	$239.70
Carbaryl	Carbofuran		
Diuron	Triallate		
Glyphosate		$198.90	$198.90
Diquat	Paraquat	$198.90	$198.90
PCB Analysis			
Polychlorinated Biphenyls		$80.60	$80.60
PAHs (Polynuclear Aromatic Hydrocarbons) by GC/MSD		Subcontractor's Rate	Subcontractor's Rate
Open Characterization (Semi-quantitative)			
Volatiles (Scans for Volatile Organic Compounds)		$250.00	$250.00
Extractables (Scans for Extractable Organic Compounds)		$300.00	$300.00

THE REGIONAL MUNICIPALITY OF DURHAM
2021 FEES AND CHARGES
WORKS DEPARTMENT - ENVIRONMENTAL LABORATORY

Description		2020 Rate (before appl. Taxes)	2021 Changed Bold 2021 Rate (before appl. Taxes)
Laboratory Fees Page 9 of 10		**$**	**$**
ORGANIC MONITORING PACKAGES			
Industrial Sewer Use By-law Acid/Base/Neutral Compounds		$214.20	$214.20
di-n-butylphthalate	bis(2-ethylhexyl)phthalate		
Polychlorinated Biphenyls		$80.60	$80.60
Industrial Sewer Use By-law Volatile Organic Compounds		$134.60	$134.60
1,1,2,2,-tetrachloroethane	m/p-xylene		
1,2-dichlorobenzene	o-xylene		
1,4-dichlorobenzene	styrene		
benzene	tetrachloroethylene		
chloroform	toluene		
cis-1,2-dichloroethylene	trans-1,3-dichloropropylene		
dichloromethane	trichloroethylene		
ethylbenzene	xylene (Total)		
methyl ethyl ketone (MEK)			
Industrial Sewer Use By-law Nonylphenols & Ethoxylates (Subcontracted)		Subcontractor's Rate	Subcontractor's Rate
nonylphenol	nonylphenol ethoxylates		
Durham/York/Peel Sewer Use By-law Organic Package*		$727.50	$727.50
1,1,2,2,-tetrachloroethane	m/p-xylene		
1,2-dichlorobenzene	o-xylene		
1,4-dichlorobenzene	styrene		
benzene	tetrachloroethylene		
chloroform	toluene		
cis-1,2-dichloroethylene	trans-1,3-dichloropropylene		
dichloromethane	trichloroethylene		
ethylbenzene	xylene (Total)		
methyl ethyl ketone (MEK)			
di-n-butyl phthalate	bis (2-ethylhexyl) phthalate		
PCB (Total)			
* If nonyl phenol/nonyl phenol ethoxylates req'd, please request as add-on to package			
Total Petroleum Hydrocarbons (TPH) in Water (Subcontracted)		Subcontractor's Rate	Subcontractor's Rate
This CCME method includes:			
a). BTEX-Purgeables by P&T GC/MS or HS GC/FID - gasoline range			
b). Extractables by GC/FID - diesel range			
c). Total Oil & Grease by Gravimetric - heavy oil range			
PFAS/PFOS (Direct Injection Method)	**New Test**	n/a	**$360.00**
Perfluorodecanesulfonic acid (PFDS, Perfluorodecanesulfonate) Perfluorodecanoic acid (PFDA, Perfluorodecanoate) Perfluorododecanoic acid (PFDoA, Perfluorododecanoate) Perfluoroheptanoic acid (PFHpA, Perfluorohepanoate) Perfluorohexanesulfonic acid (PFHxS, Perfluorohexanesulfonate) Perfluorohexanoic acid (PFHxA, Perfluorohexanoate) Perfluorononanoic acid (PFNA, Perfluorononanoate) Perfluorooctanesulfonic acid (PFOS, Perfluorooctanesulfonate) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanoic acid (PFOA, Perfluorooctanoate) Perfluoroundecanoic acid (PFUnA, Perfluoroundecanoate)			
PFAS/PFOS (Solid Phase Extraction Method)	**New Test**	n/a	**$600.00**
Perfluorodecanesulfonic acid (PFDS, Perfluorodecanesulfonate) Perfluorodecanoic acid (PFDA, Perfluorodecanoate) Perfluorododecanoic acid (PFDoA, Perfluorododecanoate) Perfluoroheptanoic acid (PFHpA, Perfluorohepanoate) Perfluorohexanesulfonic acid (PFHxS, Perfluorohexanesulfonate) Perfluorohexanoic acid (PFHxA, Perfluorohexanoate) Perfluorononanoic acid (PFNA, Perfluorononanoate) Perfluorooctanesulfonic acid (PFOS, Perfluorooctanesulfonate) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanoic acid (PFOA, Perfluorooctanoate) Perfluoroundecanoic acid (PFUnA, Perfluoroundecanoate)			
Legal Sample Fees and Legal Storage Fees			
Samples submitted under legal chain of custody (To maintain an unbroken chain of custody for samples that may be used for litigation)	per sample	$255.00	$255.00
Extended storage for legal samples (longer than 30 days) (Samples will be stored free of charge for 30 days from the date of final report)	per container per month	$3.10	$3.10
Court testimony by Regional Environmental Laboratory staff	per hour (including travel and wait time)	To be determined case-by-case	To be determined case-by-case
Mileage for appearance	per kilometre (actual)	$0.55	$0.55

THE REGIONAL MUNICIPALITY OF DURHAM

2021 FEES AND CHARGES

WORKS DEPARTMENT - ENVIRONMENTAL LABORATORY

Description	2020 Rate (before appl. Taxes)	2021 Changed Bold 2021 Rate (before appl. Taxes)
Laboratory Fees Page 10 of 10	**$**	**$**
Miscellaneous		
Sub-contractor Fee	Subcontractor's Rate	Subcontractor's Rate
Report re-issue Fee:		
- Current Year	$10.00	$10.00
- Previous 2 years	$25.00	$25.00
- Prior Archives	$100.00	$100.00
Sample treatment (if required):		
Chlorine quenching	$25.00	$25.00
Oil & Grease additional extraction	$25.00	$25.00
Crypto/Giardia Additonal Filter Processing	$400.00	$400.00
Shipping (Sample Containers)	Actual cost	Actual cost

Regional Municipality of Durham

2021 Water and Sanitary Sewer User Rates Detailed Report

Table of Contents

Exhibits

1 Background

1.1 Water and Sanitary Sewer User Rates Are Reviewed Annually

The Region's water and sanitary sewer user rates are reviewed annually and recommendations are made to Council in December, prior to a January 1st implementation of approved user rates.

The existing water and sanitary sewer user rates follow the same basic format as the uniform rates adopted in 1976. Since that time, user rates have been calculated in a consistent manner using a standard waterworks industry technique, the Base-Extra Capacity method and reflect the actual costs of supplying customers. Rates are based on metered consumption with three declining rate blocks, a service charge (by meter size for water), and an unmetered fire line charge (water only).

The following report is being considered concurrently by Council and is related to this Water and Sanitary Sewer User Rates Report:

- **Report #2020-F-24:** The recommended user rates are based on operating costs, capital costs and financing as outlined in detail in 2020-F-24: 2021 Business Plans and Budgets and Nine Year Capital Forecasts for the Consolidated Water Supply and Sanitary Sewerage Systems Report. This report is also included on the December 8, 2020 Finance and Administration Committee agenda.

The following report is related to this Water and Sanitary Sewer User Rates Report and was previously considered and approved by Council:

- **Report #2020-COW-24: 2020 Asset Management Plan** – This report provides an update on Durham's asset management initiatives, including those related to the water and sanitary sewerage systems. It provides important information regarding existing asset replacement values, condition and needs for existing asset rehabilitation and replacement. Findings from the Annual Asset Management Plan are used to inform the 2021 capital plan and 2022 to 2030 capital forecast for the rehabilitation and replacement of water supply and sanitary sewerage infrastructure.

1.2 User Rates Implemented on January 1st of each year.

It is imperative that the proposed 2021 user rates be approved in 2020 in order that they can be implemented with the first customer billings commencing early January 2021. Any delay in implementation may mean that any required rate increase would have to be larger to generate sufficient revenue during the Region's fiscal year. In addition, it is considered preferable to adjust the rates during the low winter consumption period rather than have a rate increase occur at the same time as the spring/summer seasonal usage increase.

1.3 Public Notification Provided

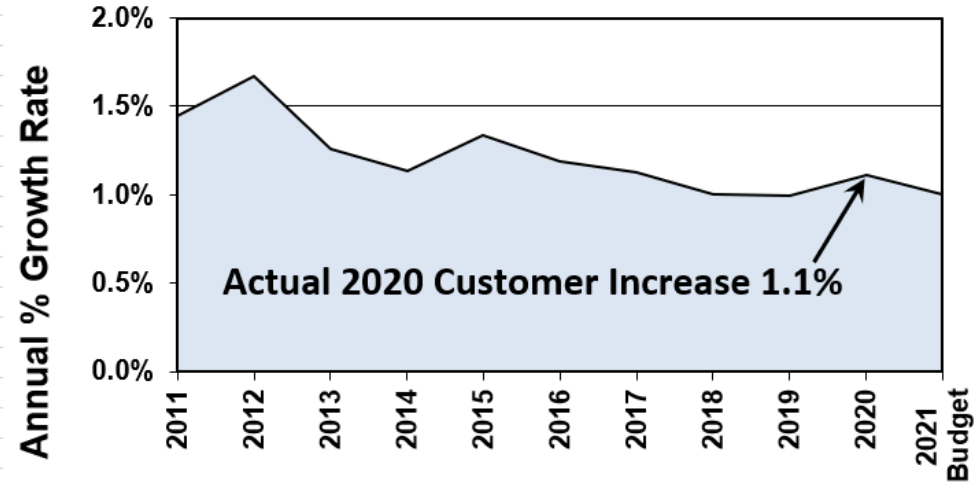
The proposed 2021 water and sanitary sewer user rates, fees and related charges will be considered by the Finance and Administration Committee on December 8th, 2020 and by Regional Council on December 16th, 2020. Public notification of this schedule was provided in local newspapers throughout the Region during the weeks of November 9th and 23rd. Notification was also posted on the Region's website. This affords the public an opportunity to make representation to the Finance and Administration Committee and Regional Council regarding proposed changes to the user rates prior to adoption. Printed copies of this user rate report are available to the public free of charge upon request or by accessing the Region's website.

2 Customer Growth - Moderate

Actual water customer growth from 2011 to 2020 and Budget 2021 (end of June data) is graphed in Exhibit 1 below. Mid-year figures are used for rate calculation purposes as they represent the "average" number of customers for the year.

Exhibit 1 - Annual % Growth in Water Customers (June data)

2011 to 2020 Actuals and 2021 Budget



Annual customer growth peaked at about 4.0 per cent in 2004. Since then, growth decreased to 1.0 per cent in 2018 and has since levelled.

There were totals of 179,498 water customers and 174,757 sanitary sewer customers in June 2020. Some customers have multiple units (such as apartment buildings) but only one meter. There are fewer sanitary sewer customers than water customers because there are communities with Regional water supply services, but no Regional sanitary sewer services provided including Orono, Newtonville, Blackstock, Greenbank, Uxville and most of Prince Albert. In addition, there are some individual customers in communities with sanitary sewers who are currently served only by the Regional water system.

Each year sanitary sewer customer growth is slightly higher than water customer growth as some customers who were only connected to the Regional water system, but with Regional service available, connect to the Region's sewage system.

For 2021 rate setting purposes, annual customer growth is projected at 1.00 per cent for water and 1.05 per cent for sanitary sewer (the same as projected in the 2020 User Rates report).

The actual water, sanitary sewer and fire line customer data from 2011 to 2020 and projected 2021 budget are tabulated in Exhibit 2.

Exhibit 2 - Water & Sanitary Sewer Customers (June data)
2011 to 2020 Actuals and 2021 Budget

	Water			Sewage			Fire
		Increase Over			Increase Over		Lines
		Previous June			Previous June		
Year	Total	Number	Percent	Total	Number	Percent	Total
2011	161,172	2,295	1.4%	156,907	2,309	1.5%	1,749
2012	163,860	2,688	1.7%	159,605	2,698	1.7%	1,775
2013	165,927	2,067	1.3%	161,683	2,078	1.3%	1,802
2014	167,813	1,886	1.1%	163,575	1,892	1.2%	1,783
2015	170,051	2,238	1.3%	165,844	2,269	1.4%	1,835
2016	172,068	2,017	1.2%	167,894	2,050	1.2%	1,863
2017	174,014	1,946	1.1%	169,861	1,967	1.2%	1,877
2018	175,763	1,749	1.0%	171,658	1,797	1.1%	1,899
2019	177,518	1,755	1.0%	173,431	1,773	1.0%	1,919
2020	179,498	1,980	1.1%	174,757	1,326	0.8%	1,940
2021 Budget	***181,293***	***1,795***	***1.00%***	***176,592***	***1,835***	***1.05%***	***1,959***

The projected 2021 increase in the number of water customers is 1,795 including residential and ICI (industrial, commercial and institutional).

The projected customer growth for 2021 is:

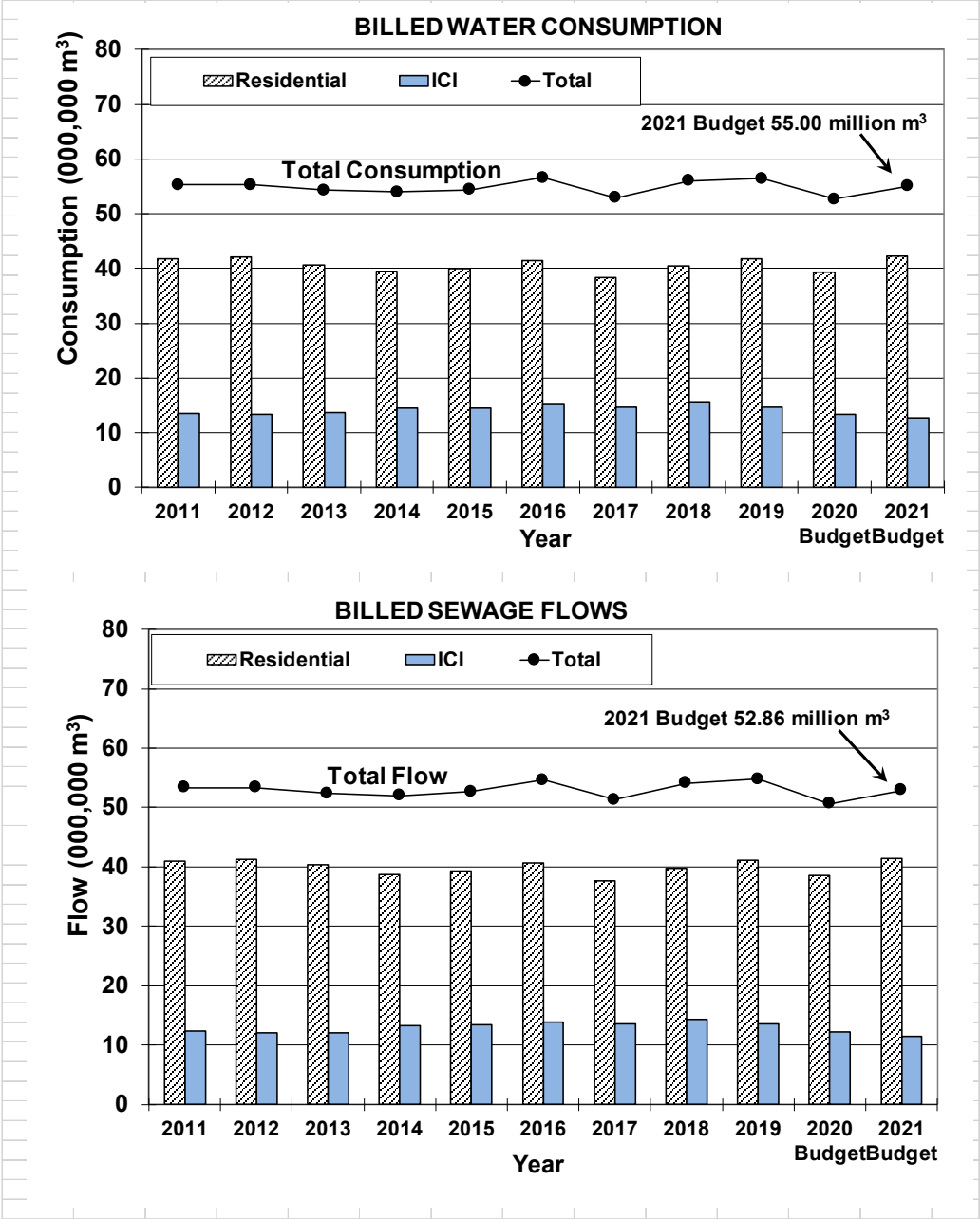
- **<u>Water</u> increase by +1,795 (+1.00 per cent) to a total of 181,293**
- **<u>Sanitary Sewer</u> increase by +1,835 (+1.05 per cent) to a total of 176,592**

3 Water Demand – Some Growth

3.1 Historical Consumption

Exhibit 3 graphs the 2011 to 2019 actual and 2020 and 2021 budgeted residential, ICI and total volumes billed to customers for water supply and sanitary sewerage. Additional information on the basis of the 2021 budget projections for consumption is provided in the following sections.

Exhibit 3 - Billed Water & Sanitary Sewer Volumes
2011 to 2019 Actuals and 2020/2021 Budget

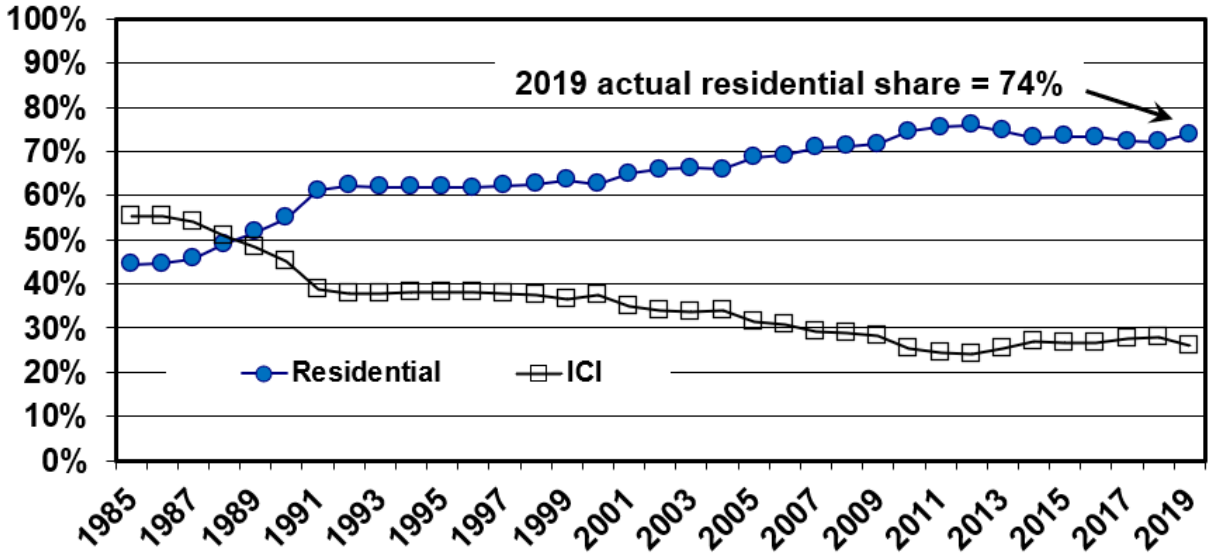


3.2 Residential versus ICI Consumption Share

Up until 2012 there was a steady increase in the share of consumption by residential customers and a corresponding decrease in the share of consumption by industrial/commercial/institution (ICI) customers. Residential usage grew from about a 43 per cent share in 1985 to a 76 per cent share in 2012. The change was due to a combination of strong residential growth, and, for a number of years, decreases in large ICI customer consumption. The trend reversed in 2013 with the reopening of one of the largest ICI customers, a paper production facility that was shut down in 2010. Facilities were upgraded using a different recycling process with a resulting increase in industrial water usage share. Residential share increased somewhat in 2019 with consumption reductions at General Motors.

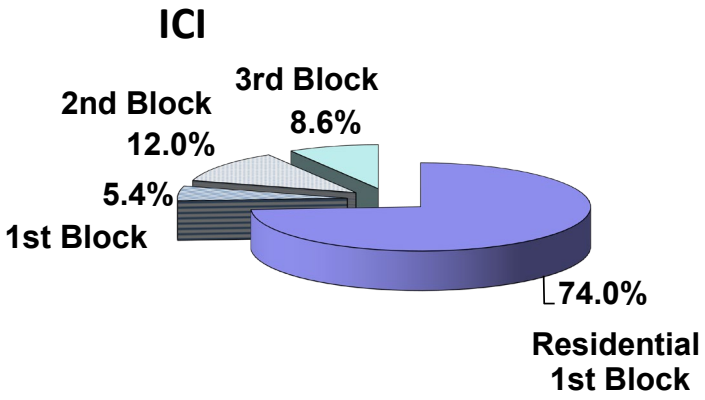
Annual consumption share is illustrated in Exhibit 4. The residential share of consumption is currently about 74 per cent.

Exhibit 4 - Billed Water & Sanitary Sewer Volume Share – Residential versus ICI 1985 to 2019 Actuals



The distribution of actual 2019 consumption by block and customer class is illustrated in Exhibit 5.

Exhibit 5 Water Consumption Share by Block – 2019 Actual



All residential consumption is billed at 1st block rates. ICI water users enter the 2nd and 3rd rate blocks. Consumption by block is broken down as follows:

- **1st block** (including all residential and ICI up to 45 m^3/month or 10,000 gallons/month) - All residential usage is billed at 1st block rates and these customers represent the majority of usage. Total 1st block consumption for all customers represented 79.4 per cent of all usage in 2019 (ICI 5.4 per cent + Residential 74.0 per cent).

- **2nd block** (ICI 46 to 4,500 m^3/month or 10,001 to 1,000,000 gallons/month) – This segment's consumption decreased slightly to about 12.0 per cent of the total.

- **3rd block** (ICI over 4,500 m^3/month or 1,000,000 gallons/month) – Large user consumption share decreased from about 10.0 per cent of total usage in 2018 to about 8.6 per cent in 2019.

3.3 Residential Consumption – Some Growth Budgeted

Although Durham continues to see residential customer growth, starting in 2001 and until 2017 usage per customer has trended downwards - the combined impact was a steady decrease in total residential usage. This trend appears to have levelled off in 2018, with 2019 and 2020 showing increased residential consumption per customer.

Total residential consumption is made up of "Base" day-to-day usage plus extra "Seasonal" usage in the summer. The two components are discussed in more detail as follows:

- **Base Usage** - Base usage is due to day-to-day activities that occur year-round such as kitchen, bathroom and laundry usage.

- **Seasonal Usage** – Seasonal usage is mostly outdoors during the summer months (May to September) and varies from year-to-year. During dry summers the level increases and in wet summers it is less.

Base Usage – Although the number of residential customers continues to grow, base (day-to-day) usage per customer had been decreasing from about 320 m3/customer/year in 2000 to about 220 m^3/customer/year in 2017. This steady drop in usage by residential customers tended to more than offset the impact on total residential consumption from the addition of new customers. The steady decrease in base usage per customer up to 2017 is apparent in Exhibit 6 below.

Note that this is a blend of all residential customers including single family dwellings, duplexes, apartment buildings and condominium townhouses.

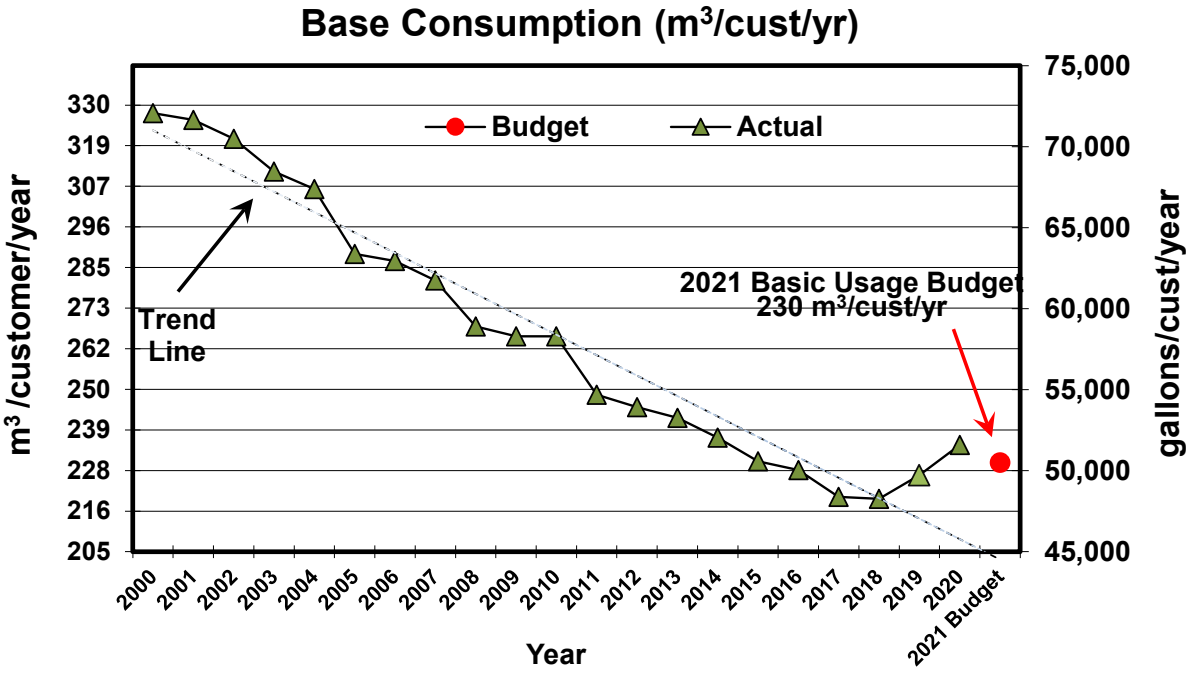
Contrary to expectations and trends, base usage per residential customer levelled off in 2018 at 219 m^3/customer/year followed by an increase to 226 m^3/customer/year in 2019. Base residential usage was budgeted at 219 m^3/customer/year for 2020.

An analysis of 2020 residential consumption indicates an increase in base usage over 2019 which coincides with the shift to more individuals working and studying remotely from home as a result of the COVID-19 pandemic. Due to the combination of recent historical base usage trend and the potential for COVID-19 ramifications going forward, at least for the near term, the level of base residential usage for budget 2021 purposes has been increased to 230 m^3/customer/year. Should actual residential base consumption be lower than projected in 2021, funding from the Water Rate Stabilization Reserve Fund and the Sewer Rate Stabilization Reserve fund will be required to finance any resulting deficits.

It is important to note that this increased rate in residential base consumption is not anticipated to continue post pandemic and future Business Plans and Budgets and User Rates will need to be adjusted to reflect updated projections.

Base residential usage represents the majority of residential usage and is the most important element in projecting residential use. Since residential use represents the majority of water sales, base residential consumption is also an important factor in projecting total water sales.

Exhibit 6 - Base Annual Residential Water Usage per Customer
2000 to 2020 Actuals and 2021 Budget (excludes seasonal usage)



Seasonal Usage - Seasonal volumes are mostly due to outside usage such as lawn/garden irrigation. Year-to-year weather variations can result in very little seasonal usage in wet years (examples 2008, 2013 and 2017) to significant **seasonal usage** in dry years (examples 2005, 2007 and 2016). Seasonal usage can vary from about 5 m^3/customer/year (1,000 gallons/customer/year) up to about 32 m^3/customer/year (7,000 gallons/customer/year), depending on summer weather conditions. Historically, seasonal usage has been budgeted at 6.5 m^3/customer/year, which represented about the bottom 30 per cent of summer usage levels, similar to a wet summer. For 2021 budget purposes, seasonal usage has been increased to 10 m^3/customer/year which represents the average level over the past ten years.

Total Usage – Total usage per residential customer (including base usage plus an allowance for seasonal usage) was budgeted at 225.5 m^3 (49,610 gallons) per year for 2020. For 2021 budgeting purposes, due to the projected increase in both base and seasonal usage per customer, total residential usage is budgeted at 240.0 m^3 (52,800 gallons) per residential customer.

Residential Consumption Summary				
	Per Customer		Total Annual	
Type of Usage	2020 Budget	2021 Budget	2020 Budget	2021 Budget
Cubic Metres				
Basic	219.0	230.0		
Seasonal Allowance	6.5	10.0		
Total	225.5	240.0	39,318,000	42,315,000
Gallons			(000)	(000)
Basic	48,180	50,600		
Seasonal Allowance	1,430	2,200		
Total	49,610	52,800	8,650,000	9,309,000
Change		6.4%		7.6%

Based on the projected number of residential customers this is equivalent to total budgeted 2021 residential consumption of 42,315,000 m^3 (9,309,000,000 gallons).

Historical Factors - The downward trend in residential **base usage** (day-to-day consumption) is a result of a number of initiatives which began in the 1990's:

- The Province revised the Ontario Building Code in 1996 to require low flush toilets (6.0 litres per flush) and low flow showerheads (9.85 litres per minute) in new construction. This started the trend towards more efficient household usage in new homes. The Province again revised the Ontario Building Code in 2012. The new Code has measures requiring high-efficiency (6.0 litre/flush) toilets in new single-family residential construction or renovation (while still permitting the roughly equivalent 3/6 litre dual flush), and installation of low flow (7.6 litres/min) showerheads in all residential construction.
- New appliances, especially washing machines, are designed to use significantly less water.

Examples	Older	Newer
Toilets	10 to 20 litres per flush	Single Family Dwellings - 6.0 litres per flush (1)
Showerheads	Up to 30 litres per minute	Low Flow 7.6 litres per minute
Dishwashers	36 to 63 litres per load	31 to 45 litres per load
Washing Machines	Top loading 175 litres per load	Front loading 50 to 100 litres per load
Note 1) Ontario Building Code		

- The cost of water efficient appliances such as toilets and front-loading washers has continued to decline to the point where many families find them affordable. The availability of widely available and affordable water efficient plumbing fixtures and appliances has resulted in ongoing decreases in consumption.
- There is a changing housing development format which results in smaller lot size, requiring lower seasonal usage.

Priority Green Clarington Demonstration Project - The Region participated in the Priority Green Clarington Demonstration Project. Six new homes were built in Bowmanville and Courtice in 2014, with features that go beyond water conservation standards required by the Ontario Building Code. The features include greywater reuse as well as ultra low flow toilets, faucets and showers.

Priority Green Clarington Demonstration Project
Annual Consumption vs Regional SFD Average

	2015		2016		2017		2018		2019	
	m3	gallons	m3	gallons	m3	gallons	m3	gallons	m3	gallons
Region SFD Average	205	45,100	210	46,200	190	41,800	193	42,460	n/a	n/a
Green Demonstration Project	161	35,420	155	34,100	143	31,460	146	32,047	160	35,163
GDP% versus Region Average	79%		74%		75%		75%		n/a	
Summer Precipitation	Wet		Very Dry		Average		Average		Wet	

Annual 2015 to 2019 consumption data for the homes in the Demonstration Project have been compared with the average Regional consumption in detached single family dwellings (SFD). Consumption in the Demonstration Project homes in recent years averaged about 25 per cent less than the Regional SFD average (2019 Regional SFD average not available at the time of writing this report). The Demonstration Project indicates that there is still potential for future reduction in residential per customer water use as conservation measures continue to be adopted. Note that the Green Demonstration Project average consumption per customer actually increased from 146 m^3/customer/year in 2018 to 160 m^3/customer/year in 2019 which is consistent with the Regional increase in average base consumption per customer from 2018 to 2019 for all residential customers (see Exhibit 6).

Future Plans – It is Regional policy to encourage the efficient use of water and to continue to investigate and implement measures to achieve this. The historical effectiveness of the programs outlined above has been reflected in the continued (until recently) decrease in per customer residential usage. Given the Region's commitment to encouraging water efficient usage and the efficiencies already achieved, further reductions in per customer usage may be expected in the long term.

3.4 ICI Consumption – Some Decrease

ICI consumption for the 2020 Budget and proposed 2021 Budget for water and sanitary sewer by consumption block are detailed below, following the discussion of consumption trends.

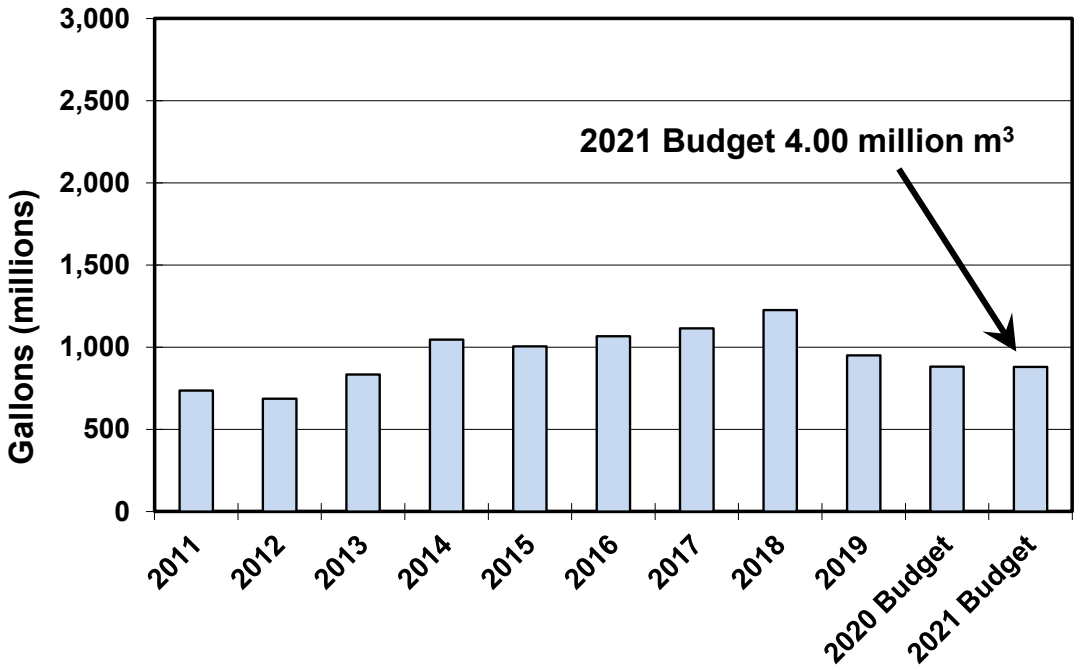
1st Block ICI – It is projected that by year-end 2020 first block ICI consumption will be close to budget levels. Early 2020 first block consumption was robust but dropped over the summer as small business was impacted by COVID-19 restrictions. In the fall, 1st block ICI consumption has largely recovered. A 2021 Budget 1st block ICI consumption is projected to be similar to the projected 2020 actual level.

2nd Block ICI – There has been a dip in consumption in the mid-range which is projected to carry over into next year with a decrease in consumption budgeted for 2021.

3rd Block ICI – The 2020 Budget incorporated a projected decrease in consumption by GM due to its termination of auto production. However, a modest level of consumption has continued. This, combined with ongoing usage by other major customers and a return to operation of Whitby Cogen, is resulting in 2021 projected 3rd block consumption remaining relatively consistent with 2020 budgeted consumption despite the impacts of the COVID-19 pandemic.

Actual 3rd block consumption is graphed for 2011 to 2019 along with the 2020 and 2021 budgeted consumption in Exhibit 7. The large industry sector is responsible for 3rd block consumption and represents about 30 per cent of total ICI consumption. There were 31 customers which reached 3rd block rates for at least one billing in 2019 of which 16 were industrial, 6 - utilities, 5 - hospitals and 4 - miscellaneous.

Exhibit 7 - 3rd Block Water Consumption
2011 to 2019 Actuals and 2020 and 2021 Budget



Total ICI - Water consumption is projected to decrease in 2021 by 5.0 per cent compared to the 2020 Budget (sanitary sewer decreases by 5.5 per cent) due to the forecast decrease in 2nd block consumption (the largest volume consumption block).

ICI Consumption Summary				
	Water		Sewer	
Type of Usage	2020 Budget	2021 Budget	2020 Budget	2021 Budget
Cubic Metres				
1st Block	2,986,000	3,000,000	2,895,000	2,909,000
2nd Block	6,355,000	5,682,000	5,627,000	4,955,000
3rd Block	4,005,000	4,000,000	3,641,000	3,636,000
Total	13,346,000	12,682,000	12,163,000	11,500,000
Gallons (000)				
1st Block	657,000	660,000	637,000	640,000
2nd Block	1,398,000	1,250,000	1,238,000	1,090,000
3rd Block	881,000	880,000	801,000	800,000
Total	2,936,000	2,790,000	2,676,000	2,530,000

3.5 Total Consumption – Budget Increase

Actual Consumption/Flow for 2015 to 2019 and Budget levels for 2020 and 2021 are shown in Exhibit 8.

Exhibit 8 - Water Consumption & Sanitary Sewer Flows
2015 to 2019 Actuals and 2020 and 2021 Budgets

	Water			Sewage		
Year	Residential	ICI	Total	Residential	ICI	Total
Cubic Metres*						
2015 Actual	39,942,818	14,462,622	54,405,440	39,262,916	13,382,187	52,645,103
Change	*3.8%*	*4.3%*	*3.9%*	*3.6%*	*4.2%*	*3.8%*
2016 Actual	41,458,386	15,091,423	56,549,809	40,686,995	13,942,277	54,629,273
Change	*-7.6%*	*-3.1%*	*-6.4%*	*-7.3%*	*-2.2%*	*-6.0%*
2017 Actual	38,290,805	14,627,364	52,918,168	37,696,582	13,641,905	51,338,486
Change	*5.5%*	*6.8%*	*5.8%*	*5.4%*	*5.2%*	*5.4%*
2018 Actual	40,397,273	15,616,555	56,013,827	39,746,800	14,347,014	54,093,814
Change	*3.3%*	*-6.1%*	*0.7%*	*3.5%*	*-5.2%*	*1.2%*
2019 Actual	41,726,149	14,661,842	56,387,991	41,133,794	13,604,175	54,737,969
2020 Budget	**39,318,000**	**13,346,000**	**52,664,000**	**38,509,000**	**12,163,000**	**50,672,000**
Change	***7.6%***	***-5.0%***	***4.4%***	***7.4%***	***-5.5%***	***4.3%***
2021 Budget	**42,315,000**	**12,682,000**	**54,997,000**	**41,364,000**	**11,500,000**	**52,864,000**
Gallons (000)*						
2020 Budget	**8,650,000**	**2,936,000**	**11,586,000**	**8,472,000**	**2,676,000**	**11,148,000**
Change	***7.6%***	***-5.0%***	***4.4%***	***7.4%***	***-5.5%***	***4.3%***
2021 Budget	**9,309,256**	**2,790,000**	**12,099,256**	**9,100,000**	**2,530,000**	**11,630,000**

*** Note: 1 cubic metre = 220 Imperial gallons OR 1,000 gallons = 4.54 cubic metres**

Total 2021 Budget water consumption and sanitary sewer flows are both projected to increase slightly compared to 2020 budget levels.

The 2021 water consumption and sanitary sewer flow projections are based on and take into account the following:

- An increase in the budgeted base usage per residential customer.
- An increase in the budgeted allowance for summer seasonal usage by residential customers.
- Total residential usage increasing (water by 7.6 per cent; sanitary sewer by 7.4 per cent)
- Usage by ICI customers decreasing (water by 5.0 per cent; sanitary sewer by 5.5 per cent)
- Number of customers increasing (water by 1.0 per cent; sanitary sewer by 1.05 per cent)

Taking the foregoing into account, 2021 consumption is budgeted as follows:

- **Water consumption projected at 54,996,000 cubic metres (54,996 ML)**
- **Sanitary Sewer flow billed projected at 52,864,000 cubic metres (52,864 ML)**

4 The Recommended 0.40 per cent Water User Rate Increase (Schedule 1) & 1.06 per cent Sanitary Sewer User Rate Increase (Schedule 2) are needed to Finance the Proposed 2021 Consolidated Water Supply and Sanitary Sewerage Business Plans and Budgets

The recommended user rates are based on the proposed 2021 Consolidated Water Supply and Sanitary Sewerage Business Plans and Budgets, customer growth and projected consumption levels. Details of projected customers are provided above in Section 2 and consumption in Section 3. Details of the proposed budget data used in the rate calculations are provided below.

Proposed 2021 User Rate Increases	
Water	**0.40%**
Sewage	**1.06%**
Combined Average Residential Impact	**0.75%**

4.1 Full Cost Recovery

The water and sanitary sewer user rates are an important part of a full cost recovery strategy for Regional water and sanitary sewer systems. User rates and miscellaneous fees and charges recover operating costs. Capital costs are paid through a combination of user rate revenues, miscellaneous charges, reserve funds, development charges, and grants (where available). The user rate share of capital costs includes the capital cost for system replacements, upgrades related to meeting regulatory requirements and growth-related costs not covered by development charge revenues. The water and sanitary sewer systems are “User Pay” - property taxes are not used to fund water and sanitary sewer system costs.

4.2 User Rate Revenue Requirements

The proposed preliminary 2021 water and sanitary sewerage net expenditure budgets require a water rate increase of 0.40 per cent and a sanitary sewer rate increase of 1.06 per cent (average residential customer combined increase 0.75 per cent).

A breakdown of the proposed preliminary 2021 Budget expenditures and revenue sources, including user rate revenue requirements, is summarized in Exhibit 9 for water and Exhibit 10 for sanitary sewerage.

Additional information on the 2021 Business Plans and Budgets is available in Report # 2020-F-24: 2021 Business Plans and Budgets and Nine Year Capital Forecasts for the Consolidated Water Supply and Sanitary Sewerage Systems.

4.2.1 Water Supply System

Approximately $3.77 million in additional user rate revenues is required to support increased expenditures as set out in Exhibit 9. This is generated by a combination of:

User Rate Increase - The proposed 0.40 per cent water rate increase generates $0.46 million in additional revenues;

Customer Growth - Customer growth adds $0.48 million, offsetting a rate increase by 0.42 per cent; and

Consumption – Residential consumption is projected to increase which is projected to contribute an additional $2.83 million which offsets a rate increase by 2.46 per cent.

The proposed preliminary 2021 user rate supported water system net expenditures of $115.49 million represents an increase of $3.77 million over 2020 budget levels.

4.2.2 Sanitary Sewerage System

Approximately $5.41 million in additional user rate revenues is required to support increased sanitary sewerage system expenditures as set out in Exhibit 10. This is generated by a combination of:

User Rate Increase - The proposed 1.06 per cent sanitary sewer rate increase generates an additional $1.17 million in revenue;

Customer Growth - Customer growth adds $0.08 million, offsetting the rate increase by 0.07 per cent; and,

Consumption - Projected increased consumption (compared with 2020 Budget) will increase budgeted revenues by $4.16 million. The sanitary sewer user rate increase is offset by 3.77 per cent due to projected residential consumption growth.

The proposed preliminary 2021 user rate supported sanitary sewerage system net expenditures of $111.34 million represents an increase of $5.41 million compared to 2020 budget.

4.2.3 Billings Now on Daily Basis

The user rates are expressed on a monthly basis in Schedule 1 and Schedule 2. With the implementation of an updated billing system in October 2019, service charges for each bill are now based on the actual number of days each bill covers between meter reading dates. As customers' billing periods may vary from the standard quarterly or bimonthly periods used in the previous billing system, daily service charge rates are now applied. The daily rates, which are equivalent to the approved monthly rates, are calculated as shown in the adjacent table (using the 2020 standard meter service charge as an example). The service charge may now vary on individual bills depending on the actual number of days covered by the bill, but over time the charges will be the same as the former monthly charge approach.

Calculation of Daily Equivalent Water Service Charge		
Monthly Water Service Charge	$19.19	per month
Months per Year	12	
Annual Equivalent SC	$230.28	per year
Days per Year	365	
Daily Equivalent Service Charge	$0.6309	per day

Exhibit 9 - Revenues Required from 2021 Water User Rates

Budget Category	2020 Approved Budget ($)	2021 Proposed Preliminary Budget ($)	Increase/(Decrease) ($)	(%)
A) Operations (net costs)				
Operations, Maintenance & Administration	69,942,800	71,036,000		
Less Other Revenues	-3,191,000	-3,217,300		
Operations from Current User Rates	**66,751,800**	**67,818,700**	**1,066,900**	**1.6%**
B) Tangible Capital Assets (gross costs)				
Construction of Municipal Services	76,209,000	76,337,100		
Operations Capital	4,732,300	4,904,900		
Total Capital Program	80,941,300	81,242,000		
Less Financing & Recoveries Applied				
- Development Charge Reserve Fund - Residential	-20,823,500	-26,535,800		
- Development Charge Reserve Fund - Commercial	-678,200	-714,200		
- Development Charge Reserve Fund - Industrial	0	-1,459,500		
- Development Charge Debenture	0	0		
- Other Financing	-9,629,000	0		
Total Non User Rate Financing	-31,130,700	-28,709,500		
Capital Program from User Rates Revenue Sources	49,810,600	52,532,500		
Less User Rate Financing (Debt/Reserves)				
- User Rate Debenture	0	0		
- Asset Management Reserve Fund	-5,234,000	-5,485,600		
- Servicing of Employment Lands Reserve	0	-250,000		
- Equipment Replacement Reserve	-35,000	0		
- Treatment Plant/Rate Stabilization Reserve Fund	-702,000	0		
Total User Rate Financing	-5,971,000	-5,735,600		
Current User Rates Capital Program/Contributions	**43,839,600**	**46,796,900**	**2,957,300**	**6.7%**
C) Debt				
Expenditure	1,693,700	1,310,700		
Less Development Charge Reserve Funds Applied	-564,300	-436,700		
Debt from User Rates	**1,129,400**	**874,000**	**-255,400**	
D) Current User Rate Revenue Requirements				
Total Expenditures	152,577,800	153,588,700	1,010,900	
Less Total Revenues & Recoveries	-40,857,000	-38,099,100	2,757,900	
Total Current User Rate Revenues Required	**111,720,800**	**115,489,600**	**3,768,800**	**3.4%**
Equivalent Water User Rate Increase		**0.40%**		
E) Impact of Changes in Customers & Consumption on Rate Increase				
Factors Affecting Revenues		**Revenue Change ($)**	**Rate Increase**	
Expenditures - Increased revenue needed		3,768,800	3.28%	
Consumption - Residential increases (offsetts ICI decreases)		-2,826,600	-2.46%	
Customers - Growth reduces revenue needed		-482,100	-0.42%	
Added Revenue From Rate Increase		**460,100**	**0.40%**	

Exhibit 10 - Revenues Required from 2021 Sanitary Sewer User Rates

Budget Category	2020 Approved Budget ($)	2021 Proposed Preliminary Budget ($)	Increase/(Decrease) ($)	(%)
A) Operations (net cosst)				
Operations, Maintenance & Administration	108,297,900	112,342,700		
Less Sewer Rate Stabilizagtion Reserve Fund Contribution	-1,750,000	0		
Less Other Revenues	-35,897,700	-36,490,400		
Operations from Current User Rates	**70,650,200**	**75,852,300**	**5,202,100**	**7.4%**
B) Tangible Capital Assets (gross cost)				
Construction of Municipal Services	68,949,700	92,417,600		
Operations Capital	5,672,900	2,536,100		
York Durham Capital	1,532,800	1,963,000		
Total Capital Program	76,155,400	96,916,700		
Less Financing & Recoveries Applied				
- Development Charge Reserve Fund - Residential	-20,012,500	-22,581,100		
- Development Charge Reserve Fund - Commercial	-1,275,000	-1,455,400		
- Development Charge Reserve Fund - Industrial	0	-1,707,500		
- Other Financing	-17,606,200	-30,639,500		
Total Non User Rate Financing	-38,893,700	-56,383,500		
Capital Program from User Rates Revenue Sources	37,261,700	40,533,200		
Less User Rate Financing				
- User Rate Debenture	0	0		
- Asset Management Reserve Fund	-8,646,000	-9,049,000		
- Servicing of Employment Lands Reserve	0	-968,000		
- Equipment Replacement Reserve	-35,000	0		
- York Durham Reserve Fund	0	0		
- Treatment Plant/Rate Stabilization Reserve Fund	-702,000	0		
Total User Rate Financing	-9,383,000	-10,017,000		
Current User Rates Capital Program/Contributions	**27,878,700**	**30,516,200**	**2,637,500**	**9.5%**
C) Debt				
Expenditures	21,011,300	14,481,600		
Less Development Charge Reserve Fund	-13,612,200	-9,514,700		
Net Debt from User Rates	**7,399,100**	**4,966,900**	**-2,432,200**	**-32.9%**
D) Current User Rate Revenue Requirements				
Total Expenditures	205,464,600	223,741,000	18,276,400	
Less Total Revenues & Recoveries	-99,536,600	-112,405,600	-12,869,000	
Total Current User Rate Revenues Required	**105,928,000**	**111,335,400**	**5,407,500**	**5.1%**
Equivalent Sewer User Rate Increase		**1.06%**		
E) Impact of Changes in Customers & Consumption on Rate Increase				
Factors Affecting Revenues		**Revenue Change ($)**	**Rate Increase**	
Expenditures - Increased revenue needed		5,407,500	4.91%	
Consumption - Residential increases (offsetts ICI decreases)		-4,158,700	-3.77%	
Customers - Growth reduces revenue needed		-80,900	-0.07%	
Added Revenue From Rate Increase		**1,167,900**	**1.06%**	

5 Other Fees & Charges Recommendations

5.1 Recommended 0.40 per cent Raw Water Rate Increase (Schedule 1)

The Region supplies untreated raw water from the Whitby Water Supply Plant (WSP) to Gerdau Ameristeel Corporation located within the South Whitby Industrial Area to the east of South Blair Street. There is a separate raw water pumping station at the WSP and raw water delivery main, both built in 1977. This company is also one of the Region's major users of potable water.

Until 2019 there was a second raw water system which supplied two customers located on South Blair Street. This system in no longer in operation. One of the customers switched to potable water in 2018 and the other in late 2019.

The raw water sales from 2017 to 2019 actuals, 2020 projected and 2021 Budget are provided below:

Raw Water Consumption (m^3)

	Industry			
Year	**A**	**B**	**C**	**Total**
2017	406,044	36,950	608,206	1,051,200
Actual	39%	4%	58%	100%
2018	16,580	60,195	563,105	639,880
Actual	3%	9%	88%	100%
2019	0	29,015	568,069	597,084
Actual	0%	5%	95%	100%
2020	0	0	821,258	821,258
Projected	0%	0%	100%	100%
2021	**0**	**0**	**800,000**	**800,000**
Budget	**0%**	**0%**	**100%**	**100%**

Industries "A" and "B" no longer use raw water. Only industry "C" (Gerdau) remains on raw water at this time although the Region may consider additional raw water customer(s) in the future.

Consumption by Gerdau has escalated somewhat in 2020, replacing the consumption recently lost by the two other customers who are no longer using raw water. As a result, 2020 and 2021 raw water consumption is projected to exceed that used in 2018 and 2019.

Operating costs related to the raw water system are fully recovered by means of a raw water volumetric rate which is reviewed and updated annually as required. The raw water volumetric rate is included in Schedule 1. The volume of raw water supplied is metered and customer(s) are charged for this volume based on the approved raw water rate. On an ongoing basis the raw water rate fully recovers the costs associated with operating the raw water system, including pumping and main maintenance.

Capital costs related to upgrades to the raw water supply are 100 per cent recovered directly from the raw water customer(s). There are no capital costs in the raw water rate included in Schedule 1. In the case of the 1977 system serving the customer to the east of South Blair Street, the works were constructed by the customer at their expense and turned over to the Region. The cost of raw water system capital improvements which occur from time to time and carried out by the Region have been recovered using separate capital charges that were set up when capital work was carried out.

An expansion of the Whitby Water Supply Plant is projected for 2024. The need for upgrades has been identified as part of ongoing asset management reviews. In particular, the raw water pumping capacity at the Whitby WSP has reached end of life. This has led to a review of the raw water systems as part of the upgrade to the Whitby WSP.

Upgrades and an expansion to the Whitby WSP, where the remaining raw water pumping station is located, are planned. Capital investments will be required to replace the remaining raw water pumping facilities. For logistical reasons the raw water pumping station will need to be replaced before work can start on the upgrades and expansion at the Whitby WSP.

The raw watermain running from the WSP to the property to the east is relatively new and does not require any work at this time.

After a preliminary review of raw water system costs and consumption trends indicating a return to historic levels, it is recommended that the 2021 raw water rate be adjusted in tandem with the potable water rate increase of 0.40 per cent.

The recommended raw water rate is shown in Schedule 1 – Recommended 2021 Water User Rates.

5.2 Recommended Sun Valley Heights Homeowners Co-operative Water System Charges (Schedule 3)

The recommended charges for the Sun Valley Heights Homeowners Co-operative Water System are provided in Schedule 3 – Recommended 2021 Water Rate for the Sun Valley Heights Homeowners Co-operative Water System.

- The charge is based on actual Sun Valley Heights system costs;
- The costs are projected to remain at the 2020 budget levels of $29,222; and
- It is recommended that the 2021 rate be maintained at the 2020 level of $1,716 annually ($143 monthly).

The following provides background information on Sun Valley:

- The Sun Valley Heights Homeowners Co-operative water supply system is a privately-owned water supply system servicing 17 individual residential properties in the City of Oshawa, north of Conlin Road and west of Thornton Road.

- On August 3, 2000, the Region of Durham was issued a Minister's order pursuant to Section 62 of the Ontario Water Resources Act to maintain and operate the existing private water system owned by Sun Valley Heights Homeowners Co-operative.

- The Region is currently operating the Sun Valley system in compliance with the order and requirements of Ontario Drinking Water Protection Regulation 170/03 (formerly Regulation 459/00). The costs incurred to operate and maintain the system are billed to each property owner on a quarterly basis.

5.3 Recommended Miscellaneous Fees & Charges (Schedule 4)

Water System By-law #89-2003 (as amended) and Sewer System By-law #90-2003 (as amended) establish a variety of fees and charges that the Region can use to recover the cost of providing day-to-day and individual services related to the Region's water and sanitary sewer systems.

Water and sewerage systems rates, fees and charges for 2020 (current) and 2021 (recommended) are set out in Schedule 4 – Recommended 2021 Water & Sanitary Sewer Systems Miscellaneous Fees & Charges of this report. All fees and charges where changes are recommended are bolded.

The recommended 2021 fees and charges are based on tracking actual costs over time. Most fees remain unchanged from 2020 (these charges are not bolded). The only fee change recommended is as follows:

- Item 36) - Water from Water Supply Plants, Water Pollution Control Plants, Works Depots & Bulk Filling Stations – For item number 36, it is recommended that the schedule be updated to indicate that the "new Account Fee" does not apply for new accounts set up for the use of the Bulk Water Filling Station at the Oshawa/Whitby Depot. This proposed adjustment is necessary as a result of the completion of the new bulk filling station at the Oshawa/Whitby Depot.

5.4 Recommended Regional Environmental Laboratory Charges (Schedule 5)

The Regional Environmental Laboratory is located at the Duffin Creek Water Pollution Control Plant. The lab ownership is shared with the Region of York and is operated by Durham Region.

The recommended lab fee schedule (Schedule 5) includes fees for four new tests that have been added and the removal of fees for three tests no longer offered.

6 Customer Impact

6.1 User Rate Impact on Customers of Various Sizes

Water and sewer charges to various sized customers are provided in Exhibit 11.

Exhibit 11 - Rates Impact on Customers of Various Sizes

								Water Rate Increase =			0.40%
								Sewer Rate Increase =			1.06%
								Average Residential Combined Increase =			0.75%
Customer Category			2019 Billing			2020 Billing			Increase		
Gallons/yr	m^3/year	Meter Size	Water	Sewage	Total	Water	Sewage	Total	Water	Sewage	Total	%
			Quarterly Billings ($/qtr)									
20,000	91	Standard Meter	83.18	63.71	146.89	83.53	64.40	147.93	0.35	0.69	1.04	0.71
52,800	**240**	**Avg Std Meter**	**125.57**	**132.57**	**258.14**	**126.09**	**133.98**	**260.07**	**0.52**	**1.41**	**1.93**	**0.75**
60,000	273	Flat Rate	134.88	147.69	282.57	135.44	149.27	284.71	0.56	1.58	2.14	0.76
100,000	455	Standard Meter	186.57	231.66	418.23	187.35	234.15	421.50	0.78	2.49	3.27	0.78
			Bimonthly Billings ($ bimonthly)									
100,000	455	Standard Meter	124.38	154.44	278.82	124.90	156.10	281.00	0.52	1.66	2.18	0.78
200,000	909	Standard Meter	420.10	650.48	1070.58	421.82	657.36	1079.18	1.72	6.88	8.60	0.80
5 million	22,730	2" Meter	4,036	6,192	10,228	4,054	6,258	10,312	18	66	84	0.82
50 million	227,270	4" Meter	35,626	54,150	89,776	35,768	54,726	90,494	142	576	718	0.80
150 million	681,820	6" Meter	103,980	157,668	261,648	104,394	159,342	263,736	414	1,674	2,088	0.80

Note that actual customer billings are calculated based on actual consumption and number of days represented by each bill. The above table provides examples of the impact of the rates on customers with the consumption shown over periods of 90 days ("quarterly billings") or 60 days ("bimonthly billings").

6.2 User Rate Impact on Average Residential Customer

The impact on a typical residential customer of the proposed 2021 water and sanitary sewer user rate charges are shown below in Exhibit 12.

Exhibit 12 – Impact of Proposed Water and Sanitary Sewer User Rate Increases on an Average Residential Customer

	Billings		Increase	
	2020 ($)	2021 Proposed ($)	($)	(%)
Based on 52,800 gal/year (240 m^3/yr) Consumption				
Water	125.57	126.09	0.52	0.40%
Sewage	132.57	133.98	1.41	1.06%
Total ($/quarter)	258.14	260.07	1.93	0.75%
Annual Billing ($/year)	1,032.56	1,040.28	7.72	0.75%

- A residential customer who used the same projected annual average residential per customer consumption of 240 m^3 (52,800 gallons) in both 2020 and 2021 would have a bill increase of 0.75 per cent. This equates to an increase of $1.93 quarterly or $7.72 annually.

6.3 Residential Customer Affordability

As noted above, the 2020 annual water and sanitary sewer bill for an average customer using 240 m^3 per year is $1,032.56. Later in this report, the cost of water and sanitary sewer services for a typical residential customer is compared with water/sanitary sewer charges in other municipalities and with other utilities:

- Other Large Municipalities – A total of 13 Ontario larger municipalities were surveyed to determine what they charge for water and sanitary sewer services (2020 Rates). Durham at $1,033 was 5th lowest compared to the average of $1,110 (see Exhibit 15).

- Neighbouring Municipalities – Durham's water and sanitary sewer charges are 2nd lowest of eight (8) local municipalities (see Exhibit 16).

- Other Utilities – Durham's 2020 annual average water ($531) and sanitary sewer ($502) charges (combined total $1,033) have been compared to typical utility charges for cable, internet, cell phone, gas and hydro based on local rates and assumptions of average service levels. Durham's combined water and sanitary sewer charges are less than any of the other utilities (see Exhibit 20 and Exhibit 21).

- Although in comparative terms, Durham's average residential water and sanitary sewer charges compare favorably with other municipalities and utilities, they could still be challenging for some. Over the course of 2021, staff will continue to study the affordability of water and sanitary sewer rates including considering whether there are alternative measures which should be considered to address the affordability of the water and sanitary sewer charges on various segments of the customer base.

6.4 User Rate Impact on 25 Largest Customers

Using actual 2019 consumption levels, the impacts on the Region's 25 largest customers of the recommended 2021 user rates, compared with existing 2020 rates, are provided in Exhibit 13.

Exhibit 13 – Impact of Proposed 2021 Water and Sanitary Sewer User Rate Increases on 25 Largest Users (Using 2019 Actual Consumption Data - $/year)

Rank	2019 Consumption (m^3)	2019 Consumption (000 gal)	2020 Rates Water	2020 Rates Sewage	2020 Rates TOTAL	2021 Rates Water	2021 Rates Sewage	2021 Rates TOTAL	Combined Increase $	Combined Increase %
			($)	($)	($)	($)	($)	($)	$	%
1	2,268,580	499,090	2,026,730	3,114,200	5,140,930	2,034,770	3,147,290	5,182,060	41,130	0.80%
2	445,440	98,000	407,530	623,030	1,030,560	409,150	629,650	1,038,800	8,240	0.80%
3	425,420	93,590	389,730	595,640	985,370	391,280	601,970	993,250	7,880	0.80%
4	372,710	82,000	342,940	523,660	866,600	344,300	529,220	873,520	6,920	0.80%
5	255,900	56,300	239,190	359,120	598,310	240,140	362,930	603,070	4,760	0.80%
6	254,310	55,950	237,770	223,280	461,050	238,720	225,650	464,370	3,320	0.72%
7	245,720	54,060	230,140	350,120	580,260	231,060	353,840	584,900	4,640	0.80%
8	223,400	49,150	210,320	319,630	529,950	211,160	323,020	534,180	4,230	0.80%
9	155,020	34,100	149,560	20,180	169,740	150,160	20,390	170,550	810	0.48%
10	144,170	31,720	139,960	211,370	351,330	140,520	213,610	354,130	2,800	0.80%
11	127,790	28,110	125,380	188,950	314,330	125,890	190,950	316,840	2,510	0.80%
12	127,650	28,080	125,260	188,760	314,020	125,770	190,760	316,530	2,510	0.80%
13	126,790	27,890	124,490	187,580	312,070	125,000	189,570	314,570	2,500	0.80%
14	123,060	27,070	121,180	182,490	303,670	121,670	184,420	306,090	2,420	0.80%
15	98,710	21,720	99,590	149,260	248,850	99,990	150,840	250,830	1,980	0.80%
16	93,700	20,610	95,110	142,360	237,470	95,490	143,870	239,360	1,890	0.80%
17	91,200	20,060	92,880	138,950	231,830	93,260	140,420	233,680	1,850	0.80%
18	79,290	17,440	82,310	122,680	204,990	82,640	123,970	206,610	1,620	0.79%
19	76,960	16,930	80,250	119,510	199,760	80,570	120,770	201,340	1,580	0.79%
20	75,460	16,600	78,920	117,460	196,380	79,240	118,700	197,940	1,560	0.79%
21	72,880	16,030	76,620	6,840	83,460	76,930	6,910	83,840	380	0.46%
22	61,970	13,630	66,930	99,010	165,940	67,200	100,060	167,260	1,320	0.80%
23	56,760	12,490	62,320	91,930	154,250	62,580	92,900	155,480	1,230	0.80%
24	53,500	11,770	59,420	4,060	63,480	59,660	4,110	63,770	290	0.46%
25	50,020	11,000	56,310	49,830	106,140	56,540	50,350	106,890	750	0.71%
Total	6,106,410	1,343,390	5,720,840	8,129,900	13,850,740	5,743,690	8,216,170	13,959,860	109,120	0.79%
Note:	Green shaded accounts have reduced sewage charges (sewer appeals).									
	Peach shaded accounts are GM-related									

Note that most large customers will have a combined water/sanitary sewer bill increase of 0.80 per cent. This percentage is higher than the average residential increase of 0.75 per cent because large customer bills are more influenced by the higher sanitary sewer rate increase (the volumetric rate is more dominant for sanitary sewer than for water).

There are six (6) customers among the top 25 users that have reduced sanitary sewer charges. Most have significant water usage that does not discharge to the sanitary sewer. They are billed for sanitary based on this lower volume. For these, the sanitary sewer rate is less of a factor since their sanitary sewer volume billed is less than the water volume billed.

6.5 Durham's User Rates Compared with Other Ontario Municipalities

6.5.1 Background on User Rate Formats

A water and sanitary sewer rates survey was conducted for 20 municipalities (including Durham) across Ontario. The 2020 rate information, the most recent available for all municipalities, is used for this comparison.

Durham owns and operates water and sanitary sewer systems that range from large urban areas in the south to smaller urban areas in the rural north. The survey includes 12 other larger municipalities (see Exhibit 15) that offer a comparison for Durham's southern tier systems as well as 7 nearby smaller municipalities (see Exhibit 16) which might be of more interest to customers in Durham's smaller systems.

Water and sanitary sewer rate structures typically include a service charge and a volumetric charge. The rate structures used in each municipality are designed and approved locally. There are no Provincial regulations related to municipal water and sanitary sewer rate structures. The survey found very little consistency across the province in terms of rate structures used in the various municipalities.

Service charges fall into three categories:

- **Single Rate** - All customers pay the same service charge.
- **Rate Based on Meter Size** - Service charge based on customer meter size. A higher rate is applied for larger meters.
- **No Service Charge** – Charges are based solely on volume of water used.

Volumetric charges fall into four categories. Customer meter readings are used to calculate the volumetric charges. All municipalities surveyed have volumetric rates. The volumetric rate formats are mostly the same for all customers in a municipality, but vary in some municipalities between residential and non-residential customers:

- **Single Block Rate (SBR)** – The same rate is charged for all usage.
- **Increasing Block Rate (IBR)** – Rates increase in steps as usage increases (normally targets higher residential usage).
- **Declining Block Rates (DBR)** – Rates decrease in steps as usage increases (normally for non-residential only).
- **Humpback Rates (HBR)** – Consumption blocks initially increase and then decrease as consumption increases.

The following is a summary of how often the different rate structures were encountered in the survey:

Exhibit 14 - Summary of Rate Structures Used in 20 Surveyed Municipalities

Description	Residential		ICI	
	Number	%	Number	%
Service Charges				
Based on Meter Size	15	75%	18	90%
Single Charge	3	15%	0	0%
No Service Charge	2	10%	2	10%
Total	20	25%	20	10%
Volumetric Rates				
Single Block Rate	12	60%	10	50%
Declining Block Rate	1	5%	6	30%
Increasing Block Rate	6	30%	4	20%
Humpback Rate	1	5%	0	0%
Total	20	100%	20	100%

- **Service Charges** – Most municipalities (90 per cent) include a service charge (either a single rate or one based on meter size) as part of their water rates. Only Toronto and Peel have consumption-only rates. No differentiation is made by them between residential and ICI customers.

- **Residential Volumetric Rates** – The majority (60 per cent), including Durham, charge single block rates to residential customers. Another 35 per cent essentially charge increasing block rates (including the 5 per cent using humpback rates). One charges declining block rates.

- **ICI Volumetric Rates** – The largest category is single block rates at 50 per cent of municipalities. Declining block rates is the next most prevalent at 30 per cent. Increasing block rates are used in 20 per cent of the municipalities. Although London has humpback rates, they are essentially declining block rates for ICI since the rates decline compared to the first block after 35 m^3/month. They initially increase for small usage volumes.

Other features:

- **Sanitary Sewer Charged Based on Water Usage** – All surveyed municipalities base sanitary sewer charges on water consumption.

- **Allowance for Seasonal Usage on Sanitary Sewer Bill** – The majority bill sanitary sewer year-round based on water consumption. For residential only, Peel deducts 15 per cent from water usage when calculating the sanitary sewer bill. Windsor bills for sanitary sewer in the summer based on a customer's winter usage. This is feasible because Windsor bills residential customers monthly based on actual meter readings. Barrie caps the sanitary sewer charge at 45 m^3 monthly which would only benefit large water users.

- **Universal Metering** - All surveyed municipalities are metered.

Note that Durham does not recover water and sanitary sewer costs from the property tax levy. Some municipalities may use property taxes to recover a portion of water and sanitary sewer costs with the result that the user charge comparison may not pick up all of the water and sanitary sewer costs paid by customers in the other municipalities.

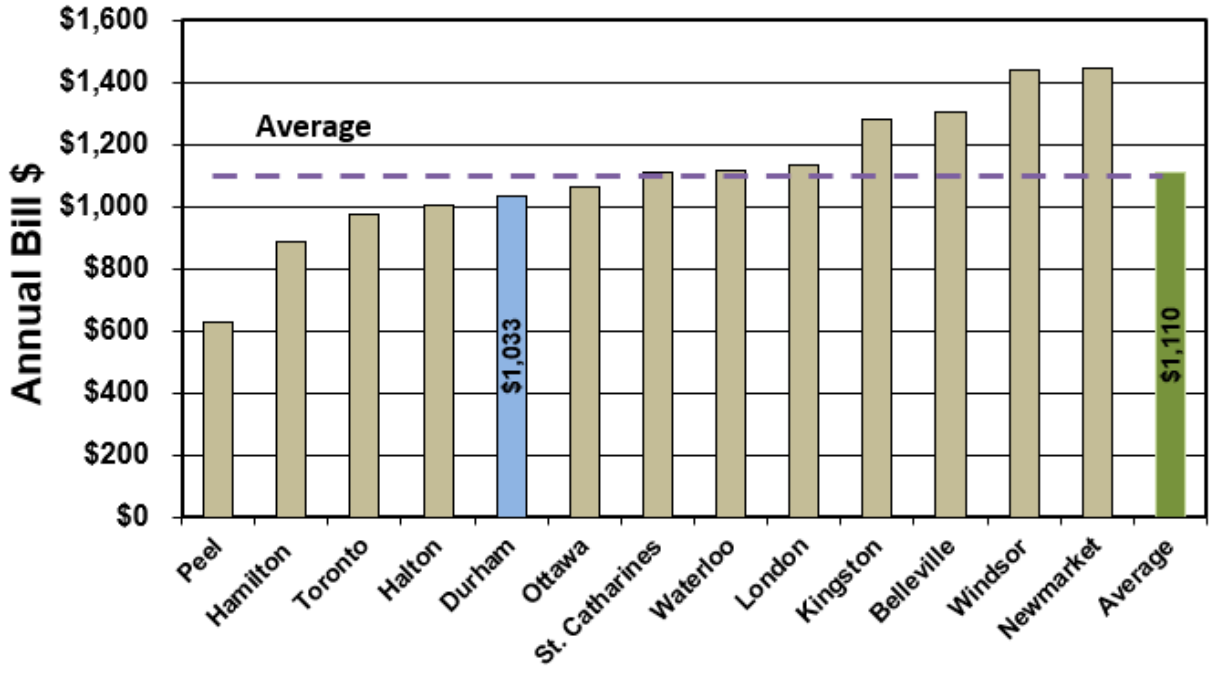
6.5.2 Residential Customer Comparison

The analysis is based on a residential customer using 240 m^3/year (52,000 gallons/year). This represents the projected usage by a typical 2021 Durham residential customer. This is equivalent to 20 m^3/month/customer (4,400 gal/month/customer).

Large Municipalities - Most of the municipalities, like Durham, have sole responsibility for water and sanitary sewer. Three, the City of Waterloo (in Waterloo Region), the Town of Newmarket (in York Region) and St. Catharines (in Niagara Region), are part of two-tier utilities. In these three municipalities, the upper tier regions are responsible for major facilities such as treatment, water storage and trunk mains. The lower tier local municipalities are responsible for local facilities, such as distribution mains and local sanitary sewers as well as the customer billings.

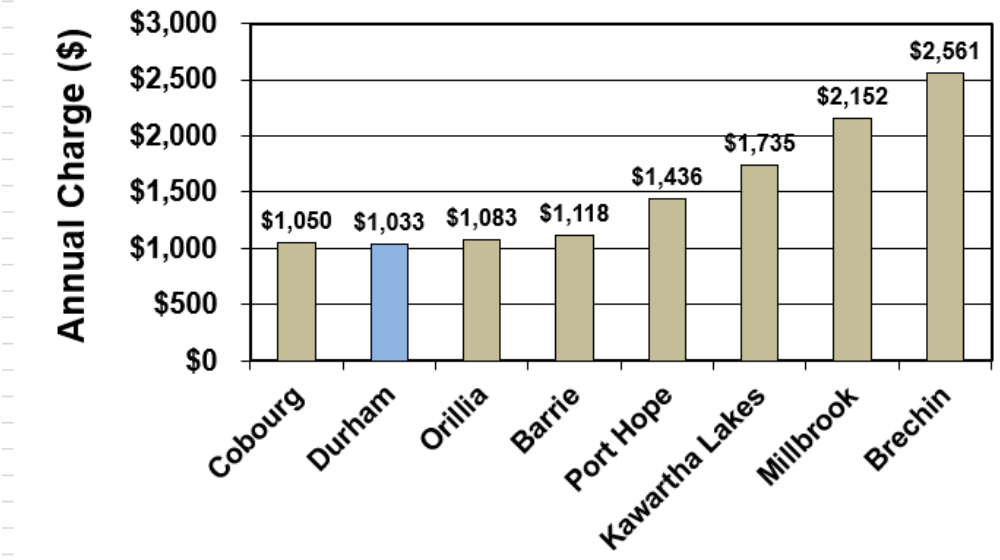
As illustrated in Exhibit 15, Durham is the fifth lowest out of the 13 in the survey. The overall average 2020 combined water and sanitary sewer bill for 240 m^3 (52,800 gallons) annual consumption for the 13 surveyed municipalities is $1,110 per year compared to $1,033 in Durham.

Exhibit 15 - Comparative 2020 Residential Water/Sanitary Sewer Charges (240 m^3/year) – Large Municipalities



Neighbouring Municipalities - Typical 2020 charges to a residential customer have also been calculated for seven neighbouring communities - see Exhibit 16.

Exhibit 16 - Comparative 2020 Residential Water/Sanitary Sewer Charges (240 m^3/yr) – Neighbouring Municipalities

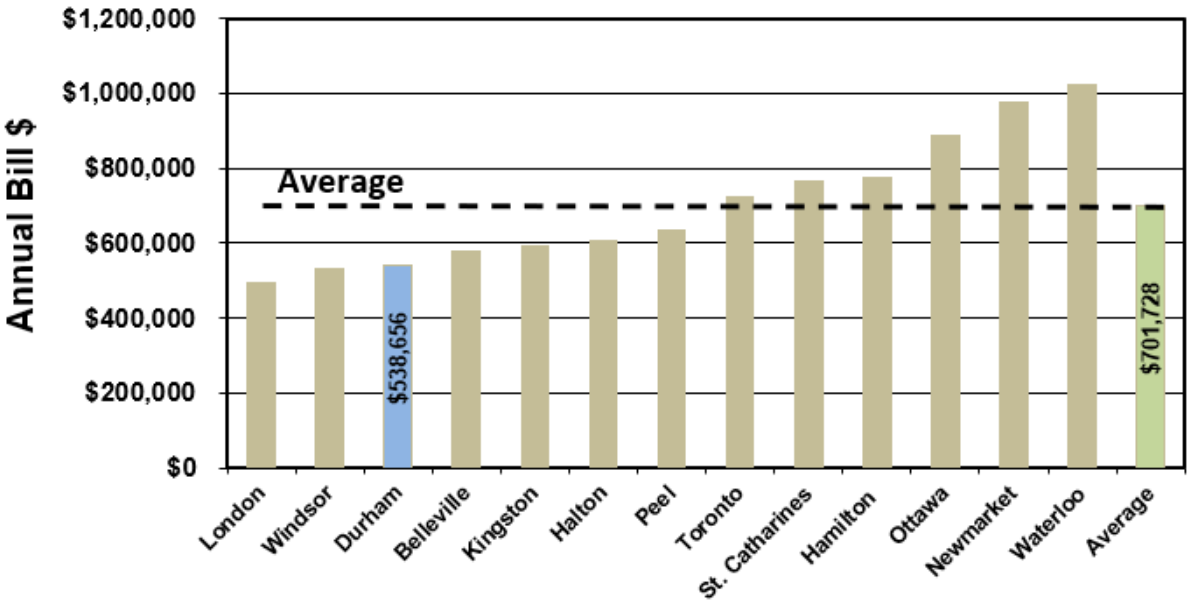


Durham is at the low end of user rate charges. Comparisons are sometimes difficult because of the use of the property tax to recover some costs in other municipalities. For example, Cobourg recovers some sanitary sewer costs from property taxes.

6.5.3 Large Customer Impact

The analysis is based on 227,272 m^3/year (50 million gallons). This is a large water user and may not exist in some of the municipalities in the comparison. In Durham it would represent the 8th largest customer. Comparative charges are graphed in Exhibit 17.

Exhibit 17 - Comparative 2020 Large Industry Water & Sanitary Sewer Charges - Large Municipalities (227,272 m^3/year)



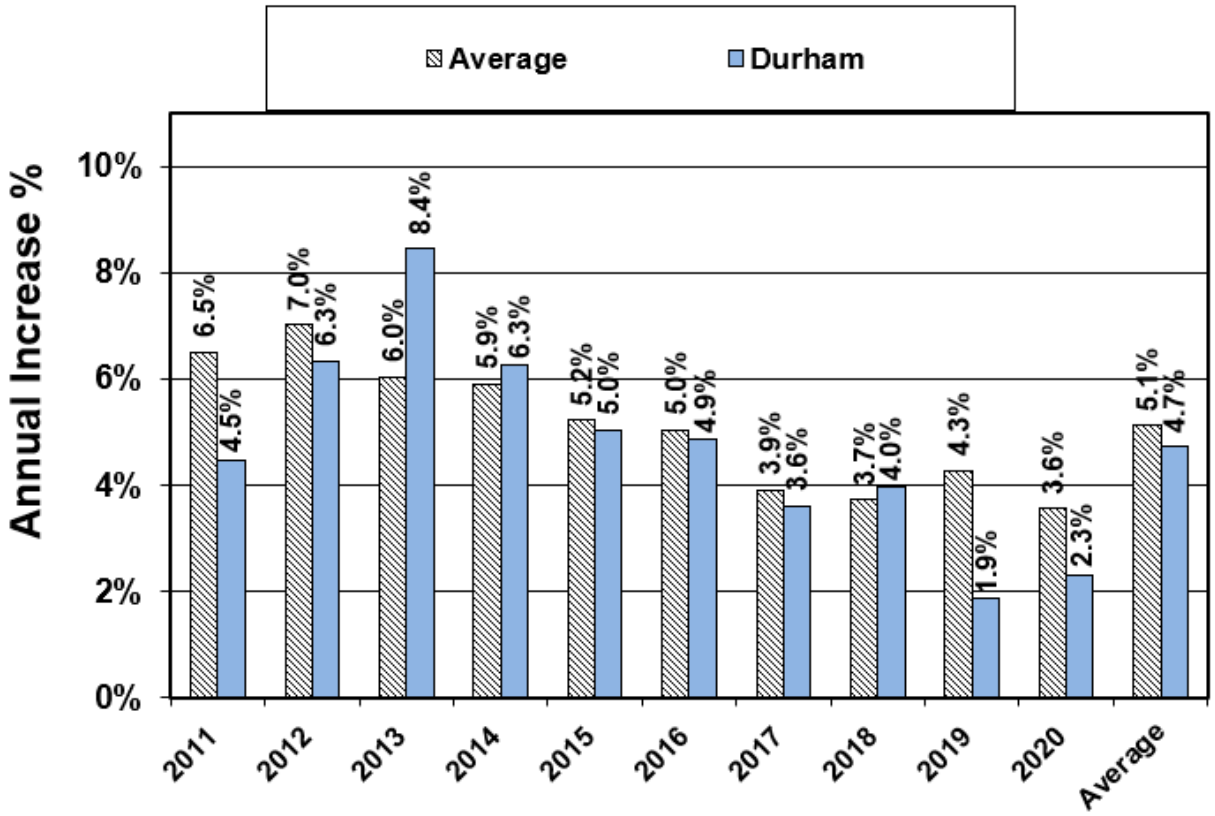
Durham was the third lowest out of the 13 in the survey. The overall average combined water and sanitary sewer bill for all the municipalities surveyed was $701,728 per year compared to $538,656 in Durham.

No comparative analysis was done for small local municipalities since most, if not all, would not have customers with this level of consumption.

6.5.4 Historical Rate Increases

Province Wide - Average water and sanitary sewer rate increases faced by customers using 240 m^3/year (52,800 gallons) in the 13 larger municipalities surveyed are graphed in Exhibit 18. Note that since average consumption per customer is generally falling over time, the actual impact on customer bills would be less than shown since decreasing usage would offset some of the increase due to higher rates.

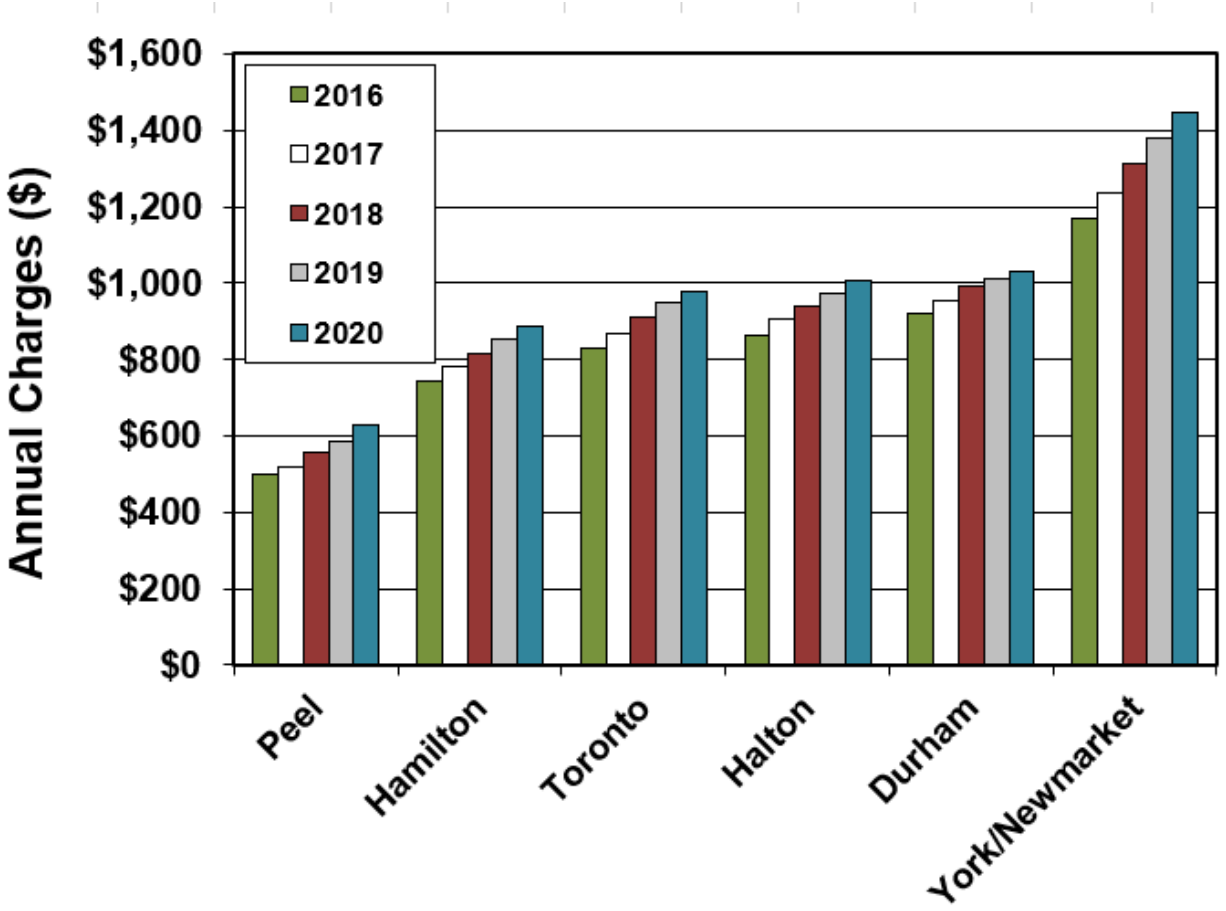
Exhibit 18 - Comparative 2011 to 2020 Residential Water/Sanitary Sewer Rate Increases — Large Municipalities (240 m^3/year)



The average annual combined water and sanitary sewer rate increase for all the municipalities was 5.1 per cent for the 10-year period. Durham's average was approximately 4.7 per cent annually.

GTA - Combined water and sanitary sewer user rate increases over the past five years in nearby Regions are graphed in Exhibit 19. The analysis is based on a customer using 240 m^3/year.

Exhibit 19 - Comparative 2016 to 2020 Residential Water/Sanitary Sewer Charges - GTA (240 m^3/year)



Durham is above average in terms of level of charges in this group.

The following observations are made:

- Peel is dominated by a single, very large municipality with major Lake Ontario treatment plants and as a result has lower rates than the other nearby regions (including Durham which has many local small systems).
- Peel, Toronto and Hamilton have either a single large metropolitan area or are anchored by one. This leads to economies of scale that Durham cannot match with its many diverse systems which service a large geographic area (the largest in the GTA).
- Halton is perhaps closest to Durham in that it has multiple water and sanitary sewer systems (although less than half of Durham's) and has adopted rate increases lower than the norm in recent years.
- Newmarket is responsible for distribution of water and collection of sanitary sewer from its customers. Water supply and wastewater treatment are provided by York Region.

6.5.5 Summary

The adoption of declining block rates by Durham was based on an analysis of the actual cost of supplying these customers and due to Durham's sole jurisdiction over the complete water and sanitary sewer systems. As a result, Durham's stepped metered rate blocks result in lower rates for large volume ICI consumption, which is advantageous to industrial customers while being fair in terms of cost recovery. Municipalities which only have jurisdiction over local systems must purchase water at one wholesale rate, leaving less scope for passing on cost savings related to large volume supply to the customers. As a result, the charges in these municipalities are amongst the highest for large customers. Conversely, these municipalities have lower charges for the smaller volume customers.

Water and sanitary sewer systems have faced rapid growth for years. When infrastructure is new, maintenance and replacement costs are relatively low. However, over time, increasing investment is needed to refurbish and replace aging infrastructure. In addition, upgrades are needed to meet more stringent regulations. The end result is that most systems must increase investments to reach sustainable levels. Since 2002, Durham and most other municipalities have found it necessary to implement higher annual rate increases than were previously needed.

Annual rate increases for the 13 other municipalities discussed in Subsection 6.5.4 have been provided covering 2011 to 2020. The average annual water and sanitary sewer rate increase of the 14 municipalities over the 10-year period has been 5.1 per cent per year compared with Durham at 4.7 per cent (see Exhibit 18).

Although Durham’s rates are established based on Durham’s systems investment needs, and not in reference to others, it is noted that the other municipalities have been facing the same challenges of funding of water and sanitary sewer systems to sustainable levels and have been increasing rates in a similar manner.

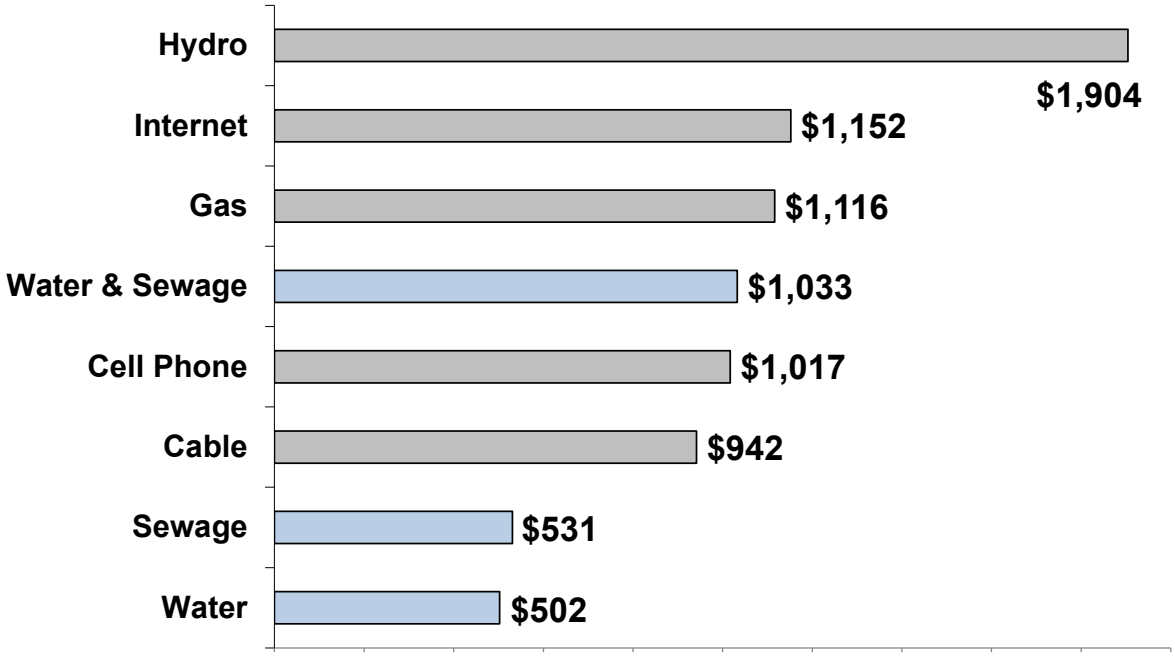
6.6 Durham's Average Residential Water & Sanitary Sewer Charges are Much Less Than Typical Hydro, Gas, Telephone or Cable Television Services

Information was gathered on local residential electricity, natural gas, cable television, high speed internet, cellular phone and home telephone rates. These rates have been compared with the Region's water and sanitary sewer rates. Note that the survey provides typical bills for each service. Individual customers will often have a different mix of services (such as no land line phone at home). The survey is meant to give a general idea of utility costs.

The “most popular” option has been priced in Exhibit 20 where that option is indicated by the supplier. There is a wide range of prices for some services.

Representative 2020 annual residential utility charges in Durham (Oshawa rates used) are graphed in Exhibit 20.

Exhibit 20 - Typical Durham Residential Utility Charges 2020



The components of a total annual bill for a representative residential customer are as shown in Exhibit 21.

Exhibit 21 - Typical Durham Residential Utility Charges 2020

Utility	Basis of Comparison	Annual Bill ($)	% of Annual Utility Bills
Hydro	Cooling, appliances, lighting, etc.	$1,904	26.6%
Internet	One level above basic - 50 Mbps	$1,152	16.1%
Natural Gas	Home & hot water heating	$1,116	15.6%
Cell Phone	Basic service with long distance package	$1,017	14.2%
Cable	Basic package – no movies	$942	13.1%
Sewage	Average residential use - 240 m3/year	$531	7.4%
Water	Average residential use - 240 m3/year	$502	7.0%
	Total	$7,163	100.0%

The total combined water and sanitary sewer billing for this residential customer represents only about 14.4 per cent of the total utility charges incurred in a typical home. Water and sanitary sewer charges combined are less than most other individual utility services.

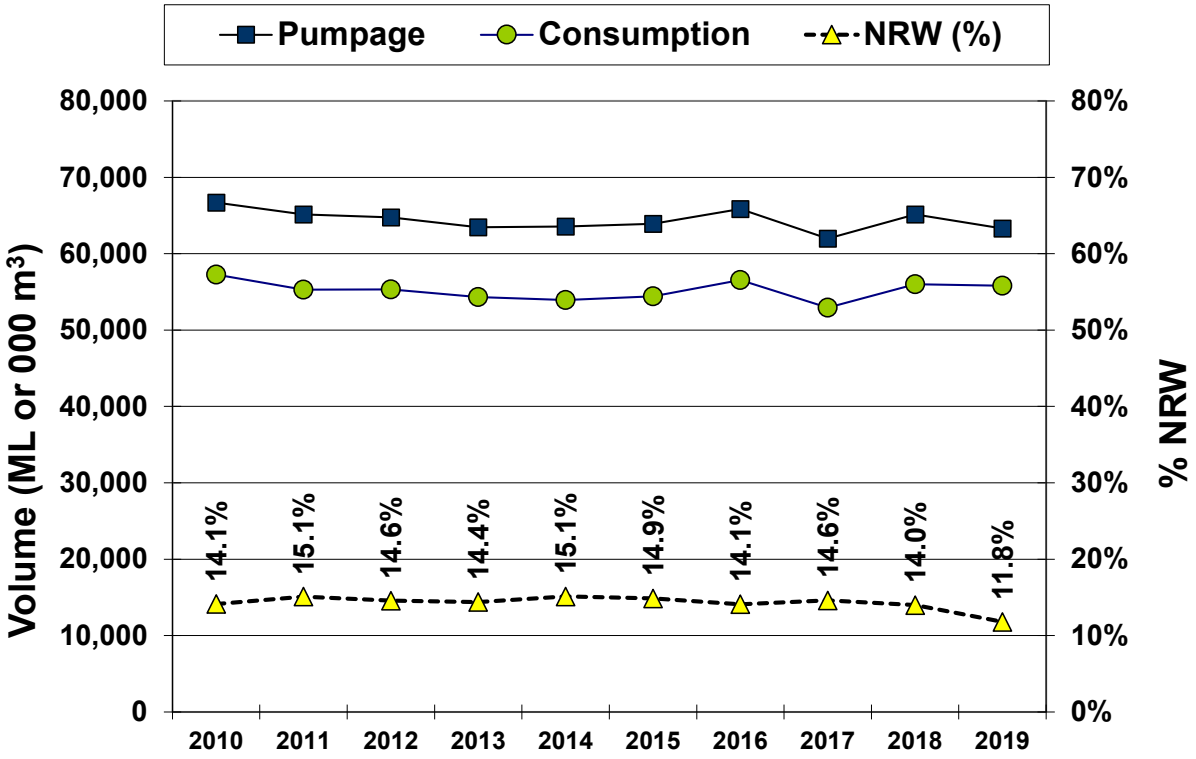
7 Other Issues

7.1 Water System Losses Update (Billed Consumption vs. Supply)

Some water is lost from the water system between water supply plants and customers. The traditional terminology used in expressing water system losses is “unaccounted for water” (UFW). A more recent term is “non-revenue water” (NRW) which highlights the fact that water loss is not sold and does not produce revenue. The two terms are synonymous. While some of these losses are actually unmetered usage such as water used for main flushing and firefighting, the biggest component is loss due to watermain leakage.

Durham's NRW from 2010 to 2019 is graphed below in Exhibit 22.

Exhibit 22 - Water Pumpage, Consumption & Non-Revenue Water 2010 to 2019 Actual



Note: 1,000 cubic metres = 1 megalitre (ML)
1 cubic metre = 220 Imperial gallons

NRW in recent years has been in a range of about 14 per cent to 15 per cent. This is considered to be fairly normal, but efforts are continually made to limit or reduce NRW losses through various programs such as cathodic protection and cement lining of cast/ductile iron mains and replacement of old infrastructure including mains, water meters and polybutylene water services.

The 2019 data indicates a NRW decrease to 11.8 per cent. The new water billing system introduced in October 2019 (this is where consumption data is generated) carries out billings closer to actual use than the older legacy system and so may have introduced an initial transitional increase in reported consumption following the implementation of the new system. It is expected that the 2020 data, once available, will reflect NRW levels more in line with historical experience.

The water meter replacement program results in a reduction in unbilled water due to timely replacement of old meters which can under-record flows later in their lifecycle. This improves revenues due to higher billed usage and hence lowers losses represented by NRW.

The use of NRW as a measure of water system performance, although common, is of limited use as it does not take in account the diversity of infrastructure in each municipality. The International Water Association (IWA) has developed and the American Water Works Association (AWWA) recommends a more comprehensive approach which takes into account individual system characteristics. The IWA recommends a process be followed which they refer to as the Standard Water Balance. It breaks water losses into a number of categories in order to better understand the nature of the losses – see Exhibit 23.

Exhibit 23 - IWA Standard Water Balance Terminology

<table>
<tr><td rowspan="10">System Input Volume</td><td rowspan="4">Authorized Consumption</td><td rowspan="2">Billed Authorized consumption</td><td>Billed Metered Consumption</td><td>Revenue water</td></tr>
<tr><td>Billed Unmetered Consumption</td><td rowspan="8">Non Revenue Water (NRW)</td></tr>
<tr><td rowspan="2">Unbilled Authorized Consumption</td><td>Unbilled Metered Consumption</td></tr>
<tr><td>Unbilled Unmetered Consumption</td></tr>
<tr><td rowspan="6">Water Losses</td><td rowspan="2">Apparent Losses</td><td>Unauthorized Consumption</td></tr>
<tr><td>Metering Inaccuracies</td></tr>
<tr><td rowspan="3">Real Losses</td><td>Leakage on Transmission and/or Distrubution Mains</td></tr>
<tr><td>Leakage and Overflows at Utility's Storage Tanks</td></tr>
<tr><td>Leakage on Service Connections up to point of Customer Metering</td></tr>
</table>

The IWA/AWWA methodology is now an industry recognized standard approach and has been utilized to assess water losses in Durham Region. Water loss performance measures such as the Infrastructure Leakage Index (ILI) and NRW per kilometre of mains were calculated first during the Water Loss Control Strategy Report based on 2006 data and have been repeated annually by Regional staff.

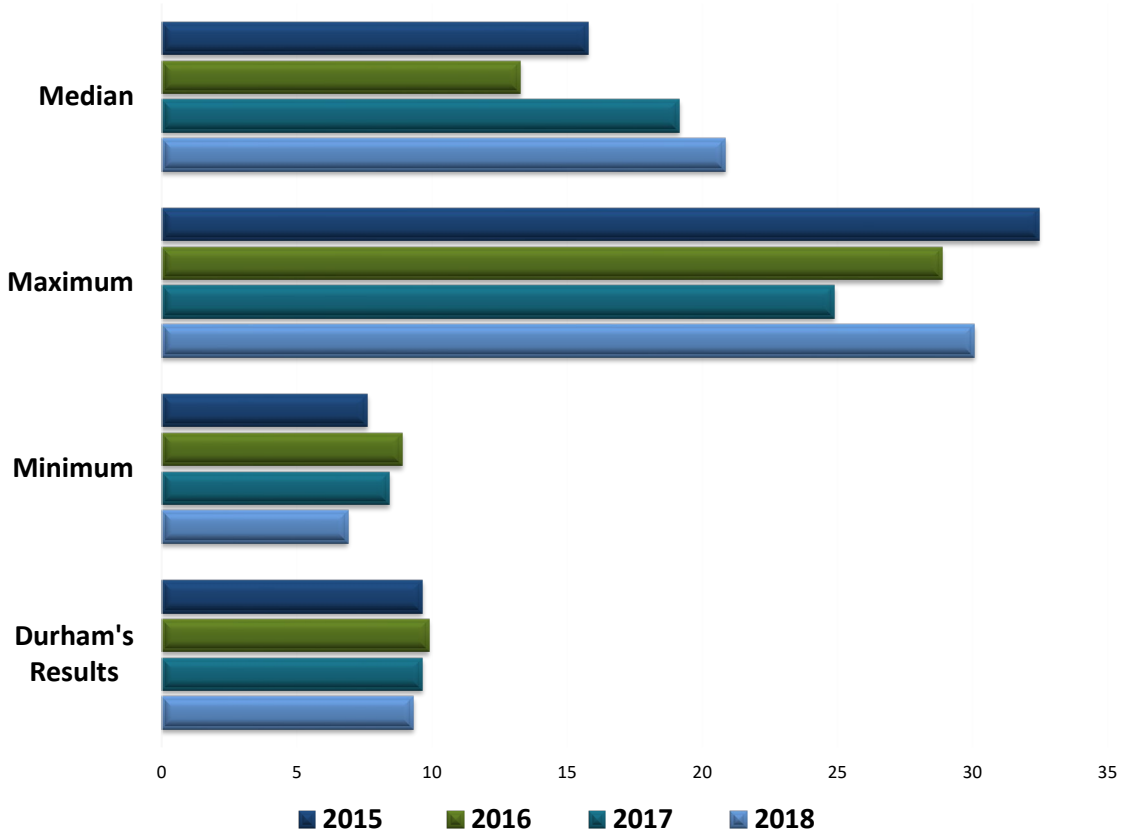
Durham Region is a long-term participant in the Municipal Benchmarking Network Canada (MBN) which facilitates comparison of statistical data with other municipal jurisdictions in Ontario.

One performance measure used by MBN is NRW per kilometre of main. This is a measure which expresses total water losses but takes into account density or spread of the water service in a municipality. For example, NRW for systems in similar condition would be higher for a spread-out municipality than for one more densely developed.

Taking the length of mains into account makes the comparison more meaningful. The lower the performance measure the better.

A graph of NRW per kilometre of main from the MBN survey for 2015 to 2018 is provided in Exhibit 24.

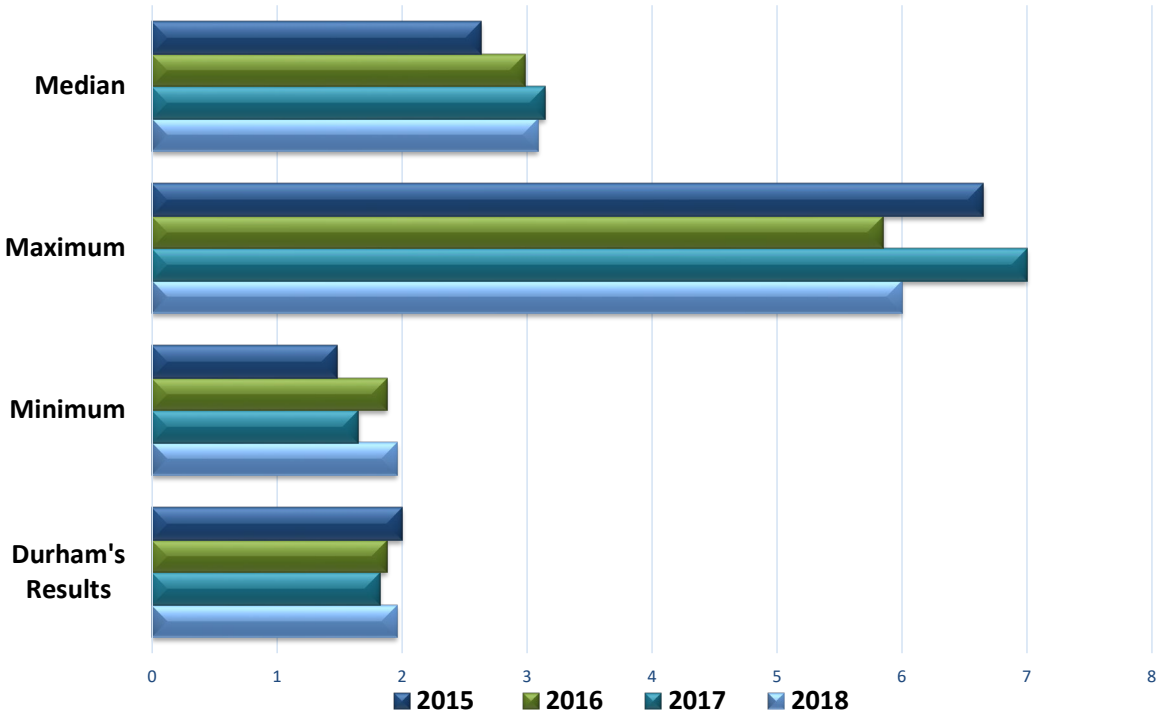
Exhibit 24 - NRW in m^3/km of Main per Day (MBN data)



Durham's 2018 NRW versus main length of is much lower than the median level.

Another performance indicator which takes a number of factors into account is the Infrastructure Leakage Index (ILI). A lower number indicates better performance. See Exhibit 25 for the 2015 to 2018 survey results.

Exhibit 25 Infrastructure Leakage Index ILI (MBN data)



The 2018 Infrastructure Leakage Index (ILI) for Durham was lower and thus better than the median.

These performance measures indicate that system investment and operational practices are resulting in generally improved results. Given that infrastructure continues to age, investments and operational efforts will have to be continued on an ongoing basis.

8 Future Considerations (2022 to 2030)

8.1 Future Customer & Consumption Trends

Elements expected to affect future customer and consumption levels are as follows:

- **Residential Consumption** – The 2021 proposed user rates assume an increase in residential base (non-seasonal) consumption to 230m^3/customer/year. This increase, in large part, is attributable to the continued impact that the COVID-19 pandemic is projected to have on residential base consumption with individuals continuing to work and attend school remotely from home. It is anticipated that this increase rate in the residential base consumption will not continue post pandemic and future Business Plans and Budgets and User Rates will need to be adjusted to reflect updated residential base consumption. Post COVID-19 pandemic, the base (non-seasonal) consumption per residential customer is expected to decrease for the foreseeable future as new housing continues to be equipped with water efficient fixtures and appliances and ongoing retrofitting of existing homes continue to place downward pressure on residential consumption. When combined with a low customer growth rate, residential consumption is projected to decrease post COVID-19 pandemic.

- **Small to Medium Commercial** – This sector historically has been fairly constant, but recently has also shown decline. It is expected that post COVID-19 pandemic, consumption will stabilize.

- **Large Industrial** –Projections assume fairly consistent consumption post COVID-19 pandemic. Staff continue to follow the recent announcement from General Motors indicating production at the Oshawa Plant starting January 2022 to understand the impact this will have on future projected consumption.

- **Total Consumption** – For planning purposes, it is projected that post COVID-19 pandemic, total consumption will continue to remain level. Static or lower usage means revenues will not increase in step with increased customer growth.

- **Regulatory** - Both provincial and federal water and sanitary sewer regulations are expected to become stricter resulting in increased cost to remain compliant.

- **Asset Management** - Durham's Report #2020-COW-16 2020 Asset Management Plan forms a basis for prioritizing future water and sewage systems infrastructure replacement investments. The annual user rate revenue requirements include contributions to the Asset Management Reserve Fund to address the most critical asset management needs.

Staff will continue to monitor consumption trends, regulatory requirements, asset management priorities and determine the impact on future user revenues over the longer term and on capital plans for both rehabilitation/replacement and growth related projects.

8.2 Future Cost Trends

The possibility of consumption level decreases will affect future budget levels and consequently rate increases over time. Over the long-term, permanent trends in consumption can affect water supply and sanitary sewer system capacity requirements and design criteria. This in turn would impact the growth capital program, particularly treatment plant expansions. Decreased demand by existing customers frees up capacity for development, which may result in short term deferral of specific water and sanitary sewerage projects if consumption trends decrease.

Capital costs related to rehabilitation, replacement and regulatory upgrades are not expected to be affected by changes in consumption patterns.

8.3 Projected User Rates

Since user rates are set on a year-to-year basis, change in water consumption in the near-term is the most important factor in user rates revenues. About 68 per cent of combined water and sanitary sewer user revenues are based on consumption.

Capital investments are rising due to pressures to invest in aging infrastructure in order to maintain levels of service and address critical priorities and respond to growth pressures. Increased capital investments are projected to have a significant impact on future user rate revenue requirements and as a consequence on future user rate levels.

In order to fund the forecasted operating and capital costs based on the customer and expenditure growth assumptions, water and sanitary sewer rates are expected to require, on average, annual increases of 4 per cent to 6 per cent. Staff continue to review operating requirements and long-term capital forecasts and financing plans to refine these estimates. Information available through the Region's new water billing system and enhancements to the capital forecast modeling under the Region's business planning and budget modernization initiative will allow for better refinement of projected rate increases for future years.

The water and sanitary sewer user rate forecasts are based on a capital program of known asset management needs. However, there are potentially other factors that will have cost implications that are unknown at this time and as a result cannot be quantified and include:

- Customer growth that may be lower than that experienced over the last number of years;
- Potential for reductions in residential base water consumption and thus related revenues without a resulting offsetting reduction in costs. In addition, any economic decline could result in lower system utilization with consequent decreases and water and sanitary sewer user rate revenues;
- Financial impact of works needed to comply with Provincial and Federal Regulatory requirements associated with the Region's water supply and water pollution control plants (i.e. the *Clean Water Act*, the *Lake Simcoe Protection Act* and *Water Opportunities and Water Conservation Act*);
- Market price impacts or volatility for input commodities, including energy and chemicals;
- Increase in construction costs;
- Significant capital investments required to meet growth related pressures;
- Low development resulting in shortfall in Development Charges to be funded by user rates;
- Asset management program investment requirements to replace aging and failing infrastructure which has reached or passed the end of its useful life. Although repairs can often extend the life of aged facilities, at some point this is not feasible and from an operational, regulatory and financial perspective replacement is required; and
- The impact of climate change on water and sanitary sewer systems infrastructure investment levels must also be considered and factored into future capital planning and its impact on user rates.

8.4 Future Actions

Staff will continue to undertake the following initiatives to ensure efficient on-going water and sanitary sewer programs:

- Incorporate in the user rate revenue requirements the funding of the following water supply and sanitary sewerage systems investment needs:
  - Rehabilitation and replacement needs related to asset management; and
  - Adaptions required to address climate change.
- As remote meter reading capability reaches sufficient penetration, transition to automated meter readings for all billings in order to reduce the cost of meter readings while increasing their accuracy, and potentially the frequency of billing;
- Assessment of emerging trends within residential and non-residential water consumption to project future usage for user rate purposes and monitoring usage trends that might influence future capital programs for treatment plant expansions;
- Assessment of water losses and reduction of unaccounted for losses, where possible. This would include continued investment in bulk water filling stations and modifications of the metering and use of hydrants for bulk water users in order to ensure that such use is controlled and costs adequately recovered by the Region; and
- Focus attention on the opportunities for intensification to maximize the use of existing infrastructure.

If this information is required in an accessible format, please contact 1-800-372-1102 ext. 2304

The Regional Municipality of Durham Report

To:	Finance and Administration Committee
From:	Commissioner of Finance
Report:	#2020-F-26
Date:	December 8, 2020

Subject:

PRESTO Device Replacement

Recommendation:

That the Finance and Administration Committee recommends to Regional Council:

That financing estimated at $3.2 million be provided at the discretion of the Commissioner of Finance for the replacement of the Region's PRESTO infrastructure, including devices on all buses.

Report:

1. Purpose

1.1 The purpose of this report is to gain approval of financing for the replacement of the Region's PRESTO infrastructure, including devices on all buses at an estimated cost of $3.2 million.

2. Background

2.1 PRESTO device replacement on DRT vehicles is currently scheduled to be completed by the end of 2020 at an estimated cost of $3.2 million.

2.2 Similar to other 905 transit agencies, DRT submitted an application to the federal and provincial governments for funding under the Investing in Canada Infrastructure Program – Public Transit Stream in October 2019. The application was subsequently deemed ineligible for funding under the program.

3. Previous Reports and Decisions

3.1 At its meeting of December 6, 2017, the Committee of the Whole adopted the recommendations of Report #2017-COW-293 which included the recommendation for approval of a new ten-year PRESTO operating agreement between Metrolinx and the 905 transit agencies through November 2027. Under the agreement, PRESTO is responsible for the procurement and installation of new devices on behalf of the 905 transit agencies, while the transit agencies remain responsible for the device acquisition and installation costs.

3.2 At its meeting of October 13, 2020, the Finance and Administration Committee received Report #2020-F-19 which provided an update on the status of the Investing in Canada Infrastructure Program funding applications. The report noted that the Region's application for funding for the replacement of PRESTO devices was deemed ineligible under the program as a vendor had been selected by Metrolinx in advance of Federal project approval. Other 905 transit agencies have similarly had their PRESTO device projects deemed ineligible. The report noted that a further report would be brought forward to Committee and Council seeking financing approval for the PRESTO device replacement project.

3.3 A companion report (Report 2020-DRT-24) was prepared for the December 2, 2020 Durham Region Transit Executive Committee meeting seeking approval for the replacement of the Region's PRESTO infrastructure, including devices on all buses at an estimated cost of $3.2 million conditional upon Finance and Administration Committee approval of project financing.

4. Current status

4.1 Existing PRESTO devices on board DRT vehicles are more than ten years old and at end of life. In accordance with the Region's operating agreement with Metrolinx, Metrolinx commenced the replacement of all PRESTO devices in October 2020 with targeted completion by mid December 2020.

4.2 The updated devices will enable new functionality to be introduced for electronic fare payment by DRT customers. This includes reduced card loading delays and electronic validation of PRESTO E-tickets whereby smart phones with active electronic tickets can be tapped on the device reader when boarding. It will also enable the introduction of open payment allowing customers to pay their fare with their credit card by tapping the device reader.

5. Financial Implications

5.1 As a result of the PRESTO device replacements being deemed ineligible under the Investing in Canada Infrastructure Program, it is proposed that the full cost of PRESTO device replacement estimated at $3.2 million be financed at the discretion of the Commissioner of Finance.

6. Relationship to Strategic Plan

6.1 This report aligns with/addresses the following strategic goals and priorities in the Durham Region Strategic Plan:

a. Goal 5.2 Service Excellence - Collaborate for a Seamless Service Experience - by working with Metrolinx and 905 transit agencies to modernize the PRESTO electronic fare payment system enabling new functionality supporting seamless travel by transit customers in Durham Region and across the Greater Toronto and Hamilton Area.

7. Conclusion

7.1 It is recommended that financing estimated at $3.2 million be provided at the discretion of the Commissioner of Finance for the replacement of the Region's PRESTO infrastructure, including devices on all buses in accordance with the terms of the PRESTO Operating Agreement for device replacement.

Respectfully submitted,

Original Signed By
Nancy Taylor, BBA, CPA, CA
Commissioner of Finance

Recommended for Presentation to Committee

Original Signed By
Elaine C. Baxter-Trahair
Chief Administrative Officer

If this information is required in an accessible format, please contact 1-800-372-1102 ext. 2304

The Regional Municipality of Durham Report

To:	Finance and Administration Committee
From:	Commissioner of Finance
Report:	#2020-F-27
Date:	December 8, 2020

Subject:

Durham Region Transit U-Pass Agreement Extension

Recommendation:

That the Finance and Administration Committee recommends to Regional Council:

That the General Manager of Durham Region Transit (DRT) and the Commissioner of Finance be authorized to execute an amendment to the existing U-Pass Agreement with Durham College, Ontario Tech University and Trent University to extend the existing U-Pass agreement with Durham College, Ontario Tech University and Trent University (Durham Campus), including an approximate 1.9 per cent increase in the fee per eligible student from $141.75 per semester to $144.50 per semester for the period of September 1, 2021 to August 31, 2022.

Report:

1. Purpose

1.1 This report provides an update on the status of DRT's U-Pass agreement with Durham College, Ontario Tech University and Trent University for the remainder of the 2020-2021 academic year in response to the impacts of the COVID-19 pandemic and seeks authorization for a one-year extension to the U-Pass agreement including an approximate 1.9 per cent increase in the fee per eligible student from $141.75 per semester to $144.50 per semester for the period of September 1, 2021 to August 31, 2022.

2. Background

2.1 DRT entered into the current U-Pass agreement with Durham College, Ontario Tech University and Trent University effective for the period May 1, 2017 through August 31, 2019. The parties have executed two consecutive one year extensions to the agreement through August 31, 2021.

2.2 The 2020-2021 U-Pass rate is $141.75 per student per semester providing unlimited trips on DRT throughout each four-month semester. This rate is charged to all full-time students of participating institutions as an ancillary fee to their tuition costs. On a monthly basis the U-Pass rate per student is $10 less than DRT's Access Pass for Ontario Disability Support Program clients and less than the cost of six adult round trips (i.e., 12 rides) per month. This is equivalent to 30 per cent of an adult monthly pass or 38 per cent of a youth monthly pass.

2.3 The U-Pass accounted for 27 per cent of DRT's annual ridership in 2019. For 2020, the U-Pass was budgeted to generate approximately $6.8 million in revenue for DRT, approximately 23 per cent of DRT's total budgeted fare-related revenue.

2.4 In 2019, the Ministry of Training, Colleges and Universities issued a new Tuition Fee Framework and Ancillary Fee Guidelines stating that where an institution has a compulsory ancillary fee for student transit passes established prior to January 17, 2019 those fees can continue to be charged for the duration of the agreement and any subsequent renewals. Renewals are considered to be subsequent contracts between the same parties creating uninterrupted service to students. No compulsory fees may be charged for a student transit pass for new agreements, fees can only be implemented on an opt-out basis. Subsequently, student association groups successfully appealed the ancillary fee guidelines, however the decision has been challenged by the Province.

3. Previous Reports and Decisions

3.1 At its meeting of January 14, 2020, the Finance and Administration Committee adopted recommendations of Report #2020-F-01 which included the recommendation to authorize the Treasurer and General Manager of Durham Region Transit to execute a one-year extension to the existing U-Pass agreement with Durham College, Ontario Tech University and Trent University (Durham Campus), including a two per cent increase in the fee per eligible student from $139.00 per semester to $141.75 per semester for the period of September 1, 2020 to August 31, 2021.

3.2 A companion report (Report 2020-DRT-23) was prepared for the December 2, 2020 Durham Region Transit Executive Committee meeting seeking to execute an amendment to the existing U-pass Agreement with Durham College, Ontario Tech University and Trent University to:

a. Suspend participating in the U-Pass agreement with out prejudice for the Winter and Summer 2021 semesters in response to the ongoing impacts of the COVID-19 pandemic; and

b. Extend the existing U-Pass agreement with Durham College, Ontario Tech University, and Trent University (Durham Campus), including an approximate 1.9 per cent increase in the fee per eligible student from $141.75 per semester to $144.50 per semester for the period of September 1, 2021 to August 31, 2022 conditional upon Finance and Administration Committee approval.

4. Current status

4.1 At its meeting of July 8, 2020, TEC authorized a temporary suspension of the U-Pass agreement for the fall 2020 semester at the request of the three post secondary institutions due to the impacts of COVID-19 on the delivery of academic programming (Report #2020-DRT-15). The requests further indicated that a decision with respect to extending the suspension period through the remainder of the 2020-21 academic year would be made by October 2020.

4.2 Requests from all three post secondary institutions to continue the suspension of the U-Pass through the 2021 winter and summer semesters have been received by DRT and is being considered by the Durham Region Transit Executive Committee at their meeting on December 2, 2020. The majority of programming at the institutions is expected to remain remotely delivered for the remainder of the academic year as a result of the ongoing COVID-19 pandemic.

4.3 Extending the temporary suspension of the U-Pass agreement does not preclude Durham College, Ontario Tech University or Trent University from execution of a further extension to the existing agreement with DRT. All three institutions are supportive of executing a new one-year extension to the U-Pass agreement to take effect September 2021 in time for the 2021-2022 academic year. As part of the extension a fee adjustment of approximately 1.9 per cent will be applied increasing the fee per eligible student by $2.75 per semester from $141.75 to $144.50.

4.4 During the U-Pass suspension period regular transit fares will continue to apply to post secondary students travelling on DRT.

5. Financial Implications

5.1 Additional 2021 revenues of approximately $60,000 are expected as a result of a 1.9 per cent increase in the U-Pass fee from $141.75 per semester to $144.50 effective September 1, 2021, based on comparable 2019 post-secondary enrollment. These increased revenues will be reflected in Durham Region Transit's 2021 Business Plan and Budget. The annualized impact of the 1.9 per cent increase is estimated to be $130,000 in additional revenues.

5.2 The overall net impact of suspending U-Pass participation for all three post secondary institutions during the winter 2021 semester is estimated at $3.1 million and an additional $0.6 million for the 2021 summer semester based on 2020 budgeted U-Pass revenues. These projected impacts will need to be provided for in Durham Region Transit's 2021 Business Plan and Budget. Should the Region be successful in receiving federal and provincial funding under Phase 2 Safe Restart Transit Stream, it is estimated that this funding may be used to offset $2.3 million in lost U-Pass revenue from January 1, 2021 through March 31, 2021. Unlike Phase 1 funding, federal and provincial funding under the Phase 2 Safe Restart Transit Stream will require the execution of a transfer payment agreement that may include additional requirements on the use of these funds.

6. Relationship to Strategic Plan

6.1 This report aligns with/addresses the following strategic goals and priorities in the Durham Region Strategic Plan:

a. Goal 1.5 Environmental Sustainability - Expand Sustainability and Active Transportation – by improving access for post secondary students in Durham to public transit as an affordable and sustainable means of travel for educational and personal needs.

b. Goal 5.1 Service Excellence - Optimize Resources and Partnerships to Deliver Exceptional Quality Services and Value – by leveraging partnerships with Durham's post secondary institutions to provide DRT's best overall value fare product offering unlimited access to DRT services for eligible students.

7. Conclusion

7.1 It is recommended that the DRT's U-Pass agreement with Durham College, Ontario Tech University and Trent University be extended for one-year including an approximate 1.9 per cent increase in the fee per eligible student from $141.75 per semester to $144.50 per semester for the period of September 1, 2021 to August 31, 2022.

Respectfully submitted,

Original Signed By

Nancy Taylor, BBA, CPA, CA
Commissioner of Finance

Recommended for Presentation to Committee

Original Signed By

Elaine C. Baxter-Trahair
Chief Administrative Officer

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The Regional Municipality of Durham Report

To:	Finance and Administration Committee
From:	Commissioner of Finance
Report:	#2020-F-28
Date:	December 8, 2020

Subject:

Sole Source for Supplemental Operational Requirements for the On Demand pilot for Durham Region Transit

Recommendation:

That the Finance and Administration Committee recommends to Regional Council:

That three sole source agreements totalling $1,010,000 be approved to support the On Demand pilot between September 28, 2020 and February 28, 2021, including agreements with:

- Taxi Tab (a division of Coventry Connections Inc.): $496,000;
- Circle Taxi Inc.: $161,000; and
- Marleen Esufali (dba Island Taxi): $353,000.

Report:

1. Purpose

1.1 The purpose of this report is to seek approval for three sole source agreements totalling $1,010,000, to support the On Demand pilot between September 28, 2020 and February 28, 2021, including agreements with:

- Taxi Tab (a division of Coventry Connections Inc.): $496,000;
- Circle Taxi Inc.: $161,000; and
- Marleen Esufali (dba Island Taxi): $353,000.

1.2 These agreements are required to support the operation of the On Demand pilot to February 28, 2021, part of the Durham Region Transit Ridership Recovery Framework and the Region's COVID Recovery Plan.

2. Background

2.1 As presented to the Transit Executive Committee on July 8, 2020, the Phase A Service Network was launched as part of Durham Region Transit's (DRT) Ridership Recovery Framework to encourage and increase transit ridership to pre-COVID levels. The framework is part of the Region of Durham's COVID-19 recovery plan. DRT's new transit network was designed to meet current and projected customer demand, from early morning to late night throughout the entire Region. With this service residents have access to public transit no matter where they live, work or are travelling to within the Region. The On Demand service replaced local routes that continued to experience low ridership or had been cancelled as part of DRT's June 8, 2020 service reduction. On Demand offers service to customers when and how they need it: stop-to-stop within a zone, facilitating connections to frequent and grid routes, or to the local GO station or bus terminal. On Demand service was extended throughout the rural areas of the Region, providing transit to all residents of Durham. The On Demand and scheduled services provide mobility options to residents throughout the week: weekday 05:00 to 24:00, Saturday 07:00 to 24:00 and Sunday 07:00 to 22:00.

2.2 The On Demand service is deployed with internal resources and supplemental contractors to ensure the success of the service. The supplemental contracted service is assumed by Taxi Tab (a division of Coventry Connections Inc.), Circle Taxi Inc. and Marleen Esufali (dba Island Taxi) that hold existing contracts for the provision of taxi services to supplement Specialized Transit Services. These contracts were awarded through a competitive bid process conducted by Purchasing under RFT-517-201.

2.3 The On Demand service pilot has proven to be a success over the initial eight weeks, with a growth rate of 98 per cent between the first and most recent weeks. The ridership for the On Demand service pilot is over 15,000 passengers. The On Demand service is now providing close to 2,100 trips per week.

3. Previous Reports and Decisions

3.1 Not applicable.

4. Financial Implications

4.1 In August 2020, DRT amended existing standing contracts to supplement Specialized Transit service with the existing three contractors. These agreements came in place through tender in 2016. This amendment included initial service hours requirements to ensure the successful launch of the On Demand service. To launch the service on September 28, 2020, three sole source agreements were issued: Taxi Tab (a division of Coventry Connections Inc.) $100,000, Circle Taxi

Inc. $75,000, and Marleen Esufali (dba Island Taxi) $55,000. Since then, the cost of the supplemental contracted service for the On Demand pilot have exceeded the permissible sole sources limits per the Purchasing by-law.

4.2 The initial cost of the taxi services was based on a strategy to build a reliable service that was able to respond to trip requests booked for immediate pick up. The contractors were also used to supplement the DRT fleet availability. The agreements ensured that the contractors exclusively took calls for the On Demand service only. A review of the initial service hours per week was performed which resulted in a reduction of required hours. The table below outlines the service hours:

Total Service Hours – Supplemental Contractors			
Assigned weekly hours	September 28 to December 2, 2020	December 3, 2020 to February 28, 2021	Total Hours
Taxi Tab (a division of Coventry Connections Inc.)	824	224	1,048
Circle Taxi Inc.	254	156	410
Marleen Esufali (dba Island Taxi)	354	302	656
Total Hours	1,432	682	2,114

4.3 The supplemental contracted services recommended in this report are estimated to have a total cost of $1,010,000 over the period of September 28, 2020 to February 28, 2021.

4.4 To ensure the continuity of the On Demand service beyond February 28, 2021, a tender will be launched for supplemental On Demand operational requirements for the period of March 1, 2021 to February 28. 2022.

4.5 Section 7 of the Region's Purchasing By-Law 16-2020 allows for sole source purchases and requires Council approval where the sole sources purchase exceeds $100,000. DRT used the established supplemental contractors for additional services by the original supplier not included in the initial procurement under Appendix C 1.2 of the Region's Purchasing By-Law 16-2020. The existing contractors were able to provide a seamless service launch avoiding significant inconvenience.

5. Relationship to Strategic Plan

5.1 This report aligns with/addresses the following strategic goals and priorities in the Durham Region Strategic Plan:

a. Service Excellence -

6. Conclusion

6.1 The On Demand pilot launched as part of the DRT Ridership Recovery framework has been a success in ensuring mobility throughout Durham Region.

6.2 The On Demand pilot has permitted DRT to avoid operational costs of over six million dollars between September 28, 2020 and February 28, 2021.

6.3 A sole source in the amount of $1,010,000 for supplemental contracted service is required to ensure the continued operation of the On Demand pilot until February 28, 2021.

6.4 A similar report was presented to the Transit Executive Committee on December 2, 2020.

Respectfully submitted,

Original Signed By

Nancy Taylor, BBA, CPA, CA
Commissioner of Finance
Recommended for Presentation to Committee

Original Signed By

Elaine Baxter-Trahair
Chief Administrative Officer

Resolutions from Advisory Committees

Durham Region Roundtable on Climate Change Committee

1. Green Development Standards in the Region of Durham

That we recommend to the Finance and Administration Committee for approval and subsequent recommendation to Regional Council:

A) That Regional Council formally urge all local municipalities in Durham to adopt green development standards similar to the Whitby Green Standard as the basis for addressing the sustainability of all new development across Durham Region; and

B) That Regional Council communicate this position to all other Regional governments in Ontario and urge them and their local municipalities to adopt similar green standards for new development.

2. Mandate for a Renewed Durham Strategic Energy Alliance

That we recommend to the Finance and Administration Committee for approval and subsequent recommendation to Regional Council:

That given the ambitious goals of the Durham Community Energy Plan, and the need for ongoing coordination among stakeholders in order to achieve these goals, that Regional staff be directed to work with Ontario Tech University and other Durham-based institutions and companies on a needs assessment and scoping exercise, to identify a mandate for a renewed Durham Strategic Energy Alliance.