



# Town of Cobourg 2020 Water and Wastewater Rate Study & Water Financial Plan

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Council Presentation

January 4, 2021

# Introduction

## Background



- Watson & Associates Economists Ltd. (Watson) has been retained to by the Town of Cobourg (Town) and Lakefront Utility Services Inc. (LUSI) to undertake a Water and Wastewater Rate Study
- A Water Financial Plan, meeting the requirements of O.Reg. 453/07 as one of the requirements of the Town's water licence renewal application (due in February 2021), has also been prepared based on the findings of the Rate Study



# Introduction

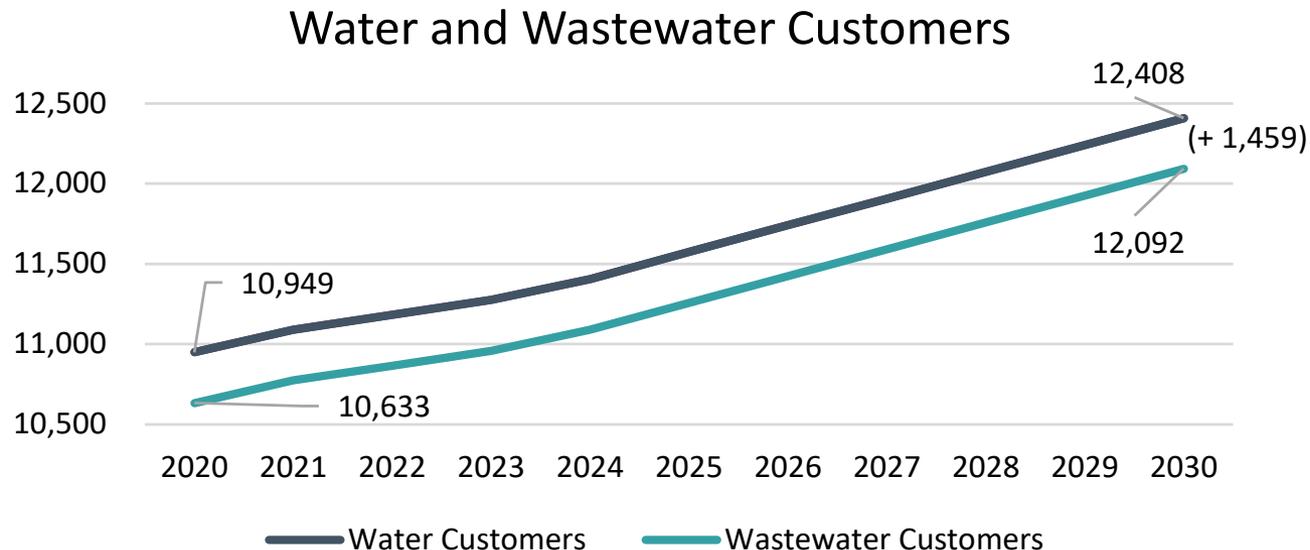
## Rate Study Work Plan/Objectives

- Objectives of the Rate Study are to understand the long-term operating and capital costs of providing water and wastewater services and to develop a sustainable funding plan and rate recommendations, including:
  - Forecast of water and wastewater service demands;
  - Capital needs assessment and funding plan;
  - Operating costs assessment and revenue analysis; and
  - Rate calculations and forecast
- Water Rate Study and Water Rate Recommendations have been approved by the Lakefront Utilities Services Board (December 9, 2020)

# Water and Wastewater Service Demands



- Forecast demands based on:
  - **Residential** –Town’s 2016 D.C. Background Study (132 connections per year) and 124 m<sup>3</sup> average annual consumption per connection
  - **Non-Residential** –historical growth (average of 8 connections per year) and 406 m<sup>3</sup> average annual consumption per connection
  - Approximately 1% annual increase in total water consumption





# Capital Needs Forecast (2020-2030)

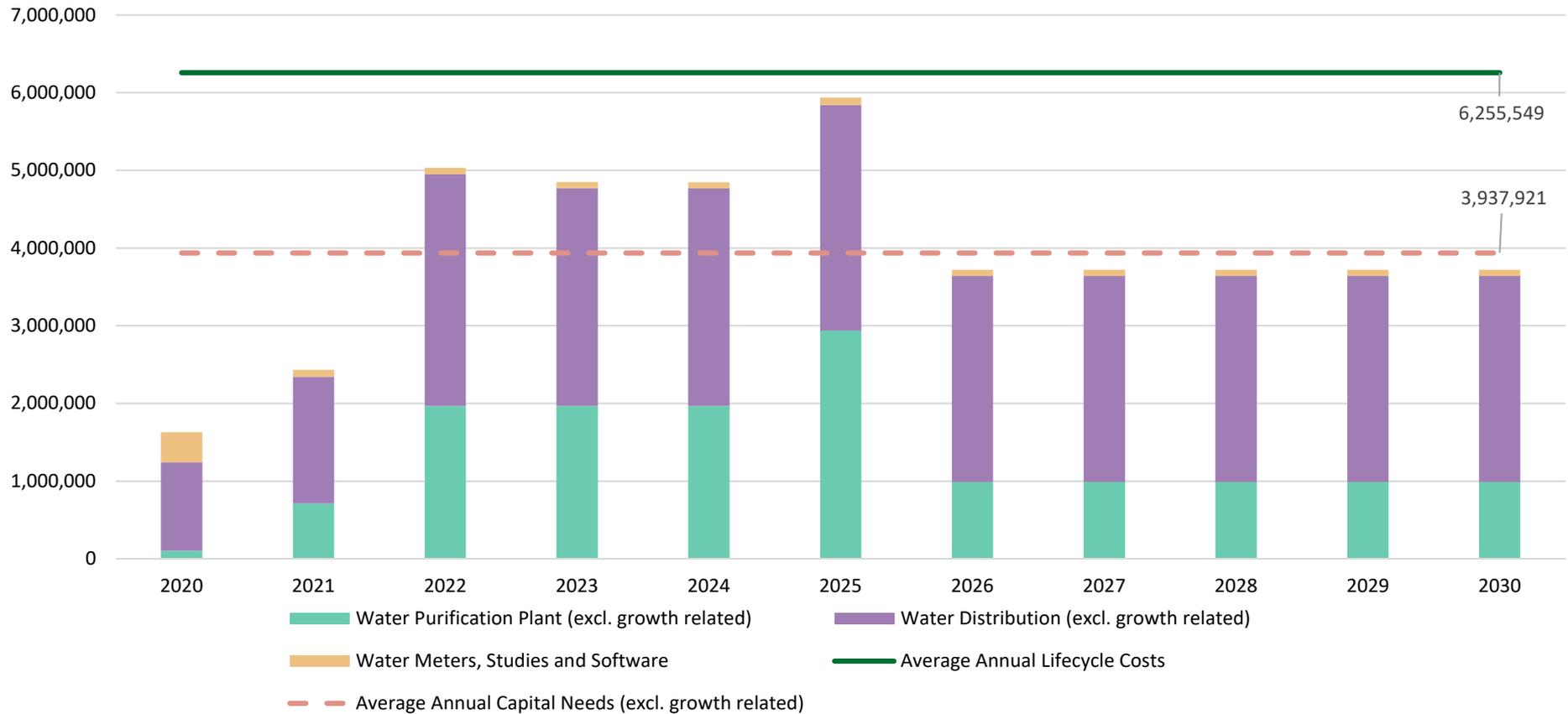
Uninflated (2020\$)

- Capital needs forecast prepared based on:
  - 2020 Capital Budget and forecast, as updated by staff; and
  - Draft 2020 Drinking Water Master Plan
- \$168.9 million gross capital costs (\$15.3 million annually)

Capital Needs	Water	Wastewater	Total
<b>2020-2030</b>			
Growth-Related (2020-2030)	23,233,454	28,537,263	51,770,717
Non-Growth Related (2020-2030)	43,317,128	46,146,144	89,463,272
<b>Total</b>	<b>66,550,583</b>	<b>74,683,407</b>	<b>168,895,500</b>
<b>Average Annual Capital Needs</b>			
Non-Growth Related	3,937,921	4,195,104	8,133,025
Lifecycle Costs <sup>1</sup>	6,255,549	4,195,104	10,450,653

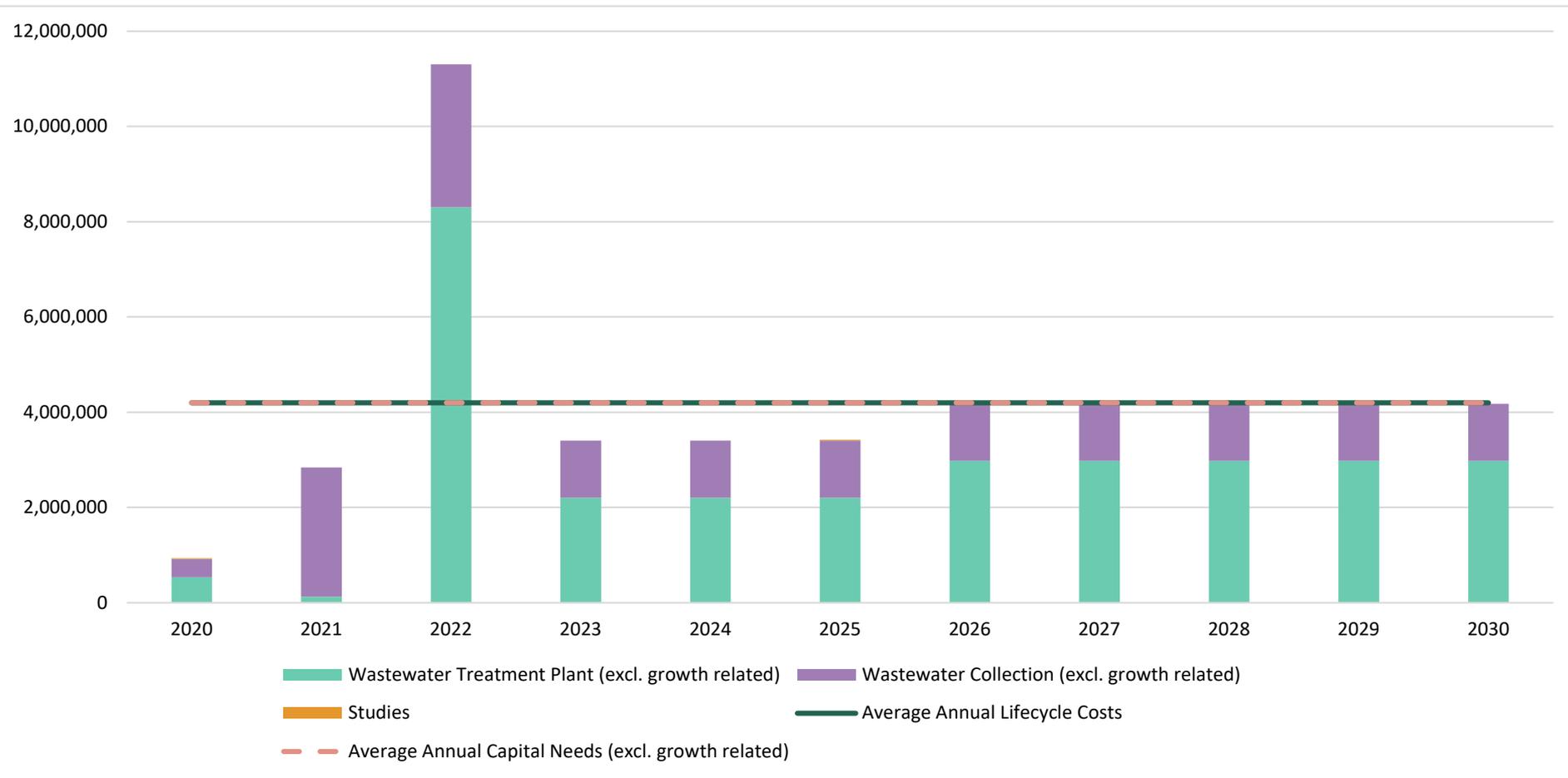
# Water Capital Needs Forecast (2020-2030)

## Uninflated (2020\$)



# Wastewater Capital Needs Forecast (2020-2030)

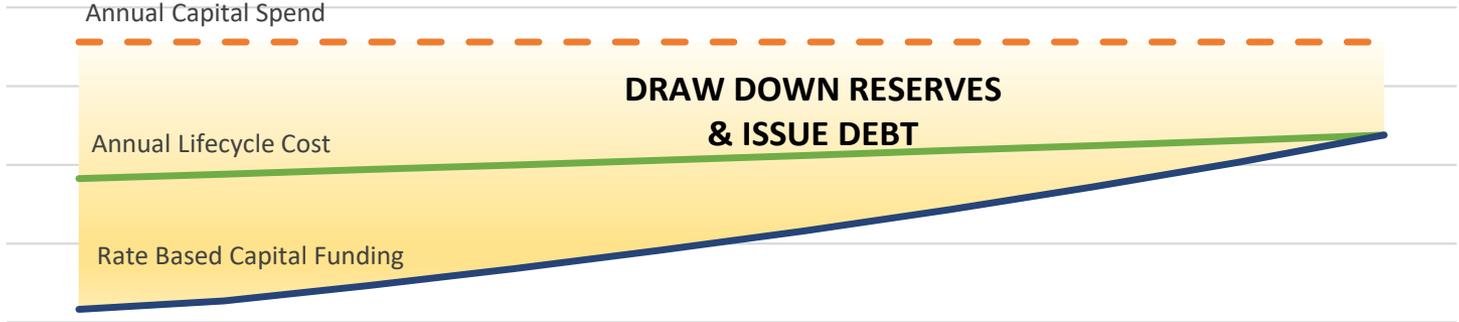
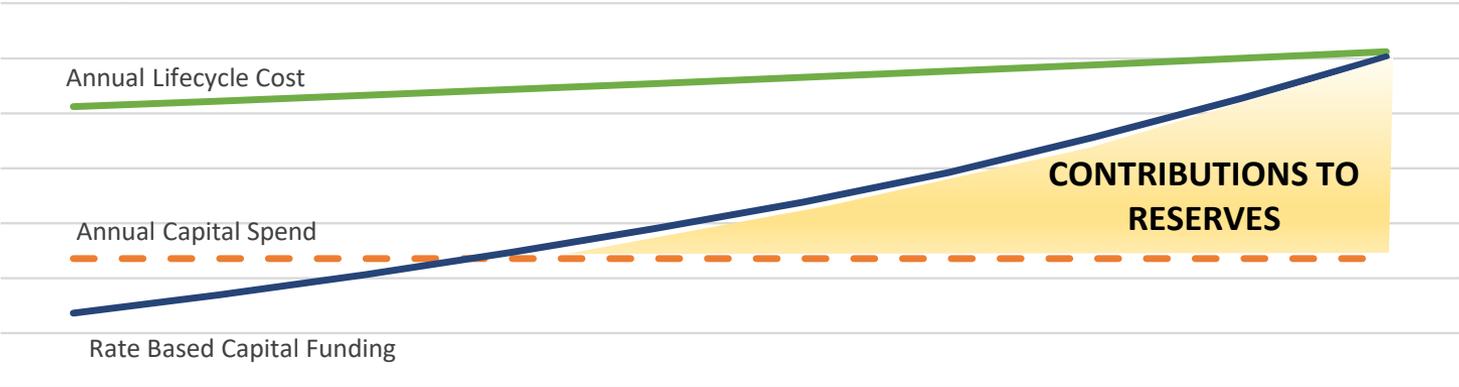
## Uninflated (2020\$)



# Capital Funding Approach



- Billing revenue increased over forecast to fund operating costs and long-term capital needs



# Capital Funding Plan



## Inflated \$

- Capital needs inflated by 3% annually
- Capital needs to be funded through transfers from reserves, debt, and D.C.s (or Developer funding agreements)

Capital Needs	Water	Wastewater	Total
Growth-Related	28,233,296	36,182,700	64,415,996
Non-Growth Related	50,682,204	53,797,300	104,479,504
<b>Total</b>	<b>78,915,500</b>	<b>89,980,000</b>	<b>168,895,500</b>

Capital Funding	Water	Wastewater	Total
D.C. Reserve Fund/Developer Funding Agreements	28,233,296	36,182,700	64,415,996
Non-Growth Related Debenture Requirements	7,365,524	22,563,196	29,928,720
Growth Related Debenture Requirements	-	-	-
Reserves	43,316,680	31,234,104	74,550,784
<b>Total</b>	<b>78,915,500</b>	<b>89,980,000</b>	<b>168,895,500</b>

# Capital Funding Plan



## Debt Financing Impacts

- Anticipated debt financing assessed against Provincial borrowing limits (i.e. annual debt financing costs not to exceed 25% of own-source revenues)
  - Current debt capacity utilization of 3.6% (2019 FIR)
  - Capital funding plan includes \$29.9 million incremental debt
  - Debt capacity utilization increases to 7.1% by 2030
    - Assessment does not consider incremental taxation own-source revenues or debt



# Capital Funding Plan

## Debt Financing Impacts (Cont'd)

- Funding Plan assumes Town will enter into agreements with developers to provide \$57.9 million in up-front financing for D.C.-eligible infrastructure over the 10-year forecast period
- If the Town was required to finance costs of all D.C. eligible water and wastewater infrastructure, up to \$57.9 million in additional debt would be required over the 10-year period
  - Additional growth-related debt would increase debt capacity utilization to 13.7%

# Capital Funding Plan



## D.C. Funding Impacts

- 2016 D.C. Background Study identifies \$ 55.7million in D.C. eligible costs (2020\$) for buildout of urban serviced area (\$23.3 million water and \$32.4 million wastewater)
  - \$44.2 million growth related costs identified in draft Drinking Water Master Plan (a portion of which will a local service cost and direct developer responsibility)
  - Anticipated Town will update costs growth-related capital requirements for wastewater services
- Updated capital servicing plan and cost estimates will be reflected in an updated D.C. Background Study so that D.C.s are reflective of the anticipated costs of servicing

# Operating Budget Forecast

## 2020-2030

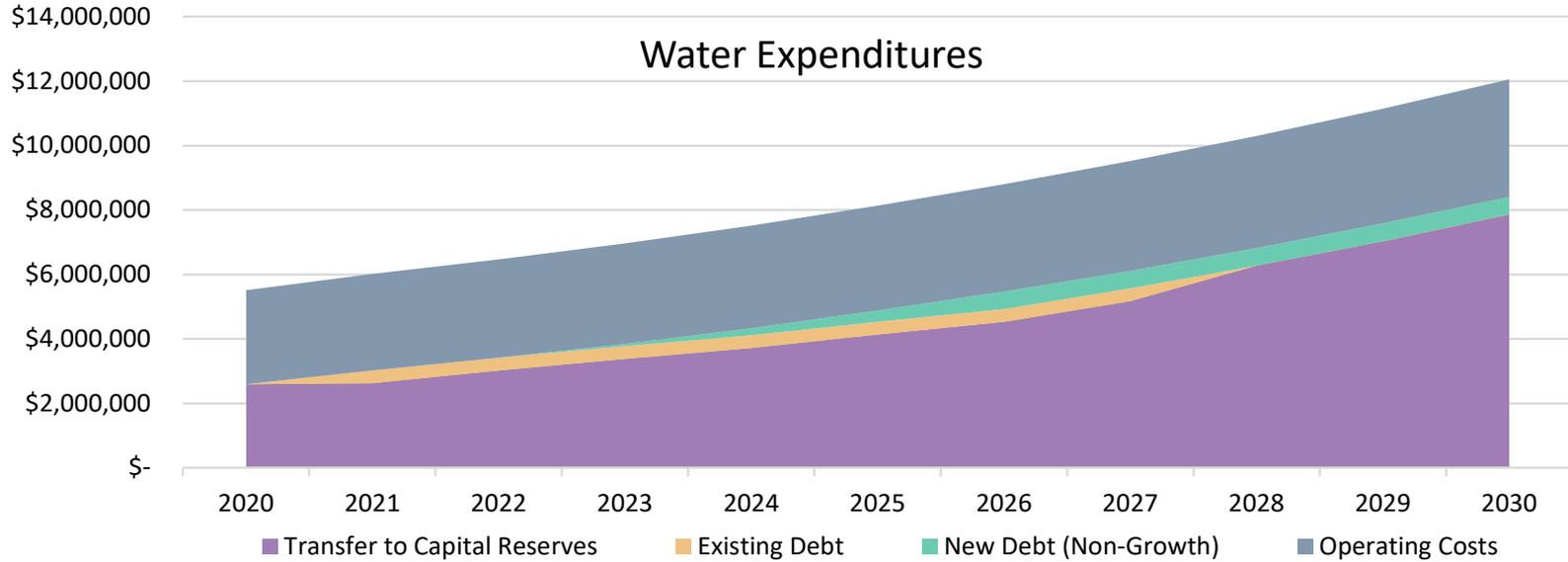


- Operating budget forecast based on three components
  - Fixed operating expenditures plus inflation – 2% per year
  - Variable operating expenditures (forecast based on increased consumption plus inflation) – Approx. 3% increase per year
  - Capital-related expenditures (based on capital funding plan)

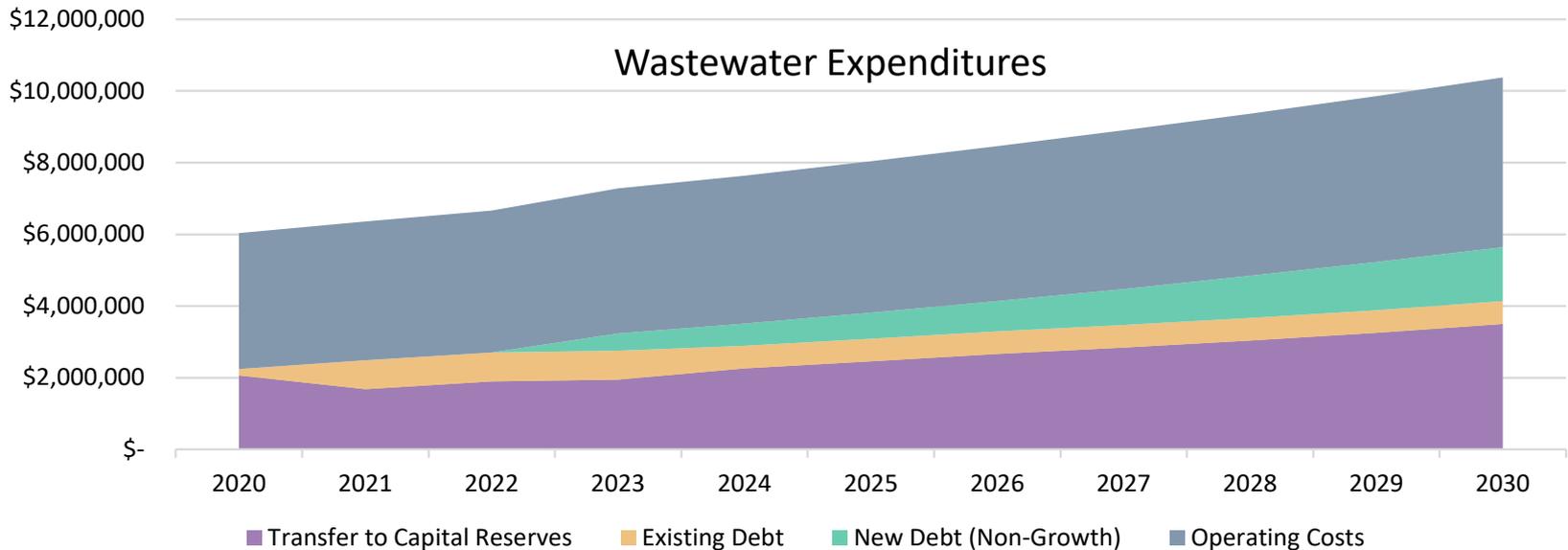
# Operating Budget Forecast 2020-2030



## Water Expenditures



## Wastewater Expenditures





# Rate Forecasts

## Alternatives Considered

- Alternative rate forecasts considered to meet forecast expenditures
- Alternative 1 - No Additional Debt
  - Required rates to provide funding for capital needs without addition debt financing would increase average customer bills by approximately 90% over the 2021 to 2022 period
- Alternative 2 – Monthly Base Charge increases only
  - Increase base charges only to reflect fixed capital costs of providing services and improving revenue stability.
  - Customers with lower annual consumption would see greater relative increases to their annual bill. e.g.:
    - Annual bill for a small volume residential customer (90 m<sup>3</sup>/year) would increase by **40% more** than the annual bill for a large volume residential customer (175 m<sup>3</sup>/year), over the 2021-2030 period



# Rate Forecast

## Recommended Rate Forecast

- In recognition of the bill impacts by customer type for the alternative scenarios considered, it is proposed that:
  - The current rate structure is maintained (i.e. monthly base charges and increasing block consumptive rates); and
  - Rate increases are applied uniformly to base and consumptive charges
- Detailed rate forecasts provided in Chapter 6 of the Rate Study
- Average annual residential water and wastewater bill to increase by 5.9% per year
  - Average annual water and wastewater bills within the Town have increased by approximately 5.3% over the 2016-2020 period

# Rate Forecast and Customer Bill Impacts

## Avg. Residential Customer (3/4" meter & 138m<sup>3</sup> consumption)



### Water Rate Summary

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Monthly Base Rate	\$13.75	\$14.74	\$15.79	\$16.93	\$18.14	\$19.45	\$20.84	\$22.34	\$23.94	\$25.66	\$27.50
<b>Annual Base Rate Bill</b>	<b>\$165</b>	<b>\$177</b>	<b>\$190</b>	<b>\$203</b>	<b>\$218</b>	<b>\$233</b>	<b>\$250</b>	<b>\$268</b>	<b>\$287</b>	<b>\$308</b>	<b>\$330</b>
Block 1 Rate	\$1.37	\$1.47	\$1.57	\$1.69	\$1.81	\$1.94	\$2.08	\$2.23	\$2.39	\$2.56	\$2.74
<b>Annual Volume Bill<sup>1</sup></b>	<b>\$189</b>	<b>\$203</b>	<b>\$217</b>	<b>\$233</b>	<b>\$249</b>	<b>\$267</b>	<b>\$287</b>	<b>\$307</b>	<b>\$329</b>	<b>\$353</b>	<b>\$378</b>
<b>Total Annual Bill</b>	<b>\$354</b>	<b>\$379</b>	<b>\$407</b>	<b>\$436</b>	<b>\$467</b>	<b>\$501</b>	<b>\$537</b>	<b>\$575</b>	<b>\$616</b>	<b>\$661</b>	<b>\$708</b>
% Increase - Total Annual Bill		7.2%	7.2%	7.2%	7.2%	7.2%	7.2%	7.2%	7.2%	7.2%	7.2%
\$ Increase - Total Annual Bill		\$25	\$27	\$29	\$31	\$34	\$36	\$39	\$41	\$44	\$47

### Wastewater Rate Summary

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Monthly Base Rate	\$15.01	\$15.70	\$16.41	\$17.16	\$17.95	\$18.77	\$19.63	\$20.53	\$21.46	\$22.45	\$23.47
<b>Annual Base Rate Bill</b>	<b>\$180</b>	<b>\$188</b>	<b>\$197</b>	<b>\$206</b>	<b>\$215</b>	<b>\$225</b>	<b>\$236</b>	<b>\$246</b>	<b>\$258</b>	<b>\$269</b>	<b>\$282</b>
Block 1 Rate	\$1.54	\$1.61	\$1.68	\$1.76	\$1.84	\$1.93	\$2.01	\$2.11	\$2.20	\$2.30	\$2.41
<b>Annual Volume Bill<sup>1</sup></b>	<b>\$213</b>	<b>\$222</b>	<b>\$232</b>	<b>\$243</b>	<b>\$254</b>	<b>\$266</b>	<b>\$278</b>	<b>\$291</b>	<b>\$304</b>	<b>\$318</b>	<b>\$332</b>
<b>Total Annual Bill</b>	<b>\$393</b>	<b>\$411</b>	<b>\$429</b>	<b>\$449</b>	<b>\$470</b>	<b>\$491</b>	<b>\$513</b>	<b>\$537</b>	<b>\$561</b>	<b>\$587</b>	<b>\$614</b>
% Increase - Total Annual Bill		4.6%	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%
\$ Increase - Total Annual Bill		\$18	\$19	\$20	\$21	\$21	\$22	\$23	\$25	\$26	\$27

### Water and Wastewater Rate Summary

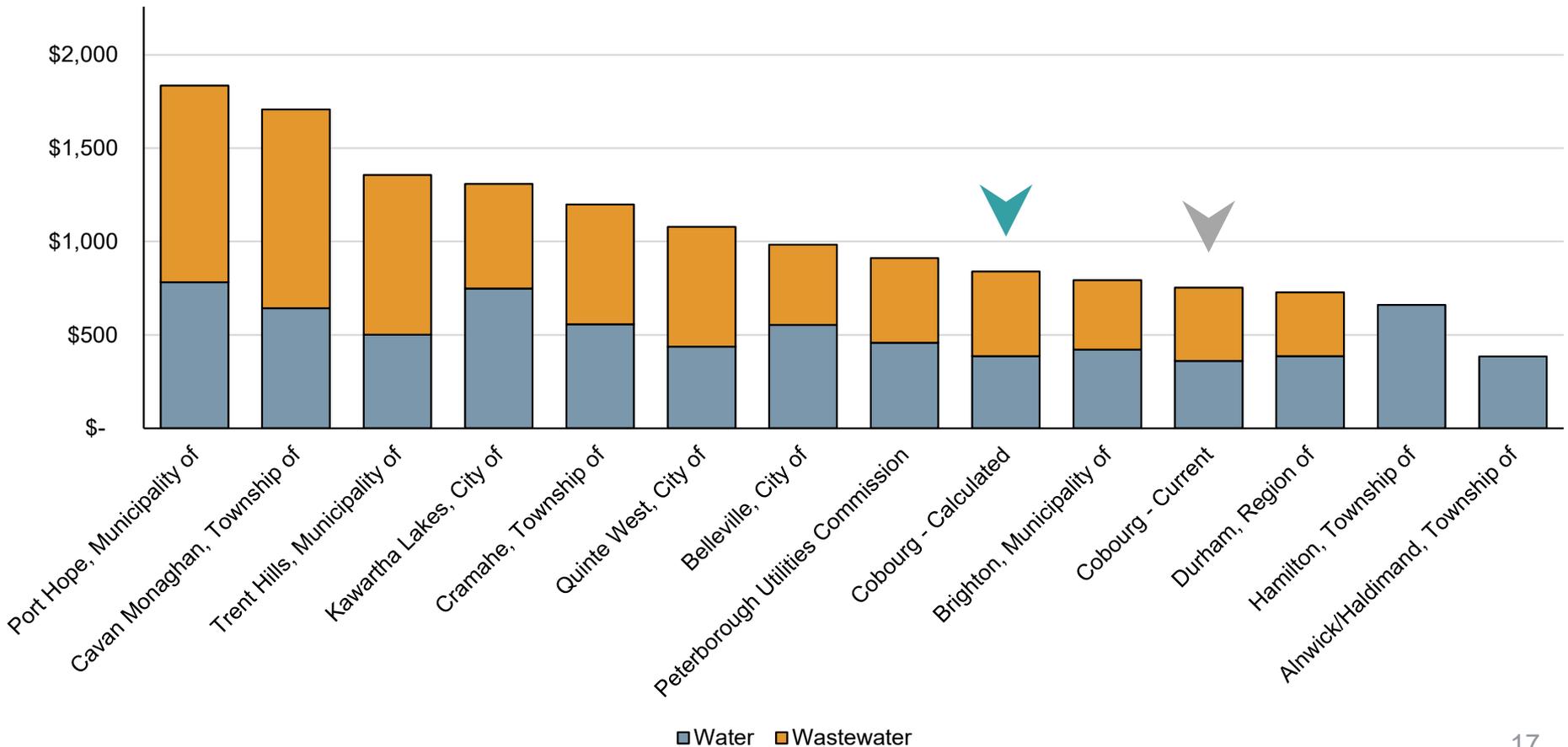
Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>Total Annual Bill Water and Wastewater Bill</b>	<b>\$747</b>	<b>\$790</b>	<b>\$836</b>	<b>\$885</b>	<b>\$937</b>	<b>\$992</b>	<b>\$1,050</b>	<b>\$1,112</b>	<b>\$1,178</b>	<b>\$1,248</b>	<b>\$1,322</b>
% Increase - Total Annual Bill		5.8%	5.8%	5.8%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	6.0%
\$ Increase - Total Annual Bill		\$43	\$46	\$49	\$52	\$55	\$58	\$62	\$66	\$70	\$74

# Municipal Comparison

## Residential Water and Wastewater Bill



Survey of Annual Residential Water & Wastewater Bill - 138 m<sup>3</sup> of Annual Consumption on 3/4" Meter

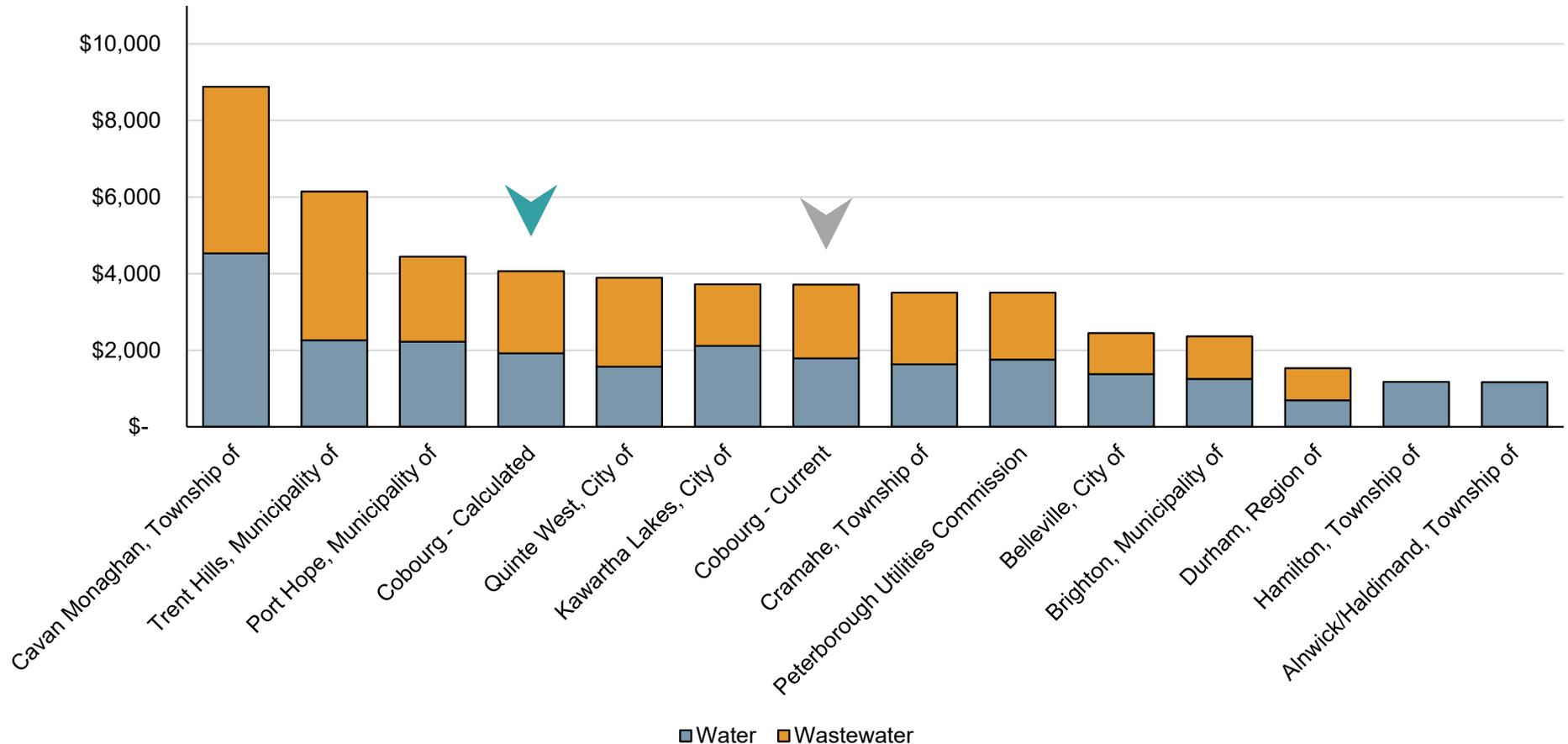


# Municipal Comparison

## Non-Residential Water and Wastewater Bill



Survey of Annual Non-Residential Water & Wastewater Bill - 406 m<sup>3</sup> of Annual Consumption on 2" Meter





# Recommendations

## Water and Wastewater Rate Study

1. That Council provide for the recovery of all water and wastewater costs through full cost recovery rates;
2. That Council approve the 2021 to 2025 water and wastewater rates;
3. That Council direct staff to update the D.C. Background Study to reflect the updated costs of water and wastewater servicing;
4. That the Town will seek to enter into up-front financing arrangements with developers for the emplacement of D.C.-eligible infrastructure; and
5. That Council direct staff to consider the results of the Rate Study in future amendments to the Town's asset management plan



# Recommendations

## Water Financial Plan

1. The Town of Cobourg Financial Plan prepared by Watson & Associates Economists Ltd. dated December 11, 2020 be approved;
2. Notice of availability of the Financial Plan be advertised;
3. The Financial Plan, the Council Resolution approving the Financial Plan, and the Rate Study underpinning the Financial Plan be submitted to the Ministry of Municipal Affairs and Housing. (O.Reg. 453/07, Section 3 (1) 6); and
4. The Council Resolution approving the Financial Plan be submitted to the Ministry of the Environment, satisfying the requirements under the Safe Drinking Water Act. (S.D.W.A. Section 32 (5) 2 ii))