

# 2021-2025 Water and Sewer Financial Plan Highlights



PRESENTED BY  
CITY OF COURTENAY STAFF

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# Water and Sewer Financial Plan Overview

**Water and Sewer services are self funded utilities and are not assisted with funding from general taxation.**

Two major sources of revenue:

**1. Utility fees:** to cover operational expenses

Such as bulk water purchase, sewer requisition, electrical power, chemicals, flushing, monitoring, labour expenses and general maintenance

**2. Frontage taxes:** to cover capital expenses

Such as asset renewal or expansion, depreciation, repairs that extend the life of an asset and contribution to reserves

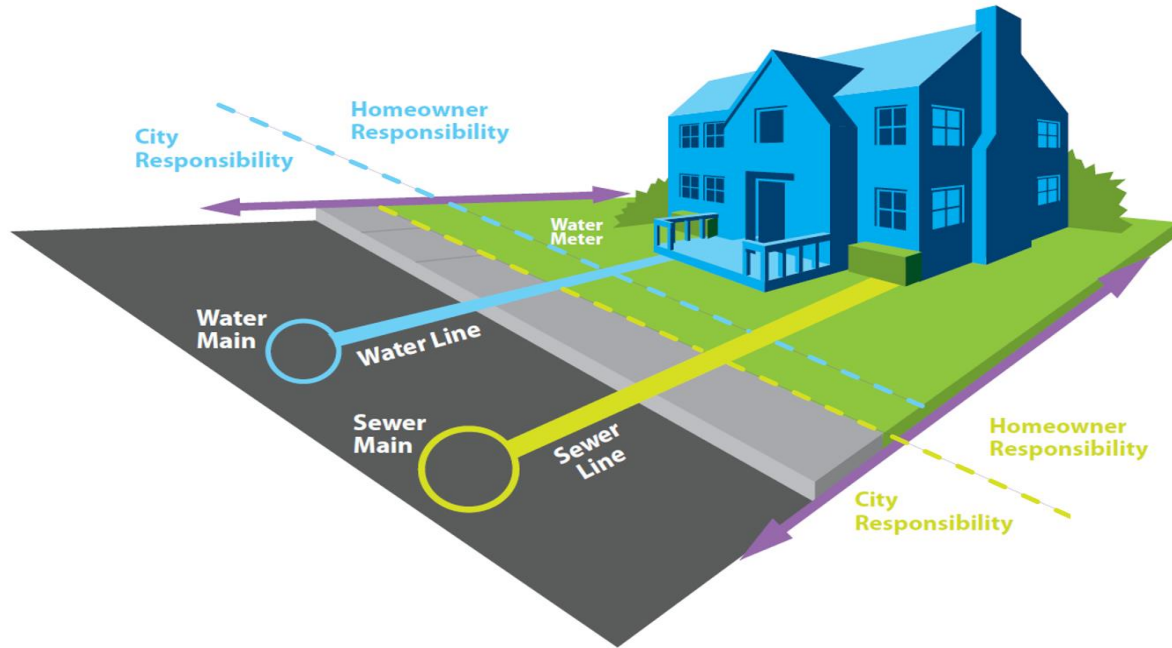
# Water and Sewer Financial Plan Overview

- ❖ Regional long-term capital impacts on City utility fees
  - Increase in CVRD bulk water rate & sewer requisition
- ❖ Increased permit and regulatory requirements in City operations
- ❖ Focus on Asset Management for sustainable service delivery
  - Emphasis on preventative maintenance to extend the life of the City's assets
  - As per Council's Asset Management Bylaw No. 2981, 2019

# Water and Sewer Financial Plan Overview

- ❖ Water and Sewer Financial Plan is a collaborative effort involving:  
Public Works – Engineering – Finance
- ❖ The *Community Charter* requires a municipality to have a five year financial plan adopted annually before May 15<sup>th</sup>
- ❖ Now seeking approval of proposed financial plans and to implement proposed utility fees to cover the anticipated costs of the services
- ❖ Next steps:
  - Incorporate into consolidated financial plan for the City
  - Amendment to bylaw required with proposed rate increase for 2021

# Utility Services to a Single Family Home



# 2021 Water Budget Highlights



# Water Fund Overview

- ❖ Regional and municipal components each play a vital role in providing water services to City of Courtenay residents
- ❖ Comox Valley regional planned capital upgrades and expansion of water infrastructure, including a new water treatment facility resulting in increased bulk water rates
- ❖ City operates and maintains a Class 3 water distribution system and must comply with Health Authority permit requirements and the statutory Drinking Water Protection Act.

# 2021 Water Operating Budget Overview

- ❖ Overall Operating Expenses reducing by 2.6%
    - Mostly due to the delay to 2021-2022 of the development of a Leak Detection and Repair Program
  - ❖ Main cost driver is the CVRD bulk water purchases
    - Represents 60% of Water Operating Expenses
    - CVRD bulk water rates expected to go up 2.4% in 2021
- |      |                           |       |
|------|---------------------------|-------|
| 2018 | - \$0.75 / m <sup>3</sup> |       |
| 2019 | - \$0.80 / m <sup>3</sup> | +6.7% |
| 2020 | - \$0.83 / m <sup>3</sup> | +3.7% |
| 2021 | - \$0.85 / m <sup>3</sup> | +2.4% |



# 2021 Water Operating Budget Overview

Transfers, Contribution & Surplus / Deficit	2021 Budget	2020 Budget
Transfer of revenue to fund Water capital projects	\$350,000	\$195,000
Contribution to Asset Management Water Reserve	\$300,000	\$300,000
Contributions to other Water Reserves	\$94,200	\$93,100
Surplus / Deficit	Surplus \$251,600 (used in proposed 2022-2023 budget)	Surplus \$181,700

# 2021 Water Fund Operating Expenses

Activity2	Activity	2020 BUDGET	2021 BUDGET	Variance 2021 Budget 2020 Budget
CVRD Water Purchase		4,436,400	<b>4,433,500</b>	(2,900)
Water Admin - Salaries/Wages		372,300	<b>301,300</b>	(71,000)
Water Admin - Training		36,900	<b>37,100</b>	200
Water Administration		13,600	<b>17,200</b>	3,600
Water Engineering Services		78,000	<b>78,000</b>	-
Water Admin - BC One Call		3,800	<b>5,000</b>	1,200
Water Operations	Water Main		<b>200,000</b>	
	Water Service		<b>395,700</b>	
	Water Distribution Valve		<b>50,000</b>	
	Water Hydrant/Blowoff	191,900	<b>194,000</b>	
	Water Meter	103,900	<b>138,300</b>	
	Water Pump Stations	68,300	<b>77,500</b>	
	Water Quality & Cross Connection Control		<b>80,000</b>	
	Water Conservation Programs	260,000	<b>167,000</b>	
	Water Transmission and Distribution - OLD	841,800		
	Water Meter Reading - OLD	11,000		
	Water Water Enforcement - OLD	26,600	-	
<b>Water Operations Total</b>		<b>1,503,500</b>	<b>1,302,500</b>	<b>(201,000)</b>
Water Vehicle Charges		79,800	<b>66,500</b>	(13,300)
Water Fleet		(52,700)	<b>(9,900)</b>	42,800
Water Work in Progress		100,000	<b>100,000</b>	-
Interfund Allocation		1,053,100	<b>1,094,900</b>	41,800
<b>Grand Total</b>		<b>7,624,700</b>	<b>7,426,100</b>	<b>(198,600)</b>

# 2020 Water Operations

- ❖ In BC, drinking water quality is controlled through provincial and federal regulations administered by the Local Health Authority

Under these regulations, we are required to provide potable water considered to be safe from disease causing micro-organisms

- ❖ The City owns and operates a Class 3 water distribution system
- ❖ The City's permit to operate has a number of mandated programs requiring additional resources:
  - Uni-Directional Flushing
  - Leak Detection
  - Cross-Connection Control
  - Industrial, Commercial and Institutional Metering (ICI) programs

# City of Courtenay Water System Assets 2020

- ❖ 173 km of water main (1/2 km new for 2020)
- ❖ 11,800 water service connections
- ❖ 1220 ICI water service connections
- ❖ 750 ICI water service connections meters
- ❖ 796 Fire Hydrants (5 new for 2020)
- ❖ 1,739 water main valves
- ❖ 92 Air valves
- ❖ 7 Pressure reducing stations
- ❖ 1 Booster station

# Asset Management's role in Operations

- ❖ Inventory and condition assessments completed in 2020
- ❖ Risk analysis completed in 2020 resulting in identification of areas of concern (either pipe material or flow concerns)
- ❖ Water Master Plan to be completed in early 2021
  - Will result in a 20 year capital plan
- ❖ Preventative Maintenance Plan (PMP) in place
  - Extend the asset life by 10-15%, saving significant capital expenditures in future years
  - Annual PMP for Water Infrastructure now in place.

# Water Smart Action Plan

- ❖ Provides framework and guidance in developing capital and operational projects
- ❖ Presented to Council on October 28, 2019
- ❖ Goal is to create an efficient and sustainable water distribution system
- ❖ Recommended projects incorporated in 2021-2025 Financial Plan:

- 2021, Transmission/Distribution & District Zone Metering:

Complete design for connections between CVWS and City water systems as well as meter chambers for City's District Metering Zone 1.

Project includes transmission/distribution metering, zone metering, cross connection control and leak detection.

- 2021, Complete utility rate review

# 2021 Water Capital Projects

2021 Proposed Budget	
Project description	Total
Sandpiper / Millard Water Main Upgrade (CF)	650,000
Water - Highway 19A Loop - Christie Parkway (CF)	100,000
Water - South Courtenay Secondary Transmission (CF)	81,500
Water Smart Initiatives - Transmission/Distribution Metering (CF)	75,000
City Watermain on private property (CF)	70,000
Braidwood Road - Road & Utility - Water Component (CF)	31,300
Water - Sandwick Area Fireflow Upgrade (CF)	25,000
<b>Grand Total</b>	<b>1,032,800</b>

# 2021 Water Revenue Requirements

- ❖ No change recommended to 2020 user and frontage fee
- ❖ Remaining total revenue requirements from realized and anticipated increased growth
- ❖ Impact for a Single Family Home since 2017:

Annual	Water User Fee			Water Frontage Rate		
	One-time	Change	Change %	per meter	Change	Change %
2017	\$425.03	\$55.44	15.00%	\$4.68	\$0.94	25.1%
2018	\$467.53	\$42.50	10.00%	\$5.84	\$1.16	24.8%
2019	\$497.92	\$30.39	6.50%	\$5.84	\$0.00	0.0%
2020	\$506.05	\$8.13	1.63%	\$5.84	\$0.00	0.0%
2021	\$506.05	\$0.00	0.00%	\$5.84	\$0.00	0.0%

- ❖ Water Master Plan and Water Rate Review to be completed in 2021 will inform the water revenue requirements for future years



# Water Fund Surplus and Reserves

WATER Surplus, Reserves and DCC Summary	Estimated Actual	Budget	Proposed Budget			
	2020	2021	2022	2023	2024	2025
Estimated Closing Balances						
<b>Water Fund Surplus</b>						
Prior Year Surplus (unallocated)	2,424,000	2,675,600	2,517,900	2,097,700	1,673,200	1,357,400
Surplus Reserve for Future Expenditures (Unspent Capital 2020)	307,800	-	-	-	-	-
	2,731,800	2,675,600	2,517,900	2,097,700	1,673,200	1,357,400
<b>Water Capital Reserves</b>						
Water Reserve	1,676,700	1,601,700	1,251,700	1,251,700	1,251,700	1,251,700
Asset Management Reserve	658,100	658,100	958,100	1,258,100	1,058,100	858,100
Water Machinery and Equipment	280,200	310,200	340,200	370,200	400,200	430,200
	2,615,000	2,570,000	2,550,000	2,880,000	2,710,000	2,540,000
<b>Total Water Surplus and Reserves</b>	<b>5,346,800</b>	<b>5,245,600</b>	<b>5,067,900</b>	<b>4,977,700</b>	<b>4,383,200</b>	<b>3,897,400</b>
<b>Total Water DCC Bylaw #2426/2755</b>	<b>376,400</b>	<b>376,400</b>	<b>376,400</b>	<b>376,400</b>	<b>376,400</b>	<b>376,400</b>

# Questions?

# 2021 Sewer Budget Highlights



# Sewer Fund Overview

- ❖ Regional and municipal components each play a vital role in providing sewer services to City of Courtenay residents
- ❖ Regional sewer service infrastructure includes:
  - Pumping stations, sewer force mains, wastewater treatment plant with outfall treated effluent
- ❖ City of Courtenay sewer collection infrastructure includes:
  - Lift stations, sewer trunk mains, collection system and connections within our boundaries
- ❖ City owns and operates a Class 3 sewer collection system

# 2021 Sewer Operating Budget Overview

- ❖ Overall Operating Expenses increasing by 4.2%
- ❖ Main cost driver is the CVRD regional sewer service requisition:
  - Represents 70% of Sewer Operating Expenses

Comox Valley Sewer Service Requisition <i>per 2020-2024 approved Financial Plan</i>		
	\$	% increase
<b>Courtenay share</b>		
2018 Actual	3,890,928	6.0%
2019 Actual	4,145,491	6.5%
2020 Actual	4,439,680	7.1%
<b>2021 Proposed budget</b>	<b>4,717,160</b>	<b>6.3%</b>
2022 Proposed budget	4,994,640	5.9%
2023 Proposed budget	5,272,120	5.6%
2024 Proposed budget	5,757,710	9.2%
2025 Proposed budget	5,757,710	-

# 2021 Sewer Operating Budget Overview

Transfers, Contributions & Surplus	2021 Budget	2020 Budget
Transfer of revenue to fund Sewer capital projects	\$190,100	\$350,000
Contribution to Asset Management Sewer Reserve	\$300,000	\$300,000
Contributions to other Sewer Reserves	\$81,000	\$81,000
Surplus	\$87,800	\$206,900

# 2021 Sewer Fund Operating Expenses

Activity2	Activity	2020 BUDGET	2021 BUDGET	Variance 2021 Budget 2020 Budget
CVRD Sewer Requisition		4,494,200	<b>4,717,200</b>	223,000
Sewer ADMIN - Salaries/Wages		304,000	<b>251,000</b>	(53,000)
Sewer Administration		11,500	<b>20,000</b>	8,500
Sewer ADMIN - Training		11,000	<b>11,000</b>	-
Sewer Engineering Services		73,000	<b>86,500</b>	13,500
Sewer Operations	Sewer Main		<b>183,800</b>	
	Sewer Service		<b>94,100</b>	
	Sewer Manhole/Chamber		<b>6,300</b>	
	Sewer Valve		<b>13,100</b>	
	Sewer Forcemain		<b>13,200</b>	
	Sewer Lift Station	217,200	<b>253,200</b>	
	Sewer Inflow & Infiltration		<b>81,000</b>	
	Sewer Operations - OLD	352,100		
	Sewer Inflow & Infiltration - OLD	46,500		
<b>Sewer Operations Total</b>		<b>615,800</b>	<b>644,700</b>	<b>28,900</b>
Sewer Vehicle Charges		30,600	<b>29,500</b>	(1,100)
Sewer Fleet		11,100	<b>23,700</b>	12,600
Sewer Work in Progress		40,000	<b>40,000</b>	-
Interfund Allocation		856,200	<b>893,200</b>	37,000
<b>Grand Total</b>		<b>6,447,400</b>	<b>6,716,800</b>	<b>269,400</b>

# 2020 Sewer Operations

- ❖ The City owns and operates a Class 3 sewer collection system
- ❖ SCADA system is fully operational
- ❖ Operational activities mandated by combination of industry best practises, engineering standards and Ministry of Health
- ❖ Flushing Program completed for 2020
- ❖ Grease and Root Removal Program completed for 2020



# Sewer System Assets 2020

- ❖ 158 km of sewer gravity main
- ❖ 7 km of sewer force main
- ❖ 2,040 manholes
- ❖ 11 lift stations
- ❖ 2 flow meter chambers

# Asset Management's role in Operations

- ❖ CCTV Pipe Inspection Program
  - System condition assessments completed in 2020
- ❖ Risk analysis completed in 2020 resulting in identification of areas of concern (either pipe material or flow concerns)
- ❖ Sewer Master Plan to be completed in early 2021 (field verified data)
  - Will result in a 20 year capital plan
- ❖ Preventative Maintenance Plan (PMP) in place
  - Extends the life of assets by 10-15%, saving significant capital expenditures in future years
  - Annual PMP in practice in 2020

# 2021 Sewer Capital Projects

2021 Proposed Budget	
Project description	Total
Sewer - Greenwood Trunk Construction (CF)	1,000,000
Sewer - 1st Street Lift Station Replacement (CF)	341,100
Puntledge Sanitary Catchment Replacement (CF)	255,000
South Courtenay Sewer System (CF)	200,000
Sewer Cascara and Klanawa Connection to Greenwood (New)	100,000
Sewer - Mansfield Drive Forcemain (CF)	50,000
Braidwood Road - Road & Utility - Sewer Component (CF)	31,300
<b>Grand Total</b>	<b>1,977,400</b>

# 2021 Sewer Capital – Long Term Borrowing

- ❖ Long Term Borrowing is a lengthy statutory process
  - Can take up to 8 months
- ❖ Process successfully completed in October 2020
  - Greenwood Trunk Connection: \$3M borrowing secured
- ❖ Recommended to start the borrowing process shortly after final adoption of the Financial Plan for:
  - 1<sup>st</sup> Street Lift Station Replacement: \$2M in 2021

# 2021 Sewer Revenue Requirements

- ❖ Recommended 2.0% increase to user fees
- ❖ Remaining total revenue requirements from realized and anticipated increased growth
- ❖ No increase to frontage fee recommended for 2021
- ❖ Impact for a Single Family Home since 2017:

Annual	Sewer User Fee			Sewer Frontage Rate	
	One-time	Change	Change %	per meter	Change
2017	\$294.70	\$26.79	10.00%	\$10.24	\$ -
2018	\$324.17	\$29.47	10.00%	\$10.24	\$ -
2019	\$340.38	\$16.21	5.00%	\$10.24	\$ -
2020	\$344.71	\$4.33	1.27%	\$10.24	\$ -
2021	\$351.60	\$6.89	2.00%	\$10.24	\$ -

- ❖ Sewer Master Plan and Sewer Rate Review to be completed in 2021 will inform the sewer revenue requirements for future years

# Sewer Fund Surplus and Reserves

SEWER Surplus, Reserves and DCC Summary	Estimated	Budget	Proposed Budget			
	Actual		2022	2023	2024	2025
Estimated Closing Balance	2020	2021				
<b>Sewer Fund Surplus</b>						
Prior Year Surplus (unallocated)	2,008,600	2,096,400	1,703,100	1,277,700	1,220,100	962,100
Surplus Reserve For Future Expenditure (Unspent Capital 2020)	867,300	-	-	-	-	-
	2,875,900	2,096,400	1,703,100	1,277,700	1,220,100	962,100
<b>Sewer Capital Reserves</b>						
Sewer Reserve	539,100	539,100	539,100	539,100	539,100	539,100
Asset Management Reserve	2,387,700	2,087,700	787,700	587,700	637,700	437,700
Sewer Machinery and Equipment	643,400	718,400	793,400	868,400	943,400	1,018,400
	3,570,200	3,345,200	2,120,200	1,995,200	2,120,200	1,995,200
<b>Total Sewer Surplus and Reserves</b>	<b>6,446,100</b>	<b>5,441,600</b>	<b>3,823,300</b>	<b>3,272,900</b>	<b>3,340,300</b>	<b>2,957,300</b>
<b>Sewer Development Cost Charges (DCC)</b>						
Sewer DCC Bylaw #1638/2755	34,800	34,800	34,800	34,800	34,800	34,800
Sewer DCC Bylaw #2426/2755	748,400	428,400	428,400	428,400	428,400	428,400
<b>Total Sewer DCC</b>	<b>783,200</b>	<b>463,200</b>	<b>463,200</b>	<b>463,200</b>	<b>463,200</b>	<b>463,200</b>

# 2021 Combined Utility Rates

- For 2021, the total increase for a single family dwelling is \$15.58

Utility rates for Single Family	2020	2021	Increase	Increase %
Sewer	344.71	<b>351.60</b>	6.89	2.0%
Water	506.05	<b>506.05</b>	-	0.0%
Solid Waste	173.73	<b>182.42</b>	8.69	5.0%
<b>Total</b>	<b>\$ 1,024.49</b>	<b>\$ 1,050.10</b>	<b>\$ 15.58</b>	<b>1.5%</b>

# Questions?