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The Corporation of **THE CITY OF NORTH VANCOUVER**
FINANCE & EPE DEPARTMENTS
REPORT

To: Mayor Linda Buchanan and Members of Council

From: Larry Sawrenko, Chief Financial Officer
Karyn Magnusson, Director, Engineering Parks & Environment

Subject: 2023 UTILITY RATES

Date: November 23, 2022 File No: 05-1820-04-0001/2023

The following is a suggested recommendation only. Refer to Council Minutes for adopted resolution.

RECOMMENDATION

PURSUANT to the report of the Chief Financial Officer, dated November 23, 2022, entitled "2023 Utility Rates":

THAT the 2023 Utilities Budgets and the 2023-2027 Utilities Capital Plan, dated November 23, 2022, be endorsed;

AND THAT the following bylaws be considered:

- "Water Utility Bylaw, 1994, No. 6417, Amendment Bylaw, 2022, No. 8953";
- "Sewerage and Drainage Utility Bylaw 1995, No. 6746, Amendment Bylaw, 2022, No. 8954"; and
- "Solid Waste Management Service, Bylaw 1997, No. 6920, Amendment Bylaw, 2022, No. 8955".

ATTACHMENTS

1. 2023 Rates and Levies Summary (CityDoc#[2300082](#))
2. 2023-2027 Water Utility Capital Plan (CityDoc#[2305021](#))
3. 2023 Water Budget (CityDoc#[2300081](#))
4. 2023-2027 Sewerage & Drainage Utility Capital Plan (CityDoc#[2305023](#))
5. 2023 Sewerage & Drainage Budget (CityDoc#[2300078](#))
6. 2023 Solid Waste Budget (CityDoc#[2300079](#))
7. Proposed Bylaw No. 8955, tracked changes version (CityDoc#[2304624](#))
8. Water Utility Bylaw, 1994, No. 6417, Amendment Bylaw, 2022, No. 8953 (CityDoc#[2240039](#))
9. Sewerage and Drainage Utility Bylaw 1995, No. 6746, Amendment Bylaw, 2022, No. 8954 (CityDoc#[2242345](#))

PURPOSE

The purpose of this report is to provide Council with recommended budgets for the Water, Sewerage & Drainage, and Solid Waste utilities, as well as recommended 2023 utility rates and bylaw amendments.

BACKGROUND

CNV's utilities fees fund its Water, Sewerage & Drainage, and Solid Waste utilities. Utility rate levels are driven by CNV's requirements for reliable ongoing operations, capital maintenance/renewal programs, and prudent reserves. CNV's utility fees are typically set in the fall each year in order to allow the preparation of utility bills for mailing in January.

Council adopted the "Development Cost Charges Bylaw, 2016, No. 8471" on July 25, 2016. The bylaw provides for the collection of DCC's for the Water and Sewerage & Drainage utilities. The fees collected under the Bylaw are also an important funding source for the utilities as the systems are upgraded and expanded to meet increasing service demands. Staff plan to review and update CNV's DCC program in 2023.

DISCUSSION

The proposed 2023 flat rate utility fees for a multi-unit dwelling are follows:

Flat Rate Utility Fees Multi-Unit Dwelling*	2022	2023	Net Change	Net Change %
Water	\$320.00	\$343.00	\$23.00	7.2%
Sewerage & Drainage				
Sewer	309.00	342.00	33.00	10.7%
Storm Drainage (average)	<u>49.90</u>	<u>52.90</u>	<u>3.00</u>	6.0%
Net Sewerage & Drainage	358.90	394.90	36.00	10.0%
Solid Waste				
Eco Levy (average)	25.30	26.19	0.89	3.5%
Total Flat Rate Utility Fee	\$704.20	\$764.09	\$59.89	8.5%

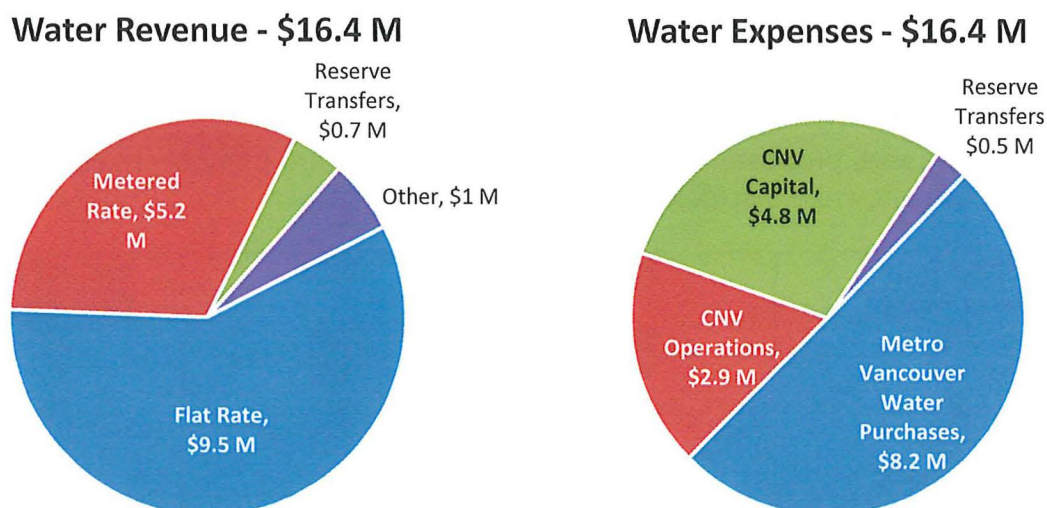
* Approximately 76% of the City's flat rate residential utility customer base is multi-unit dwellings. Single family homes make up 19%, and duplexes and other make up the final 5%. **Attachment 1** provides a summary of the proposed 2023 utility rates and levies for other dwelling types. Increases for other dwelling types are consistent with those for Multi-unit dwellings.

An overall increase of \$60 (8.5%) is unchanged from the 2023 increase projected in the "2022 Utility Rates" presentation provided to Council on November 22, 2021.

Further information on the budgets proposed for each of CNV's three utilities and the proposed rate increases needed to fund each budget is provided below.

Water Utility

The Water Utility provides a water distribution system for residents and businesses in the City. The proposed overall 2023 Water Utility budget is \$16.4 million, and is comprised of an \$11.2 million Operating Budget and a \$5.2 million Capital Budget (including reserves transfers).



The proposed budget represents a \$2.1 million increase over 2022, driven by increased bulk water purchase charges from Metro Vancouver (\$449,000) and increased capital expenditures needed to maintain the condition of CNV's water distribution assets (\$1.8M).

Bulk water purchases from Metro Vancouver account for 50% of CNV's annual Water Utility's costs. Metro Vancouver has recently provided CNV with its estimated volumes and 2023 rates. Metro Vancouver's 2023 bulk water rates are increasing 3% over 2022. Water volumes consumed in the City are also expected to be increasing slightly.

The proposed Water Utility Capital Budget is \$4.8M, an increase of \$1.8M vs 2022. This increase is primarily driven by additional construction projects to renew aging mains identified through CNV's asset management program, and work needed to service growth. **Attachment 2** lists the capital projects planned for the Water Utility in 2023-2027.

Transfers to reserves in 2023 are primarily to establish an extreme weather reserve (\$100,000) and a capital contingency (\$250,000). Extreme weather events caused by climate change put pressure on City infrastructure and are becoming more frequent. Establishment of a new reserve is recommended to enable quick response and recovery to events when they occur. A new capital contingency is also recommended

to provide funds for projects not yet identified through CNV's asset management plans and/or connections to new developments. Should either of these reserves not be used in 2023, they would be retained within the Utility and can be used for future as yet unidentified capital projects (for example, as identified in future asset management studies) or to bring down rates in the future (ie rate smoothing).

CNV's 2023 Water revenues consist of flat rate utility fees, metered charges, and other fees (primarily connection and severance fees). CNV utilizes seasonal metered water rates to be consistent with Metro Vancouver's model for selling its bulk water to all member municipalities by charging a higher rate from June 1 to September 30 each year. Seasonal rates are designed to create a pricing strategy that values water more in the summer when alpine lake storage is most stressed. The Water Utility financial model assumes 35% of water usage will be in the peak periods and 65% in non-peak periods.

The 2023 increases proposed for CNV's flat rates, which are primarily residential properties, are shown in the table below.

Dwelling Type (\$ per annum)	2022	2023	Annual Net Change (\$)
Single Unit	545	584	39
Duplex	457	489	32
Multi-Unit	320	343	23
Commercial, Churches/Halls	122	131	9
Water Cooling units	848	907	59
Schools/classroom	391	418	27
Minimum charge	545	584	39

The 2023 increases proposed for CNV's metered (per cubic meter) rates, which are primarily commercial/industrial/hospital/school properties, are shown in the table below. It's also proposed that the current tiered rate structure remain in place:

Period	2022	2023	Annual Net Change (\$)
Jan1 to May 31	1.3592	1.4544	0.0952
June 1 to Sept 30	1.6990	1.8180	0.1190
Oct 1 to Dec 31	1.3592	1.4544	0.0952

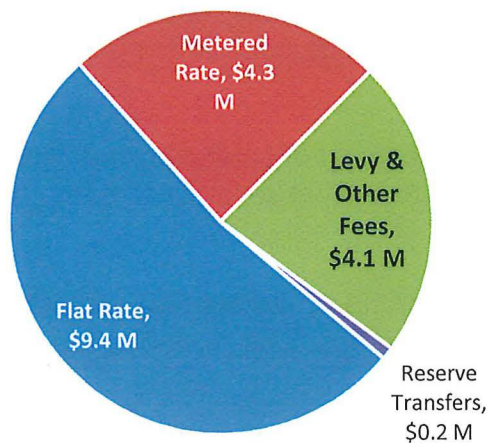
Attachment 3 provides a full summary of the proposed 2023 Water Utility Budget.

Sewer & Drainage Utility

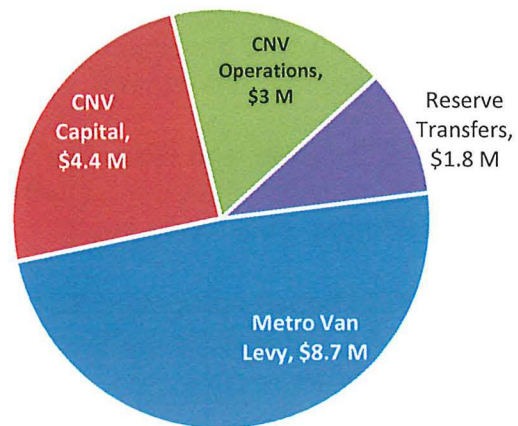
The Sewerage & Drainage Utility provides a sanitary and storm water collection system for the residents and businesses of the City of North Vancouver.

The proposed overall 2023 Sewerage & Drainage budget is \$18.0 million, and is comprised of an \$11.2 million Operating Budget and a \$5.2 million Capital Budget (including reserves transfers).

Sewer Revenue \$18.0 M



Sewer Expenses - \$18.0 M



The proposed budget represents a \$2.0 million increase over 2022. This increase is primarily driven by increased charges from Metro Vancouver (\$744,000), increased capital expenditures (\$315,000), and increased transfers to reserves (\$844,000).

The Metro Vancouver levy accounts for approximately 74% of the operating expenses of the Sewerage & Drainage utility, and 48% of the total \$18.0M budget. Metro Vancouver has recently indicated its 2023 rates are increasing 9.3% over 2022. The increase in the Metro Vancouver levy causes \$15 of the proposed \$33 Sewerage & Drainage rate increase for a typical multi residential unit.

Capital expenditures of \$4.5 million are planned for 2023, an increase of \$315,000 vs 2022. The majority of the increase (\$197,000) is to maintain the condition of CNV's sewer and drainage assets, and the remaining \$118,000 is driven by increased third party connections to new developments in the City (capital expenditures for third party connections are covered by a corresponding revenue increase and there is zero net impact to CNV). **Attachment 4** provides a full listing of the capital projects planned for the Sewerage & Drainage Utility in 2023-2027.

The Sewerage & Drainage Utility Budget also includes increased transfers to reserves of \$844,000. The completion of the new North Shore Wastewater Treatment Plant ("NSWWTP") is expected to drive increased rates from Metro Vancouver in the future (the completion date is still uncertain), so CNV provisioned \$800,000 in 2022 to help moderate future rate increases as part of its "Smoothed Rate Plan". The NSWWTP project has faced many challenges in 2022, and the previous contractor and Metro Vancouver are now engaged in various lawsuits. Further unannounced cost increases are likely. It's recommended that CNV's NSWWTP provision increase to \$1,000,000 in 2023, an increase of \$200,000.

Additional transfers to reserves are also proposed for 2023 for Extreme Weather (\$200,000), a capital contingency (\$200,000), and future rate smoothing (\$200,000). Similar to the Water utility, extreme weather events caused by climate change put

pressure on City infrastructure and are becoming more frequent and establishment of a new reserve is recommended. A new capital contingency is also recommended to provide funds for projects not yet identified through CNV's asset management plans or connections to new developments. Again, should either of these reserves not be used in 2023, they would be retained within the Utility and can be used to bring down rates in the future (i.e. rate smoothing).

CNV's 2023 Sewer and Drainage revenue sources consist of sanitary sewerage flat rates and metered charges, a storm drainage levy, and other revenue streams (primarily connection and severance fees).

The 2023 increases proposed for CNV's flat rates (primarily residential) and metered rates per cubic meter (primarily commercial, industrial, hospitals, schools) are shown in the table below:

Dwelling type	2022	2023	Annual Net Change %
<i>Flat Rates</i>			
Single unit	496	549	53
Duplex	459	508	49
Multi unit	309	342	33
Commercial, churches/public halls	120	133	13
Combine/Minimum	496	549	53
<i>Metered Rates</i>	2.0207	2.2329	0.2122

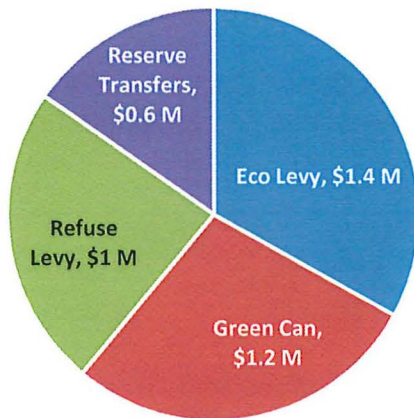
Attachment 5 provides a summary of the 2023 Sewerage & Drainage Budget.

Solid Waste Utility

CNV's Solid Waste Utility provides for the collection and disposal of residential curbside garbage and the recycling of Green Can materials (yard trimmings and food scraps) from single-family homes and smaller multi-family buildings. It also provides for public realm litter collection (including parks, streetscape, and plazas) and community waste reduction initiatives funded by the Eco Levy.

The proposed overall 2023 Solid Waste Utility budget is \$4.1 million. This Utility's budget is entirely operating expenses.

Solid Waste Revenue - \$4.1 M



Solid Waste Expense - \$4.1 M



The proposed 2023 budget represents a \$247,000 increase over 2022 and is primarily driven by increased operational costs from collecting larger volumes of litter. Since the onset of the COVID-19 pandemic, the use of City parks, streetscapes and plazas has increased significantly driving increased litter collection costs funded by the Eco Levy (Multi unit dwelling estimated rate increase of \$0.89). Additional multi-stream refuse and recycling receptacles in the public realm are needed to help manage these increased litter volumes and to support CNV's waste diversion goals.

The increases to Refuse (single unit dwelling increase of \$6) and Green Can (single unit rate dwelling increase of \$12) can be attributed to increased costs from Metro Vancouver, and inflationary increases to CNV costs. Each year, Metro Vancouver establishes the rate or "tipping fee" for materials received at regional Waste and Recycling Centres, with separate rates for garbage and organics (Green Can). The 2023 Metro Vancouver tipping fee for municipal garbage disposal will be \$127 per tonne, representing a \$6 per tonne increase from 2022, while the 2023 tipping fee for municipal organics will be \$110 per tonne, an increase of \$2 per tonne. 2023 projected tipping fees total \$609,000 (\$234,200 and \$374,500 for Refuse and Green Can, respectively), and represent 15% of the Solid Waste Utility annual budget.

In 2011, CNV implemented an Eco Levy so that waste diversion programs are funded by both residential and non-residential sectors. The Eco Levy ensures that CNV's litter program and additional waste diversion initiatives, such as the provision of public realm recycling and the dog waste collection (red bin) program, are managed and funded through CNV's solid waste utility. The use of City parks, streetscapes and plazas increased significantly during the pandemic and the expectation is that this usage will continue. There was approximately 268 tonnes of streetscape and parks litter collected in 2021 representing an increase of approximately 40% from 2020. Additional funding for the Eco Levy program has been used for the associated costs from increased collection of larger volumes of litter, along with a the number of multi-stream refuse and recycling receptacles placed in the public realm. These initiatives will support CNV's waste diversion goals along with continuing to keep parks and streets clean.

Solid Waste Utility revenues are primarily generated by annual per dwelling user fees that vary by type of dwelling and an annual Eco levy based on property assessment values. CNV's Solid Waste Utility also benefits from a reserve generated from past surpluses that has sufficient funds to cover some of the Utility's operating costs.

The 2023 recommended rate increases for Refuse and Green Can are 6.3% and 8.0%, respectively, resulting in overall solid waste fee increases of 6.6% for single unit dwellings.

Single Unit Rates	2022	2023	Change	%
Refuse	\$127.00	\$135.00	\$8.00	6.3%
Green Can	150.00	162.00	12.00	8.0%

Multi unit dwellings are usually responsible for their own Refuse and Green Can disposal through third party entities, and only pay the Eco Levy. CNV's financial modelling assumes that, for 2023, the Eco Levy will be increased by 3.5% to cover increasing operational costs from collecting larger volumes of litter. This recommendation will be formally proposed to Council for consideration when it reviews the recommended 2023 Tax Rate Bylaw in Q2 2023.

Attachment 6 provides a summary of the 2023 Solid Waste Budget.

Solid Waste Management Service Bylaw Review

The provision of solid waste services in the City of North Vancouver operate under the Solid Waste Management Service Bylaw. The current bylaw was adopted in 1997 and has been amended a number of times, with significant changes to services and delivery models. Changes such as the introduction of the Eco Levy, residential Green Can program, bi-weekly garbage collection and Recycle BC's responsibility for residential recycling. Given these many changes, staff are proposing drafting a new Solid Waste bylaw for consideration by Council in 2023. In the interim, proposed bylaw amendments include the annual updates to the rates, and this year some additional updates:

- Clarifying language around container definition and accessible set out
- Residential Green Can tag added to Schedule "C", permitting the set out of more than the current allowed six in total 77 litre Green Cans, bundles or bags. This will allow the occasional additional Green Can, bundle or bag to be set out during heavy collection seasons such as fall and spring. The rate for the additional Green Can tag is proposed at \$6.00.
- Language has been added to the bylaw to clarify that, at the discretion of the City Engineer, garbage and green bin collections services may be provided for multi unit swellings of 24 units or less. This service is currently provided for 146 stratas and 26 rental buildings. This service may not be available to all properties due to operational reasons.
- Updated language identifying materials acceptable for pickup

A full "Track Changes" version of the proposed new Bylaw is included as **Attachment 7**.

FINANCIAL IMPLICATIONS

To summarize, the proposed 2023 flat rate utility fees by dwelling type are the following:

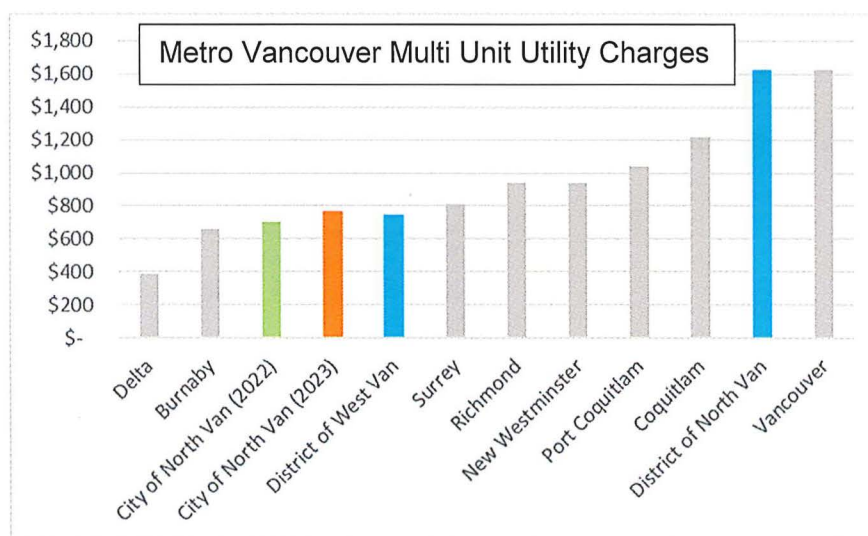
Dwelling Type	2022 Net Flat Rate	2023 Net Flat Rate (proposed)	Net Change \$	Change %
Multi-Unit	\$704.21	\$764.08	\$59.89	8.5%
Single Unit	\$1,472.26	\$1,592.21	\$119.95	8.1%
Duplex	\$1,237.55	\$1,340.11	\$102.56	8.4%

It should be noted that significant regional cost increases are anticipated in the coming years, driven predominately by Metro Vancouver's expanding capital programs. The following table indicates the latest forecasted percentage increases to regional rates over the next four years.

	2023	2024	2025	2026	2027
Bulk Water	2.8%	9.0%	13.8%	12.8%	13.8%
GVS&DD Levy	9.3%	18.0%	34.1%	17.3%	10.2%
Tipping Fees	5.0%	5.5%	5.2%	5.0%	5.4%

While CNV has been planning to buffer the impacts of the NSWWTP coming on-line, if the above increases materialize, it is likely that future CNV Utility rate increases averaging 8%-10% per year will be required in order for CNV to reach the capital renewal and rehabilitation goals.

It should be noted that CNV's utility rates are the lowest on the North Shore and continue to be competitive through the region.



* A detailed breakdown of utility costs on the North Shore is included in Attachment 1

INTER-DEPARTMENTAL IMPLICATIONS

This report has been prepared collaboratively by CNV's Finance and EPE departments. It should also be read in conjunction with the information report provided by EPE regarding CNV's Asset Management program. The Leadership Team also reviewed the recommendations for Bylaw amendments (**Attachments 8 and 9**) at its November 13, 2022 meeting.


STRATEGIC PLAN, OCP OR POLICY IMPLICATIONS

The recommended rates provide the funding to support the following goals and objectives of the 2014 Official Community Plan:

- 8.1.3 Consider stormwater management opportunities in streets, laneways and open spaces where appropriate;
- 8.1.9 Pursue the reduction of waste throughout the full lifecycle of production, consumption, recycling and disposal to achieve local and regional waste management goals;
- 8.2.1 Maintain or improve service levels related to water supply, sewers, transportation, communication and energy infrastructure;
- 8.2.2 Identify and monitor the condition of our infrastructure on a regular basis in order to identify the remaining operational life of individual elements, and to identify and rectify weaknesses before failure, thereby optimizing capital and maintenance program expenditures;

The proposed utility rates also support Council's commitment to being fiscally responsible through rates that balance operational and capital renewal needs with the impact on the ratepayer.

RESPECTFULLY SUBMITTED:



Larry Sawrenko
Chief Financial Officer



Karyn Magnusson
Director – Engineering, Parks, & Environment

The City of North Vancouver
Rates and Levies Summary

	2022 **DWV	2022 ***DNV	2022 CNV	2023 CNV	Increase \$ %	
MULTI-UNIT DWELLING						
Flat Rate Water	\$ 320.00	\$ 685.50	\$ 320.00	\$ 343.00		
Multi-Unit Net Water	320.00	685.50	320.00	343.00	23.00	7.2%
Flat Rate Sanitary Sewer	428.00	\$ 650.50	309.00	\$ 342.00		
Multi-Unit Net Sewer	428.00	650.50	309.00	342.00	33.00	10.7%
Storm Drainage Levy (estimate)	19.00	-	49.90	52.90 *	3.00	6.0%
Total Multi Unit Water/Sanitary/Storm	\$ 767.00	\$ 1,336.00	\$ 678.90	\$ 737.90	\$ 59.00	8.7%
Recycling - Multi Unit	-	17.50	-		-	0.0%
Eco Levy (estimate)	53.82		25.30	26.19 *	0.89	3.5%
Total Multi Family Solid Waste	\$ 53.82	\$ 17.50	\$ 25.30	26.19	0.89	3.5%
TOTAL MULTI-UNIT ALL LEVIES	\$ 820.82	\$ 1,353.50	\$ 704.20	\$ 764.08	59.89	8.5%
SINGLE UNIT DWELLING						
Flat Rate Water	\$ 800.00	\$ 804.80	\$ 545.00	\$ 584.00		
Single Unit Net Water	800.00	804.80	545.00	584.00	39.00	7.2%
Flat Rate Sanitary Sewer	839.00	781.80	496.00	\$ 549.00		
Single Unit Net Sewer	839.00	781.80	496.00	549.00	53.00	10.7%
Storm Drainage Levy (estimate)	500.00	-	102.35	108.49 *	6.09	6.0%
Total Single Unit Water/Sanitary/Storm	\$ 2,139.00	\$ 1,586.60	\$ 1,143.35	\$ 1,241.49	\$ 98.09	8.6%
Other Rates						
Refuse	\$ 220.73	\$ 303.00	\$ 127.00	\$ 135.00	8.00	6.3%
Green Can			150.00	\$ 162.00	12.00	8.0%
Recycling - Single Unit	-	24.50	-	\$ -	-	0.0%
Eco Levy (estimate)	53.82		51.90	\$ 53.72 *	1.82	3.5%
Total Single Unit Solid Waste	\$ 274.55	\$ 327.50	\$ 328.90	\$ 350.72	\$ 21.82	6.6%
TOTAL SINGLE UNIT ALL LEVIES	\$ 2,413.55	\$ 1,914.10	\$ 1,472.25	\$ 1,592.21	\$ 119.95	8.1%
DUPLEX Including Infills & Strata SFD)						
Flat Rate Water	\$ 640.00	\$ 685.50	\$ 457.00	\$ 489.00		
Duplex Net Water	640.00	685.50	457.00	489.00	32.00	7.0%
Flat Rate Sanitary Sewer	879.16	\$ 650.50	459.00	\$ 508.00		
Duplex Net Sewer	879.16	650.50	459.00	508.00	49.00	10.7%
Storm Drainage Levy (estimate)	500.00	-	97.24	103.07 *	5.83	6.0%
Total Duplex Water/Sanitary/Storm	\$ 2,019.16	\$ 1,336.00	\$ 1,013.24	\$ 1,100.07	\$ 86.83	8.6%
Other Rates						
Refuse	\$ 220.73	\$ 303.00	85.00	\$ 91.00	6.00	7.1%
Green Can			90.00	98.00	8.00	8.9%
Recycling - Duplex	-	24.50	-	-	-	0.0%
Eco Levy (estimate)	53.82		49.31	51.04 *	1.73	3.5%
Total Duplex Solid Waste	\$ 274.55	\$ 327.50	\$ 224.31	\$ 240.04	\$ 15.73	7.0%
TOTAL DUPLEX ALL LEVIES	\$ 2,293.71	\$ 1,663.50	\$ 1,237.55	\$ 1,340.11	\$ 102.56	8.4%

* Average storm and eco levy based on average property assessment, plus overall increase for 2022

** DWV is fully metered, therefore the water and sewer rates are estimates based on expected usages

*** DNV does not have a separate storm drainage levy

Water Utility

2023-2027 WATER CAPITAL PLAN

Project Name	2023	2024	2025	2026	2027	2023-2027	Description
Watermains	3,083,400	3,518,888	5,177,700	2,763,490	2,764,856	17,308,335	Water main construction projects to renew aging mains and upgrades to support growth. Includes expenditures funded with DCCs of \$971,400. Work at 9 locations is planned for 2023.
Water Studies	205,000	95,000	95,000	95,000	75,000	565,000	Annual and intermittent costs associated with utility assessment tools (models and benchmarking studies), along with annual inspection of watermains and external capital and asset management planning.
Drinking Water Fountains and Misting Stations	20,000	-	-	-	-	20,000	Drinking water fountain and misting stations throughout the City
Equipment - Water	15,000	15,000	15,000	15,000	15,000	75,000	Small equipment used for the construction, operation and maintenance of the CNV's Water Utility. This equipment includes water treatment equipment, construction equipment, and tools.
Valves	100,000	100,000	100,000	100,000	100,000	500,000	Water valves that control the movement of water throughout the City and allow water mains to be shut off when there is a water main or water connection break.
Water Meters	160,000	160,000	180,000	180,000	200,000	880,000	Installation of new and replacement of existing water meters throughout the City, which monitor usage.
Pressure Reducing Station Repairs	50,000	50,000	50,000	50,000	50,000	250,000	Capital repairs to pressure reducing stations, which moderate water pressure throughout the City.
Water Sampling Station Repairs	15,000	15,000	15,000	15,000	15,000	75,000	Capital repairs to water sampling stations that are essential to monitoring water quality throughout the City
Hydrant Installations	25,000	25,000	25,000	25,000	25,000	125,000	Capital repairs to fire hydrants throughout the City when either damaged or needing replacement due to age or condition.
Connection Replacements	200,000	200,000	200,000	200,000	200,000	1,000,000	Replacement of water connections to residents and businesses throughout the City.
Trench Restoration for Mainline work	50,000	50,000	50,000	50,000	50,000	250,000	Restoration of trenches post completion of waterworks throughout the City.
Redundant Watermain Decommissioning	75,000	75,000	75,000	75,000	75,000	375,000	Decommissioning of redundant water mains throughout the City which have either been replaced or are superfluous to future need.
Backflow Prevention IPS Implementation	250,000	150,000	-	-	-	400,000	Backflow prevention from commercial properties is vital to the health and safety of our drinking water. This project will improve the regulation of backflow prevention devices in commercial properties by improving CNV's use of IPS.
Utilities Project Management	75,000	75,000	75,000	-	-	225,000	Dedicated Project Management is needed to deliver utility projects in an efficient and cost effective manner.
Hydro Vacuum Excavation and Flushing Truck	-	240,000	-	-	-	240,000	A new fleet vehicle that will be used primarily in utility excavations and pipe flushing reduces risk to underground assets when excavating and facilitates best practice utility asset management by conducting routine flushing of all types of utility service pipes. Total cost of \$800,000 shared between the Water and Sewer & Drainage Utilities.
TOTAL	4,323,400	4,768,888	6,057,700	3,568,490	3,569,856	22,288,335	

2023 WATER BUDGET

Programs	2022 Annual Budget	2023 Annual Budget	Variance 2022 to 2023	% Variance	Notes
WATER REVENUE					
FLAT RATE SALES	8,683,116	9,522,672	839,556		Consistent with proposed rate increase
METERED SALES	4,776,019	5,185,614	409,595		Consistent with proposed rate increase
PENALTIES FLAT RATE	14,900	15,400	500		
TRANSFER FROM DNV	157,400	162,900	5,500		
Water Admin	13,631,436	14,886,585	1,255,150	9.2%	
Water Operations	695,800	791,100	95,300	13.7%	Fees for Connection and Severance
Transfers from Reserve	0	700,000	700,000		Use of capital reserves for significant projects in 2023
Total Water Revenue	14,327,236	16,377,685	2,050,450	14.3%	
WATER EXPENSES					
WATER PURCHASES	7,759,400	8,235,520	476,120		Metro Vancouver rate increase of 3%
WAGES AND BENEFITS	1,430,150	1,519,460	89,310		
GOODS AND SUPPLIES	79,100	81,050	1,960		
SERVICES	211,220	328,935	117,715		
FINANCIAL SERVICES	915,180	1,020,654	105,474		
Water Operating	10,395,050	11,185,619	790,569	7.6%	
TRANSFER TO CAPITAL	2,441,000	4,124,400	1,683,400		New projects indenfitied through Asset Management studies
THIRD PARTY CONNECTIONS	564,100	655,200	91,100		
OTHER TRANSFERS					Transfers to reserves in 2023 to establish contingencies for Capex and extreme weather
	927,086	412,466	-514,620		
Transfers to Reserves	3,932,186	5,192,066	1,259,880	32.0%	
Total Water Expenses	14,327,236	16,377,685	2,050,449	14.3%	

Sewer and Drainage Utility

2023-2027 SEWER & DRAINAGE CAPITAL PLAN

Project Name	2023	2024	2025	2026	2027	2023-2027	Description
Sanitary Sewer Capital Projects							
Sewer Mains	525,000	175,000	925,000	527,000	461,500	2,613,500	Sewer main construction projects to renew aging mains and upgrades to support growth. Includes expenditures funded with DCCs of \$538,800. Work at 4 locations is planned for 2023.
Sewer Utility Pump Station - Major Upgrades	250,000	500,000	250,000	50,000	50,000	1,100,000	Major upgrades required to facilitate a resilient sanitary sewer network. Pump stations are required to enable wastewater to flow to sewer treatment facilities. Planned projects include upgrades to the Loutet pump station and preliminary work on the Bewicke pump station.
Sewer Utility Studies	150,000	150,000	150,000	150,000	220,000	820,000	Annual and intermittent costs associated with utility assessment tools (models and benchmarking studies), along with annual inspection of sewers and asset management planning.
Flow Monitoring Stations	100,000	60,000	60,000	60,000	60,000	340,000	Installation of new flow monitoring stations throughout the City, which help to monitor sanitary flows and verify modelling with the goal of reducing Infiltration and Inflow in CNV's Sanitary System.
Equipment - Sewers	20,000	20,000	20,000	20,000	20,000	100,000	Small equipment purchases used for construction, operation and maintenance of CNV's Sewers Utility. This equipment includes, but is not limited to, testing equipment, construction equipment, and tools.
Sanitary Manholes	35,000	35,000	40,000	40,000	40,000	190,000	Installation of new, and the replacement and upgrade of existing, sanitary man holes throughout the City. These facilitate inspection and maintenance of CNV's storm sewers network.
Sanitary Inspection Chambers and Connections	100,000	100,000	100,000	100,000	100,000	500,000	The installation of inspection chambers and the repair of existing sanitary connections in the City. These facilitate the movement of sanitary waste water from premises to sanitary mains.
Trench Restoration for Mainline work	50,000	50,000	50,000	50,000	50,000	250,000	The restoration of trenches post completion of Sanitary Works throughout the City
Sanitary Sewer Private Side Inflow & Infiltration Management	200,000	350,000	350,000	350,000	350,000	1,600,000	Repair of private side sanitary connections to minimise the occurrence of Inflow and Infiltration
Hydro Vacuum Excavation and Flushing Truck	-	280,000	-	-	-	280,000	A new fleet vehicle that will be used primarily in utility excavations and pipe flushing reduces risk to underground assets when excavating and facilitates best practice utility asset management by conducting routine flushing of all types of utility service pipes. Total cost of \$800,000 shared between the Water and Sewer & Drainage Utilities.
Utilities Project Management	37,500	37,500	37,500	-	-	112,500	Dedicated Project Management is needed to deliver utility projects in an efficient and cost effective manner.
Total Sanitary Sewer Projects	1,467,500	1,757,500	1,982,500	1,347,000	1,351,500	7,906,000	
Storm Drainage Capital Projects							
Storm Utility Main Replacement	600,000	150,000	500,000	565,000	540,000	2,355,000	A storm main construction project to renew aging mains and upgrades to accommodate growth and the effects of climate change. Includes DCC funding of \$143,700. One project is planned for 2023
Stormwater Treatment Facilities	225,000	250,000	250,000	275,000	300,000	1,300,000	An upgrade to improve receiving water health by treating water before it enters receiving bodies. Includes projects to improve existing outfalls and offset the effects of development.
Storm Utility Studies	140,000	185,000	140,000	190,000	140,000	795,000	Annual and intermittent costs associated with utility assessment tools (models and benchmarking studies), along with annual inspection of storm sewers and asset management planning.
Flow Monitoring Stations	100,000	60,000	60,000	60,000	60,000	340,000	The installation of new storm flow monitoring stations throughout the City, which help to monitor flows and verify modelling.
Catch Basins	52,000	53,000	54,000	55,000	56,000	270,000	The installation of new, and the replacement and upgrade of existing, catch basins throughout the City. These capture road water run off and direct it into CNV's storm system.
Manhole Installations	30,000	30,000	30,000	30,000	30,000	150,000	The installation of new, and the replacement and upgrade of existing, storm manholes throughout the City. These manholes facilitate inspection and maintenance of CNV's storm sewers network.
City Wide Culvert Replace and Rehabilitation	50,000	75,000	75,000	50,000	150,000	400,000	The assessment, maintenance, repair, and replacement of existing large diameter storm culverts. These culverts typically convey streams and creeks under roadways and public spaces.
Storm Infill	375,000	365,000	395,000	460,000	400,000	1,995,000	Construction of new storm sewers in areas that are not currently serviced. These areas may have historically relied on open ditches, or shallow perforated pipe/ drain tile which does not meet current servicing needs. Typical projects are prioritized to coordinate with private property development on lots that are not serviced by the storm sewer system.

Sewer and Drainage Utility

Project Name	2023	2024	2025	2026	2027	2023-2027	Description
Storm Water Quality Infrastructure	200,000	225,000	225,000	250,000	250,000	1,150,000	New rain gardens and other infrastructure that improves the quality of storm water runoff.
Stream Environmental Enhancement	100,000	100,000	60,000	40,000	-	300,000	CNV utilizes the natural creeks and Burrard inlet as part of the drainage system, draining all surface water from private properties, public roadways, and public spaces to the natural habitat utilized by all aquatic species. As part of CNV's ISMP, all CNV projects in and around streams should improve local fish habitat and passage. This project delivers those improvements.
Creek Hazard Management	50,000	50,000	50,000	50,000	50,000	250,000	The drainage utility is the primary source of funds for dealing with the City's natural creeks and associated steep slopes along the ravines. On-going monitoring, intermittent technical assessments, and physical works are required to manage the hazards such as slope stability, erosion, and localized creek related flooding. Typical tasks include geotechnical and hydrotechnical assessments as well as slope stabization and erosion protection works. Regular annual funding is required for on-going monitoring and to address localized issues as they arise.
Trench Restoration for Mainline work	100,000	50,000	50,000	50,000	55,000	305,000	The restoration of trenches post completion of Storm Works throughout the city.
Storm Inspection Chambers and Connections	53,000	54,000	55,000	56,000	57,000	275,000	The installation of inspection chambers and the repair of existing storm connections in the City. These facilitate the movement of storm water from premises to storm mains.
Driveway Culverts	15,000	15,000	15,000	15,000	15,000	75,000	The repair and replacement of existing driveway culverts in the City.
Utilities Project Management	37,500	37,500	37,500	-	-	112,500	Dedicated Project Management is needed to deliver utility projects in an efficient and cost effective manner.
Hydro Vacuum Excavation and Flushing Truck	-	280,000	-	-	-	280,000	A new fleet vehicle that will be used primarily in utility excavations and pipe flushing reduces risk to underground assets when excavating and facilitates best practice utility asset management by conducting routine flushing of all types of utility service pipes. Total cost of \$800,000 shared between the Water and Sewer & Drainage Utilities.
Total Storm Drainage Projects	2,127,500	1,979,500	1,996,500	2,146,000	2,103,000	10,352,500	
TOTAL	3,595,000	3,737,000	3,979,000	3,493,000	3,454,500	18,258,500	

2023 SEWERAGE AND DRAINAGE BUDGET

Programs	2022 Annual Budget	2023 Annual Budget	Variance 2022 to 2023	% Variance	Notes
SEWER AND DRAINAGE REVENUES					
FLAT RATE SALES	8,265,766	9,365,990	1,100,224		Consistent with proposed rate increase and increased number of units
METERED SALES	3,602,832	4,325,911	723,079		Consistent with proposed rate increase and increased number of units
CONNECTION/SEVERANCE FEES	515,800	374,700	-141,100		
OTHER	26,400	27,200	800		
Sanitary Revenue	12,410,798	14,093,801	1,683,003	13.6%	
DRAINAGE LEVY	2,630,500	2,788,300	157,800		
CONNECTION/SEVERANCE FEES	612,500	876,800	264,300		
Drainage Revenue	3,243,000	3,665,100	422,100	13.0%	
Sub-Total Operating Revenues	15,653,798	17,758,901	2,105,103	13.4%	
Reserve Transfers	254,925	165,875	-89,050	-34.9%	
Total Sewer and Drainage Revenue	15,908,723	17,924,776	2,016,053	12.7%	
SEWER AND DRAINAGE EXPENSES					
GVS&DD LEVY	7,971,747	8,721,567	749,820		9.3% GVS&DD Sewer levy increase
WAGES AND BENEFITS	630,137	701,910	71,773		
GOODS AND SUPPLIES	26,795	25,430	-1,365		
SERVICE EXPENSES AND FEES	272,517	206,190	-66,327		
FINANCIAL SERVICES	571,751	670,020	98,269		
Sanitary Expenses	9,472,947	10,325,117	852,170	9.0%	
WAGES AND BENEFITS	735,960	739,240	3,280		
GOODS AND SUPPLIES	41,486	42,580	1,094		
SERVICES	280,663	222,461	-58,202		
FINANCIAL SERVICES	377,991	436,569	58,578		
Drainage Expenses	1,436,100	1,440,850	4,750	0.3%	
Sub-Total Operating Expenses	10,909,047	11,765,967	856,920	7.9%	
TRANSFER TO CAPITAL	3,114,000	3,311,000	197,000		Planned increase for replacement of aging infrastructure
THIRD PARTY CONNECTIONS	1,024,100	1,142,100	118,000		
RESERVE FOR FUTURE EXPENDITURES	800,000	1,000,000	200,000		Reserve contribution for NSW WTP
OTHER TRANSFERS	61,576	705,709	644,133		Rate smoothing and to establish contingencies for Capex and extreme weather
Reserve Transfers	4,999,676	6,158,809	1,159,133	23.2%	
Total Sewer and Drainage Expenses	15,908,723	17,924,776	2,016,053	12.7%	

2023 SOLID WASTE BUDGET

Programs	2022 Annual Budget	2023 Annual Budget	Variance 2022 to 2023	% Variance	Notes
SOLID WASTE REVENUE					
Green Can	1,043,400	1,138,300	94,900	9.1%	Consistent with proposed rate increase
REFUSE TAGS COMMERCIAL	3,500	3,500	0		
REFUSE TAGS RESIDENTIAL	9,000	9,000	0		
REFUSE LEVY	899,300	965,600	66,300		
Refuse	911,800	978,100	66,300	7.3%	Consistent with proposed rate increase
Eco Levy	1,309,300	1,355,100	45,800	3.5%	Consistent with proposed rate increase
Reserve Transfers	585,900	626,000	40,100	6.8%	Reserves used to smooth rate increases
Total Solid Waste Revenue	3,850,400	4,097,500	247,100	6.4%	
SOLID WASTE EXPENSES					
WAGES AND BENEFITS	498,193	578,000	79,807		Inflationary impact and additional services
GOODS AND SUPPLIES	61,220	48,300	-12,920		
SERVICES	384,000	441,500	57,500		Metro Vancouver tipping fees increases of 2% and increased volume
FINANCIAL SERVICES	366,837	415,100	48,263		
Green Can	1,310,250	1,482,900	172,650	13.2%	
WAGES AND BENEFITS	470,580	456,000	-14,580		Inflationary impact and additional services
GOODS AND SUPPLIES	2,000	2,000	0		
SERVICES	206,000	243,200	37,200		Metro Vancouver tipping fees increases of 5% and increased volume
FINANCIAL SERVICES	390,170	403,500	13,330		
Refuse	1,068,750	1,104,700	35,950	3.4%	
WAGES AND BENEFITS	1,007,250	1,080,860	73,610		Increased public realm litter collection
GOODS AND SUPPLIES	183,733	123,300	-60,433		
SERVICES	117,347	145,220	27,873		
FINANCIAL SERVICES	163,070	160,520	-2,550		
Eco Levy Programs	1,471,400	1,509,900	38,500	2.6%	
Total Solid Waste Expenses	3,850,400	4,097,500	247,100	6.4%	