

Report to Council



Date: October 28th 2024
To: Council
From: City Manager
Subject: Wastewater Utility 2025 Budget and Utility Rates
Department: Utility Services

Recommendation:

THAT Council receives, for information, the Report from the Utility Services Manager dated October 28th, 2024 pertaining to the city wastewater utility, the proposed 2025 wastewater operating and capital budgets, and wastewater utility rates for 2025;

AND THAT Bylaw No. 12719 being amendment No. 42 to Sewerage System User Bylaw No. 3480 be forwarded for reading consideration;

AND FURTHER THAT staff be directed to add the budget items referenced in the Report Attachment 2 to the draft 2025 Financial Plan – Preliminary Budget Volume.

Purpose:

To provide Council with information on the wastewater utility, consider budget items for the 2025 wastewater operating and capital budget, and to set wastewater utility rates for 2025.

Background:

The City of Kelowna provides wastewater collection and treatment services to approximately 90 per cent of its residents. All wastewater collected is treated at the City's biological nutrient removal (BNR) wastewater treatment facility before safely discharging to Okanagan Lake. Biosolids collected in the process are composted at a facility operated jointly with the City of Vernon and sold as "Ogogrow"; an unrestricted Class A compost product with some additional biosolids being composted for mine reclamation near Princeton.

The wastewater utility includes more than \$1.5 billion worth of assets. These assets include 2 wastewater treatment facilities, 44 lift stations, over 600 kilometers of wastewater mains, as well as the equipment required to maintain these assets and provide reliable and resilient service to our community.

Staff have conducted a review of the City wastewater utility's operations, maintenance, and capital program to determine financial revenue needs to support a sustainably funded utility. This analysis includes a 10-year projected pro-forma statement of revenues and expenditures, based on proposed 2025 budget figures, future capital, and operating expenditures in all areas of the utility.

Wastewater collection and treatment costs to our users are low compared to most other communities in the Okanagan Valley and across BC. A comparison of 2024 wastewater costs in BC for a typical single-family home is provided as Attachment 1.

Discussion:

Council should be aware of the following notable initiatives that will have some impact on the wastewater utility and utility rates over the coming decade:

Energy Management

Energy management has been a long-standing key performance indicator (KPI) for the wastewater utility. In 2018, staff commissioned an energy audit at the wastewater treatment facility. The audit suggested a number of potential energy savings opportunities; several of which have been completed. The next energy-saving item to be addressed will be the replacement of one of the bio-blowers. This project is currently underway with completion expected in early 2025. Other suggestions from the report are under review for possible inclusion in future capital budgets.

Lift Station Assessments

Condition assessments are now complete for all 44 of the City's wastewater lift stations. These assessments are a key part of effective asset management and provide a road map for upgrades or replacement of lift stations based on criticality and condition. Lift station renewals will typically involve retrofits to meet current standards, replacement of key components, or full replacement to address future needs and to incorporate new technology and materials. Six of the 44 stations are being renewed by the end of 2026.

Solids management

Biosolids are a product of our wastewater treatment process, and they must be managed and disposed of safely on a continuous basis. Biosolids management is provincially regulated. The City now maintains a "portfolio" of biosolids management options to safely dispose or repurpose our biosolids production needs today and into the future. Our primary disposal practice is to compost biosolids in partnership with the City of Vernon and create safer byproducts for later use. More recently, the city now diverts excess solids to a compost facility near Princeton.

Long-term management options include composting at other mine reclamation sites and either a private or municipally owned digestion facility. The city continues its assessment for its own biosolids digestion facility at the location of the future wastewater treatment plant. As the risk of closure of our external disposal options remains out of our control, it is important that we anticipate that a digester will eventually be needed. For now, we anticipate this to be needed further into the future than previously expected, and the proposed utility rates now assume a deferral of this need beyond 2035.

Aging system

On average, our wastewater assets are relatively young. However, they are depreciating faster than they are being renewed. Our current renewal rate is roughly 0.8 percent of our asset replacement value. This means our renewal funding is adequate to renew assets every 125 years on average. In the long run, sustainable renewal funding will need to be approximately 1.33 percent of system replacement cost (equal to 75-year average life cycle). In addition to increasing capital expenditure for renewal in the future, we can expect operating costs to rise as the average age of our infrastructure increases.

Innovation and Technology

As development expands in the KLO Road area of the city, one innovation under consideration is expanding the use of Wastewater Heat Recovery (WHR). The wastewater treatment and disposal process results in warm effluent that is dispersed physically at depth in Okanagan Lake. The latent heat in this effluent, coupled with heat exchangers and a separate grid, can be used to heat buildings. Currently, Okanagan College uses heat from a small amount of our effluent to heat their facilities. Over a longer planned period, there is the potential to create a more substantive heat recovery system or utility that could heat other buildings, including the high school and other neighboring developments as they occur. There is potential for carbon credits and future grant funding.

Effluent reuse also provides the opportunity to reduce irrigation demand from the potable water system. Effluent is used to irrigate landscaping at the wastewater facility. Staff continue to explore further opportunities to provide this irrigation source to other areas surrounding the wastewater facility and expand the use of this resource for street sweeping and planter/tree watering.

In 2024, the City implemented its first Cured-in-Place pipe insert in 2.7 kilometers of transmission main from Hardie Street, through Parkinson Park, and along Burtch Road, beyond Byrns Avenue. The project's success has led to a re-thinking of potential future pipe replacement options. This type of renewal approach, when properly implemented, is very quick, easy to phase in, and requires minimal street excavation. The Burtch Lining project took two months to execute with minimal disruption to the public.

Accommodating Growth

Over the last 10 years, the City's rapid growth coupled with improving residential water efficiency, has led to some potential unanticipated consequences that impact our primary wastewater treatment services. Despite the population growth, the volume of wastewater into the treatment facilities remains relatively constant. More recently, studies have confirmed the quantity of biosolids being removed continues to increase. The success of water conservation initiatives at all levels, including changes to building codes, is resulting in challenges to our wastewater treatment processes. As less water is used in homes and businesses due to more efficient fixtures, we are measuring higher nutrient concentrations in our raw wastewater stream. This means that wastewater is becoming more concentrated.

In anticipation of the additional 57,000 housing units being added over the next 20 years, remedying this situation involves capacity increases and modifications to one or more of our 12 treatment processes. This effectively results in an earlier triggering of process expansion at the Raymer wastewater treatment facility. The 2025 proposed budget includes a request for funding to update and revise the Wastewater

Master Plan and identify the necessary upgrades or improvements required to ensure that the facility remains within its operating permit.

2025 Budget

A summary of wastewater utility accomplishments, highlights and proposed 2025 operating and capital budget adjustments are provided in Attachment 2. Upon support of Council, these requests will be presented for approval on December 5, 2024, as part of the 2025 Financial Plan – Preliminary Budget Volume.

Utility Rates

There are several factors that drive utility costs higher than inflation. This trend may continue for the foreseeable future as we move towards fully funding all wastewater utility costs, including asset depreciation. These factors are:

1. Assets are depreciating faster than they are being renewed. Our current renewal rate is adequate given the relatively young age of our assets, but renewal will need to increase in the longer term as the system ages.
2. We can expect operating costs to rise as the average age of our infrastructure increases.
3. The construction cost inflation rate typically exceeds general consumer inflation.
4. Preparation to for growth related changes affecting wastewater treatment operations.

The wastewater utility has reserves to address planned infrastructure renewal over the 10-year capital plan horizon. In the short term, reserves can address the shock impact of cost increases, allowing time to assess the longer-term renewal costs and adjust the capital plan and rates as necessary.

The table below shows the projected revenue and spending for the utility over the next five years. In all years, an annual deficit is expected but will be funded using the utility fund balance (reserves), DCC reserves, and grants. This five-year plan will significantly reduce the utility fund balance but is expected to recover over the following five years.

\$ thousands	2025	2026	2027	2028	2029
Operating revenues	26,871	27,605	28,726	29,887	31,012
Operating expenditures	(16,587)	(15,303)	(15,826)	(16,367)	(16,910)
Capital expenditures	(38,656)	(26,962)	(18,394)	(22,771)	(23,149)
Annual surplus / (deficit)	(28,371)	(14,660)	(5,494)	(9,251)	(9,047)
Other funding sources	19,094	9,428	480	100	295
Reserve use	10,278	6,279	6,000	10,000	9,750
Fund surplus / (deficit)	1,000	1,047	986	849	998
Recommended rate increase	2%	2%	3%	3%	3%

The proposed 2025 rate increase of two percent keeps the city wastewater utility rate affordable for Kelowna customers and comparable to other similar sized municipalities in British Columbia. The 2025 rate increase will cost residential homes an additional \$0.49 per month to a total monthly fee of \$24.82. The City's benchmarking efforts which compare our operations with other municipalities across Canada continue to show that Kelowna provides cost-effective tertiary wastewater collection and treatment.

A summary of the recommended changes to Bylaw 3480 is provided in Attachment 3.

Conclusion:

The wastewater utility continues to provide efficient and cost-effective service for ratepayers. To ensure that the wastewater utility continues to be sustainably self-funded, a general rate increase of two percent (2%) is recommended for 2025.

Internal Circulation:

Divisional Director, Infrastructure
Financial Planning Manager
Controller
Revenue Supervisor
Communications Advisor

Considerations applicable to this report:***Financial/Budgetary Considerations:***

At the direction of Council staff will incorporate the proposed 2025 wastewater budget adjustments into the draft 2025 Financial Plan – Preliminary Budget Volume that will be considered by Council in December 2024.

The proposed 2025 wastewater utility rates support the approved ten-year capital plan and the proposed 2025 operating budget adjustments.

Communications Comments:

Utility customers will be informed of the 2025 rates on their next utility bill.

Considerations not applicable to this report:***Legal/Statutory Authority:******Legal/Statutory Procedural Requirements:******Existing Policy:******Consultation and Engagement:***

Submitted by: Kevin Van Vliet, Utility Services Manager

Approved for inclusion: M. Logan, General Manager, Infrastructure

Attachment(s):

Attachment 1: 2024 Single Family Dwelling Monthly Sewer Rates

Attachment 2: Proposed Wastewater Utility amendment of draft 2025 Preliminary Financial Plan

Attachment 3: Summary of proposed changes to Bylaw 3480.

cc: Utility Planning Manager, Utility Services
Revenue Supervisor, Corporate Services
Financial Planning Manager, Corporate Services