Quick facts

- The City of Kelowna provides wastewater service to approximately 95,000 of its 128,000 residents.
- The infrastructure required to support the City's wastewater service has a replacement value of $761 million.
- Wastewater is treated with state-of-art biological (chemical free) process that removes nutrients and disinfects effluent.
- The condition of the wastewater infrastructure is fair to good depending on the asset component.
- Both wastewater effluent water quality and treated biosolids are regulated and meet stringent environmental standards before returning to the environment.
- The City of Kelowna Wastewater Utility has an affordable and sustainable plan to ensure customers continue to receive safe, reliable and environmentally responsible wastewater service.

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Wastewater system score card

Asset component	Quantity	Replacement value ($ million)	Expected remaining life	Age rating
Wastewater Mains	597 km	550	72%	Good
Lift Stations	35	38.8	44%	Fair
Wastewater Treatment Facility	1	149	61%	Good
Brandt's Creek Trade Waste Treatment Plant	1	13.7	41%	Fair
Regional Compost Facility	1	9.6	75%	Good
Total		761		

Rating scale (remaining service life)

Very good (100-80%) Good (79-60%) | Fair (59-40%) Poor (39-20%) | Very poor (19-0%)

Wastewater system

Kelowna's wastewater system collects, conveys, treats and disposes of domestic and industrial wastewater from homes and businesses. Wastewater is conveyed to Kelowna's Wastewater Treatment Facility (WWTF) through a network of 597 km of wasterwater mains and 35 lift stations. There is second treatment facility that treats industrial wastewater from Sunrype and Andrew Peller. The City also has a Biosolids Treatment facility located between Kelowna and Vernon where it treats biosoldis from Kelowna, Vernon and Lake Country.

Wastewater Treatment

Kelowna's first WWTF was built in 1913 at the same location where the modern plant sits today. Since that time, Kelowna has led the way in sustainable waste management practices with state-of-art infrastructure and highly trained technical staff using cost effective and environmentally sound practices.

Wastewater treatment involves a three stage chemical free treatment and disinfection process that returns the treated effluent to Lake Okanagan in a safe and environmentally responsible manner. The biosolids are trucked to the City's regional compost facility where they are treated and sold as OgoGrow – a class A compost that can be safely applied to flowers, shrubs and vegetable gardens.

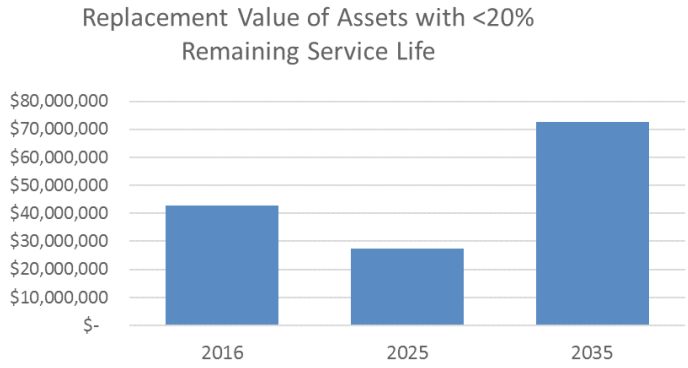
Effluent water quality

Both effluent water quality and treated biosolids are regulated and must meet stringent environmental standards. The City monitors effluent quality through a rigorous testing and monitoring program and is committed to meeting regulatory standards. The City strives to be a leader in sustainable waste management practice through innovation, operational efficiency and timely infrastructure investment.

Wastewater system condition

The Wastewater Utility is a resilient and robust system that is maintained in a state of good repair. Pumping and treatment facilities have backup equipment to ensure continuous service delivery when equipment breaks down or there is a power outage.

The condition of the wastewater infrastructure is fair-to-good depending on the asset component. The wastewater system currently has $43 million worth of assets with less than 20 percent of their service life remaining.



Over the next 20-years, given the proposed re-investment level, the wastewater system will age and the value of wastewater assets with less than 20 percent service life will increase to $72 million or about 8 percent of the total replacement value.

Wastewater system risks

Wastewater assets are depreciating faster than they are being renewed or replaced. This funding short fall is acceptable in the short-term because the wastewater system is relatively new (see 20-year funding needs below).

As the system ages, asset renewal funding will need to increase. If the City doesn't plan for and manage future cost pressures, service levels may need to be reduced or customers may have to accommodate unexpected rate increases. Service reduction may include more frequent interruptions (e.g. pipe breaks) or diminished odour control at our treatment facilities. The regulated treatment of wastewater and biosolids should not be affected and the City is committed to exceeding regulatory standards.

Response

The 20-year funding needs for the Wastewater Utility forecast future cost pressures for system operation, maintenance, infrastructure renewal and infrastructure to support growth and improve service levels. These costs are accounted for in the Wastewater Utility financial model and indicate that on average rate increases will need to match inflation (projected at 2% per annum) to support service delivery for the next 10-years. Long-term, as the wastewater system ages, investment in infrastructure renewal will need to increase and may require rate increases in excess of inflation. Regular updates to this AMP will identify these future cost pressures and plan ahead to mitigate the impacts to the Wastewater Utility customers.

20-year funding needs