Stormwater

Total asset replacement value	**$926 million**
Current condition	**FAIR**
Projected condition in 25 years	**POOR**
Annual funding needed to meet target performance	**$20.4 million**
Annual average funding	**$4.9 million**
Annual funding gap	**$15.5 million**
Funding source	**Stormwater user fees**
Data maturity level	**Medium**

Funding gap
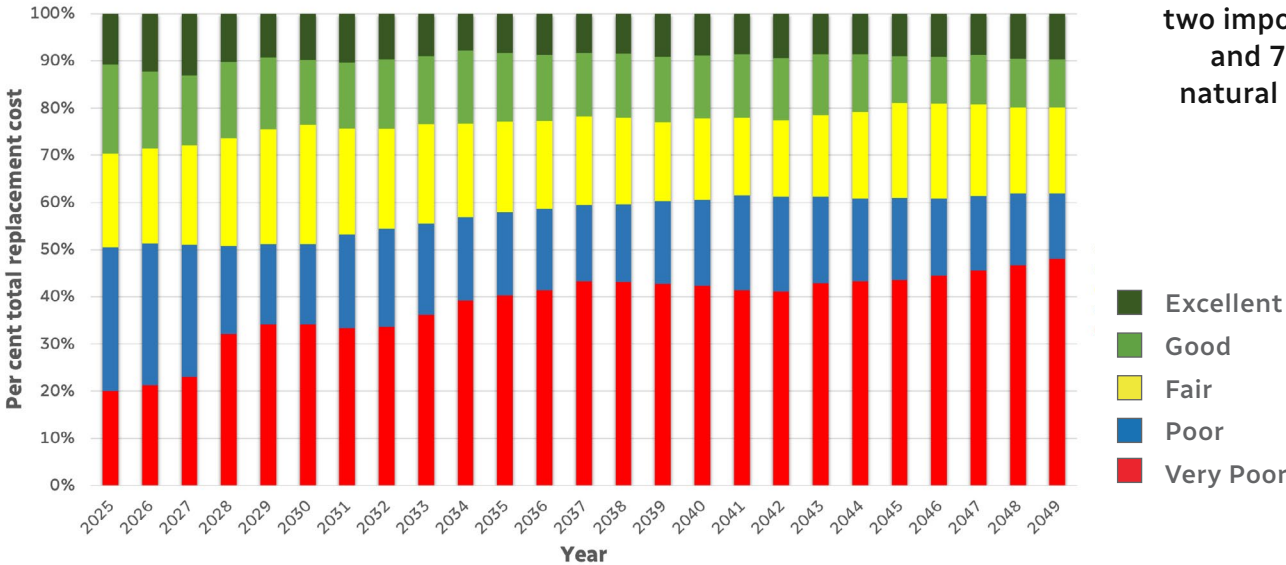$15.5 million

Average annual funding
$4.9 million
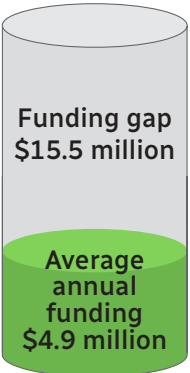
Annual funding needed $20.4 million

Assets include 352 km of pipes, 59 stormwater management ponds, two impoundments and 70 km of natural channels.

Projected annual performance of stormwater assets

Per cent total replacement cost — Year

Legend:
- Excellent
- Good
- Fair
- Poor
- Very Poor

A Diverse Approach to Stormwater Management

Our stormwater system continues to thrive with a diverse and sustainable approach to water management. It includes clean water collector pipes, infiltration infrastructure, soakaway pits, and constructed impoundments. Each component plays a vital role in capturing, filtering, and managing runoff—supporting environmental health and urban resilience. Together, these systems help reduce flooding, recharge groundwater, and protect waterways, showcasing our commitment to smart, integrated stormwater solutions for the future.

CURRENT STRATEGY

The 2025 replacement value of the City's stormwater management assets is estimated at $926 million. The City's stormwater assets are the pipes, catchbasins, ponds and creeks that collect, manage and infiltrate rainwater runoff from roads and properties. The stormwater pipe collection network has 352 km of pipes with associated catchbasins and manholes. The City's stormwater management facilities include 59 stormwater management ponds and two impoundments (Silver Lake and Clair Lake). In addition, the City is responsible for 70 km of natural creek channels. The stormwater network is a user fee funded asset.

Storm sewers can either be rehabilitated or replaced. In Waterloo we replace storm sewers that are in very poor condition when other work is being done on watermains or sanitary sewers during road reconstruction. Stormwater management ponds are dredged on a routine basis to remove sediment that has accumulated, restoring the full capability to treat and control the quality and quantity of stormwater runoff. We also maintain our natural stormwater assets (creeks) in the urban environment to support adequate flow through the system, control erosion, and reduce risk to critical infrastructure.

ASSET PERFORMANCE

Stormwater asset performance is evaluated using historical knowledge, age, and observed conditions. The quality and availability of our asset data (data maturity) are continuously evolving. The current data maturity level for stormwater assets is assessed to be medium. The city is continuously working to improve asset data quality.

Approximately 50% of the stormwater assets are currently considered in fair or better performance. Over the 25-year timeline, with the current level of funding, we anticipate the percentage of stormwater assets with fair or better performance profile to decrease from approximately 50% in 2025 to approximately 38% by 2049. Based on the best available stormwater asset data, deterioration rates and 2023-2032 capital funding, we estimate that stormwater assets have an annual infrastructure funding gap of $15.5 million.

LEVELS OF SERVICE

The following tables show the levels of service established by the city for stormwater assets. These metrics include the technical and community level of service required as part of the Ontario Regulation 588/17. Service metrics are reported for the prior year ending on December 31.

50%

Stormwater assets with a fair or better performance

COMMUNITY LEVELS OF SERVICE

The following table outlines the qualitative descriptions that determine the community levels of service for stormwater assets.

SERVICE ATTRIBUTE	QUALITATIVE DESCRIPTION	2024
Scope	Description, which may include maps, of the user groups or areas of the municipality that are protected from flooding, including the extent of the protection provided by the municipal stormwater management system.	A significant portion of the developed area within the City of Waterloo is protected from flooding either through surface or underground stormwater management infrastructure as seen in **Figure 67** in the **2024 Asset Management Plan**

TECHNICAL LEVELS OF SERVICE

The following table outlines the quantitative metrics that determine the technical level of service for stormwater assets.

SERVICE ATTRIBUTE	QUANTITATIVE METRICS	2023	2024
Scope	Per cent of properties in the municipality resilient to a 100-year storm.	81.5%	81.5%
	Per cent of properties in the municipality resilient to a 5-year storm.	92.3%	92.3%

The information presented here is based on the best available asset inventory and condition data as of March 2025, as well as funding details from the 2025-2026 approved capital budget and the 2027-2033 capital forecast.

The forecasting model allows staff to project the condition of City assets over a 25-year timeframe and therefore all funding is based on a 25-year average.

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THE CITY OF
Waterloo