

Water-Wastewater Capital Asset Overview

Public Works Committee, October 10, 2023

PW 45-2023

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Introduction

Mission

Niagara Region's Water-Wastewater (W-WW) Division serves to protect public health and the environment by providing safe drinking water and effective wastewater management for the communities we serve.

Approximately 450,000 residents are served safe water at a cost of \$2 per household per day.

Overview

Niagara Region Council's direction is to provide:

1. Essential drinking water services
2. Essential wastewater services

The W-WW Division is guided by:

- Safe Drinking Water Act
- Clean Water Act
- Environmental Protection Act
- Other legislative requirements

W-WW Asset Snapshot

Water:

- 6 water treatment plants
- 38 water reservoirs and elevated tanks
- 23 booster and chlorine booster stations
- 312 kilometers of trunk water mains
- 55 Million litres/day of safe and reliable drinking water
- 340 l/household/day

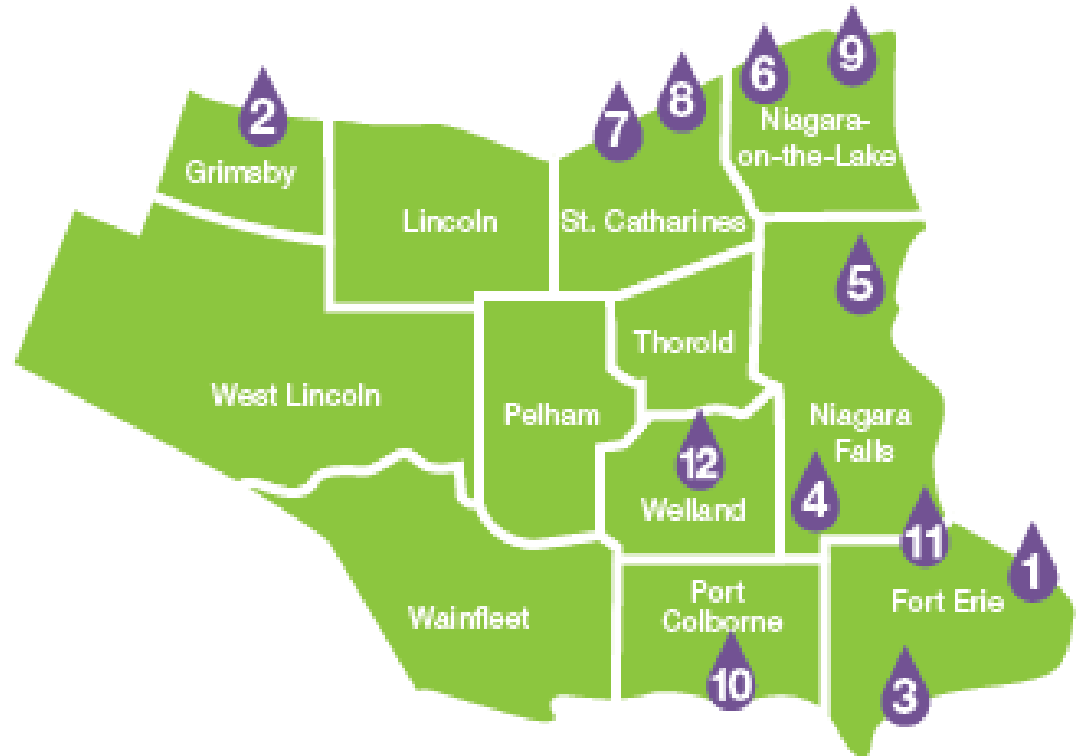
Wastewater:

- 12 wastewater facilities
- 1 biosolids storage facility
- 113 pump stations
- 303 kilometers of forcemains and gravity sewers
- 187.5 Million litres/day of sewage treatment to protect the Great Lakes from pollution and practice responsible environmental stewardship (1,165 l/household/day)

W-WW Asset Snapshot



Water treatment plants



Wastewater treatment plants

W-WW Asset Snapshot

- Overall W-WW system asset value of \$5 billion
- Majority of W-WW assets are in good condition
- Asset renewal strategy is focussed on high risk assets in very poor condition
- Maintenance management focusses on repair of asset failures

		Water	Wastewater
	Replacement Value (2021)	\$1.8 billion	\$3.3 billion
Condition (Percentage by replacement value)	Very Good	33%	12%
	Good	34%	33%
	Fair	13%	27%
	Poor	11%	14%
	Very Poor	9%	14%

Capital Project Insights

Port Dalhousie WWTP Upgrades - \$41M



Capital Project Insights

Port Dalhousie WWTP Upgrades

- Originally built in 1969
- Improved efficiency and treatment process
- Required to maintain adequate services as population grows
- Provides continual protection of Lakeside Beach
- Improved energy efficiency



Capital Project Insights

Decew WTP Upgrades - \$78.7M

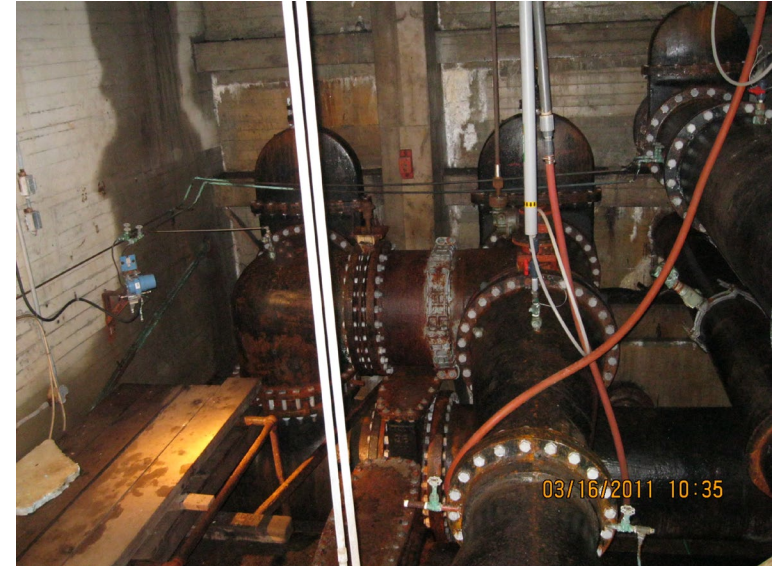


Capital Project Insights

Decew WTP Upgrades

- Niagara Region has maintained and invested in the 100-year-old Decew Water Treatment Plant with still work ongoing
- This is required to keep up with population growth and to continue providing safe, reliable drinking water to residents.
- Improved maintenance of taste and odour control through GAC filters

Before



After



Capital Project Insights

Construction of Grimsby Reservoir - \$22M



Capital Project Insights

Construction of Grimsby Reservoir

- This project addresses rapid population growth in the Grimsby area
- Ensuring adequate water pressure despite increased demand
- Ensuring security of supply



Region-wide outlook

Water

- Number of ongoing Projects: 83

Wastewater:

- Number of ongoing projects: 139

	Budget Sustainability	Budget Growth	Remaining Sustainability	Remaining Growth
All	\$578M	\$465M	\$268M	\$360M
Water	\$201M	\$47M	\$87M	\$12M
Wastewater	\$377M	\$418M	\$181M	\$348M

Thank you!