

Niagara Region 2024 Wastewater Annual Performance Report: Introduction and Systems Overview

Description of Niagara Region Wastewater Treatment and Collection Systems

Wastewater services are delivered using a two-tier model with local area municipalities owning and operating local gravity sewer mains while Niagara Region owns and operates large gravity sewer trunk lines, most pumping station and forcemains as well as all wastewater treatment facilities. Sewage from rural portions of Niagara Region that do not have sewer services are accepted at multiple facilities as imported sewage, or hauled sewage, from commercial sewage haulers.

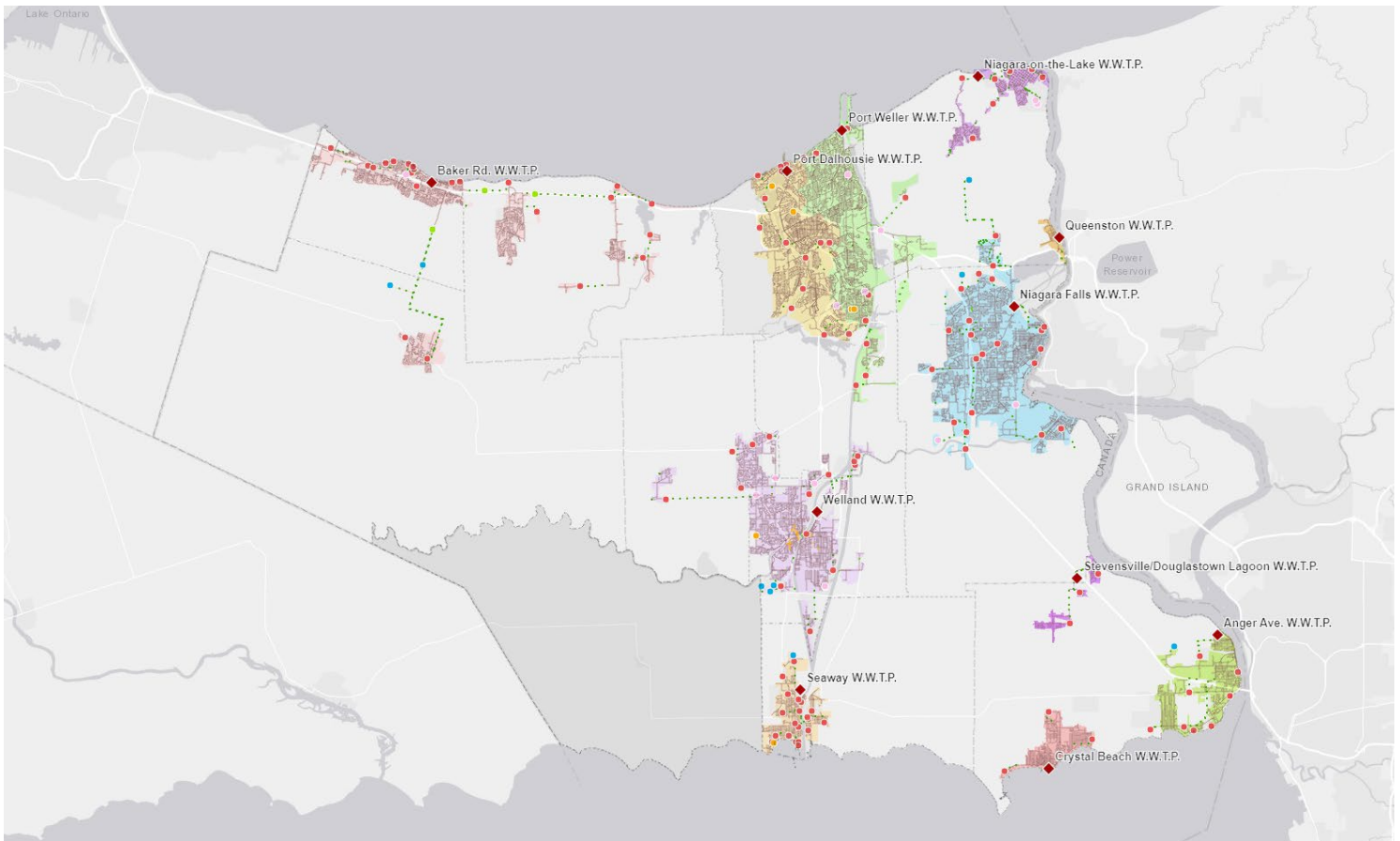


Figure 1 - Map displaying wastewater servicing areas within the Niagara Region

Niagara Region Wastewater Treatment and Collection 2024 Annual Performance Report – Introduction and Overview

Niagara Region operates 11 active wastewater treatment facilities, 108 sewage pumping stations (SPS), 145 kilometers of forcemain, 143 km of gravity trunk sewers and 3 odour control facilities (OCF).

Table 1 - Active Wastewater Treatment Facilities Owned and Operated by Niagara Region

Facility Name	Municipalities Served	Size of Served Area (square meters)	Service Population	Number of Sewage Pump Stations
Anger Avenue (Fort Erie) WWTP	Fort Erie	16,398,026	15,621	7
Baker Road WWTP	Grimsby, Lincoln, West Lincoln	29,517,363	51,158	15
Crystal Beach WWTP	Fort Erie	8,763,568	9,053	3
Niagara Falls WWTP	Niagara Falls, Niagara-on-the-Lake	63,407,326	93,366	21
Niagara-on-the-Lake WWTP	Niagara-on-the-Lake	8,786,545	8,763	7
Port Dalhousie WWTP	Thorold, St. Catharines	40,910,802	76,335	14
Port Weller WWTP	Thorold, St. Catharines, Niagara-on-the-Lake	45,742,318	78,332	9
Queenston WWTP	Niagara-on-the-Lake	1,658,960	373	0
Seaway (Port Colborne) WWTP	Port Colborne	12,049,147	15,562	17
Stevensville-Douglastown Lagoon	Fort Erie	2,914,181	2,745	2
Welland WWTP	Pelham, Thorold, Welland	41,477,580	69,019	13
Total:		271,625,816	420,327	108

An infographic displaying key statistics for wastewater treatment is included as figure 2 below.

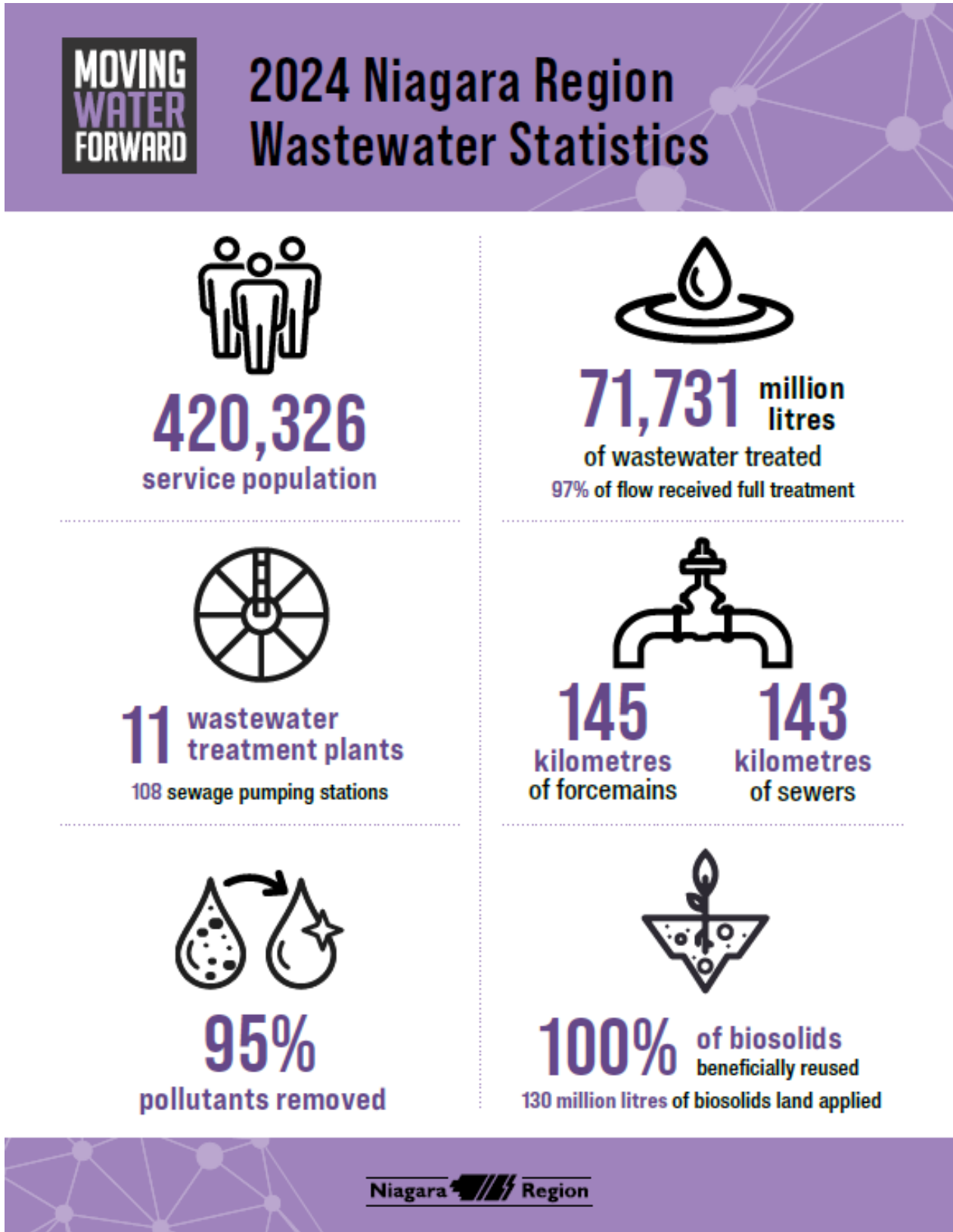


Figure 2 - Image displaying 2024 wastewater treatment statistics.

Purpose and Overview of Annual Performance Reporting

The annual performance reports are intended to provide residents of Niagara Region, Council as the system owner, area municipalities and Niagara Region staff with an overview of the performance of each wastewater system operated by Niagara Region. In addition, all wastewater treatment and collection infrastructure operate under Environmental Compliance Approvals (ECAs) issued by the Ministry of Environment, Conservation and Parks (MECP). As required by the Environmental Compliance Approvals issued by the MECP, Niagara Region must prepare and submit an annual performance summary report by March 31 of the following year.

An annual performance report has been created for each wastewater system to meet MECP annual reporting requirements and includes a section specific to the treatment facility itself, followed by a section dedicated to the performance of the related sewage collection system.

A glossary of terms is available to explain unfamiliar terms used in wastewater treatment as well as any common abbreviations used throughout the reports.

Wastewater Integrated Quality Management System

Wastewater treatment is provided as a service to the public living, working, and visiting communities across the Niagara Region. Niagara Region is committed to source water protection through effective collection and treatment of wastewater. This commitment is demonstrated through the implementation of a Wastewater Integrated Quality Management System (WW iQMS).

Through our policy statement, we are committed to:

- Fostering a culture of continuous improvement
- Lessening our impact on the environment
- Unwavering commitment to compliance
- Supporting climate change initiatives
- Holding ourselves accountable to the customer

The adoption of a WW iQMS demonstrates Niagara Region's due diligence and proactive approach in reducing our environmental impacts while enhancing operational efficiency. The WW iQMS is a systematic approach aimed at reducing the environmental impact, while ensuring compliance with regulatory requirements. It involves managing significant environmental risks, setting environmental objectives, and striving for continual improvement in all aspects of the WW iQMS.

Wastewater Integrated Quality Management System (iQMS)

Niagara Region has implemented a Wastewater Integrated Quality Management System to demonstrate our commitment to the customer to effectively treat wastewater and protect the environment.

The Region is committed to:

- F** Fostering a culture of continuous improvement
- L** Lessening our impact on the environment
- U** Unwavering commitment to compliance
- S** Supporting climate change initiatives
- H** Holding ourselves accountable to the customer

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Figure 3 - Image of Niagara Region Wastewater Integrated Quality Management Policy

If you have any questions about any of the wastewater performance reports, please contact the Water-Wastewater Services division at 905-980-6000 or by email to WWWServices@niagararegion.ca.