

# PROJECT PROFILE

## An Affordable Wastewater Treatment Solution for Municipalities and Communities

### DEVOLA, OHIO

#### PROBLEM

A small community with failing septic systems tried to fix the problem with gravity sewer, then with grinder pumps. But capital costs, operating costs, and logistical issues resulted in decades-long project delays.

#### SOLUTION

Local leaders were alerted to the option of an Orenco Prelos® Sewer, a pressurized liquid-only sewer that features low-cost effluent pumps and would allow for 500 future connections without the need for expensive lift stations.

### Prelos Sewer: Seeing Is Believing

Devola is an unincorporated community in Washington County, Ohio. Along with about 2700 residents, it also had 561 failing septic systems. In 2021, county leaders were taking steps toward the installation of a grinder sewer system to replace the failing tanks when they became aware of a more cost-effective system: Orenco's Prelos Sewer.

Prelos is pressurized, liquid-only sewer based on 40 years of proven sewer solutions. At its core is the Prelos Processor, which has a watertight tank with a unique, patented "meander" design for superior solids settling, removal, and primary treatment. The Processor is easy to maintain, with long-lifespan components that include a lightweight effluent pump that can last more than 35 years<sup>1</sup> (for which Orenco offers an optional 10-year, extended pump warranty). Inside the Processor, solids are screened by a passively self-cleaning pump vault and filter, so only liquids are transported for treatment.



Despite a tentative decision for grinder sewer, county leaders changed course after comparing costs and ultimately chose an Orenco Prelos Sewer. The project went from concept to construction in less than a year.

### Municipal and Community Market

#### PROJECT OVERVIEW

#### DEVOLA, OH



#### Design Parameters

- About 2700 residents
- 72,600 gpd (275 m<sup>3</sup>/day) average flow
- Allows for 500 future connections

#### Projected Start-Up Date

- October 2025

#### Project Cost

- \$14,586,246 (includes labor, equipment, and installation services)

#### Collection System and Primary Treatment

Residential connections:

- 559 1000-gal (3.8-m<sup>3</sup>) Prelos Processors
- One 1000-gal (3.8-m<sup>3</sup>) duplex (2-pump) Prelos Processor

Commercial connections:

- One Prelos 1000-gal (3.8-m<sup>3</sup>) tank with one duplex Prelos Processor
- One 3000-gal (11.4-m<sup>3</sup>) tank with one 1000-gal (3.8-m<sup>3</sup>) duplex Prelos Processor
- One 9000-gal (34.1-m<sup>3</sup>) tank with one 1000-gal (3.8-m<sup>3</sup>) duplex Prelos Processor

#### Secondary Treatment

- Activated-sludge plant in a nearby city

#### Monitoring and Control

- For each residence: an S-Series simplex control panel from Orenco Controls™
- For each duplex connection: an MVP duplex control panel from Orenco Controls

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Although county leaders and their project engineer had previously decided to go with a grinder sewer, they changed their minds after seeing and comparing a local grinder sewer installation with an Orenco Prelos Sewer in Dupont, another small community in Ohio.

They were impressed with many aspects of the Prelos Sewer, especially its low operational cost and how it allows communities to easily expand the number of connections as the need arises. They also took note of the effluent pump at the heart of the Prelos Processor – how lightweight it was, that it required no special tools for maintenance, and that it offered both a long lifespan and a low replacement cost.



At the core of a Prelos Sewer is the Prelos Processor, featuring a long-lasting, lightweight effluent pump and a unique, patented "meander" design for superior solids settling, removal, and primary treatment.

to construction. Small-diameter Prelos service lines that follow the contour of the land have now been installed using the minimally invasive method of directional boring. These lines carry primary-treated effluent from the Prelos Processor being installed at each home to an existing gravity sewer.

Flow continues downstream to the Devola lift station and then on to a wastewater facility in the nearby city of Marietta for final treatment and discharge. Project managers estimate that about 485 of Devola's 559 homes will have had their Processors installed by October 2024.

James Booth, Charlie Schilling, and Kevin Ritter are the Washington County Commissioners who decided to make the switch to Prelos Sewer. They say, "Prelos is already saving us money on up-front costs, and we also expect savings on operation and maintenance over the long term, based on what we've seen in other communities. We appreciate Orenco's Jerry VanAuker for setting up visits to other towns who have experience with Prelos Sewer. He was a valuable asset in our decision-making process."

Municipal and Community Market

Engineer

- Richard G. Wischmann, P.E., WSP USA

Contractor

- RDR Utility Services Group

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– Washington County Commissioners

For information about Prelos® Sewer, AdvanTex® Wastewater Treatment, or Orenco Controls™, contact Orenco Systems, Inc.



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All product and performance assertions are based on proper design, installation, operation, and maintenance according to Orenco's current published documentation.