

# Nantucket Harbor Shimmo & Plus Areas Sewer Extension Project

## GRAVITY VS LOW-PRESSURE SEWERS

In this continuing series of public outreach for the above sewer project, this article presents residents with more detailed information on **HOW** properties will be connected to the existing sewer system. The proposed sewer system extensions for the Nantucket Harbor Shimmo area and the Plus parcels areas are considered hybrid systems, which are similar to the Town's existing wastewater collection system. The hybrid systems consist of both gravity sewer lines with pump stations and low-pressure sewer lines with individual on-lot grinder pumps for conveyance of wastewater to the Surfside Wastewater Treatment Facility (WWTF).

**GRAVITY SYSTEM WITH PUMP STATIONS** A gravity sewer system consists of pipelines in the right-of-way that flow downhill, and are not pressurized. Gravity sewer systems operate by collecting the wastewater via continuously sloped pipes that transport the flow to a wastewater pump station. Extremely flat or hilly terrain poses a problem to gravity sewer installations since the gravity sewers must continually slope downward, resulting in the sewer becoming increasingly deep or the need for pump stations at low points to collect and lift the wastewater to the WWTF via a pressurized pipe called a force main.

Approx. length of Gravity Sewers for this project –

**13,000 feet**

Approx. number of properties to be served –

**100**

**LOW-PRESSURE SYSTEM WITH ON-LOT GRINDER PUMPS** A low-pressure sewer system has proven to be a viable alternative where implementation of gravity sewer systems is impractical and/or uneconomical, which is generally due to excavation depths or other construction factors. A low-pressure sewer system includes small diameter pressure sewers in the right-of-way, buried at a relatively shallow depth following the profile of the ground, and fed by individual on-lot grinder pumps.

Approx. length of Pressure Sewers for this project –

**32,000 feet**

Approx. number of properties to be served –

**260**

**WHAT IS A GRINDER PUMP AND HOW DOES IT WORK?** A grinder pump receives wastewater from a residential or commercial structure and pumps it into a low-pressure or gravity sewer line. As its name suggests, the grinder pump macerates the solids present in the wastewater to a slurry in the manner of a kitchen sink garbage disposal, and discharges the wastewater to the sewer collection pipes.

**WHO NEEDS A GRINDER PUMP?** Grinder pumps are used to provide sewer service to areas that cannot be serviced by a gravity sewer, typically due to topographic elevation issues as outlined above, specifically:

- ① Areas of rolling topography or individual roadways that fall off significantly in elevation.
- ② Low-lying properties at elevations lower than that of the roadway surface.

For preliminary maps showing properties that will likely require a grinder pump, please visit [www.nantucket-ma.gov/NHS-Plus-Sewer](http://www.nantucket-ma.gov/NHS-Plus-Sewer).

The Town is currently continuing its Public Outreach program, which will consist of written information distributed via a series of newspaper articles (similar to this) and posted on the Town's website at [www.nantucket-ma.gov/NHS-Plus-Sewer](http://www.nantucket-ma.gov/NHS-Plus-Sewer). Another outreach component will be public meetings to discuss project overview information and smaller neighborhood or association-specific meetings to discuss project items that are more unique to the individual areas. An Initial public meeting is scheduled for Tuesday, March 14th at 5PM in the CPS cafeteria. Please feel free to email any questions to [sewerproject@nantucket-ma.gov](mailto:sewerproject@nantucket-ma.gov) or call (508) 228-7200 x7800.