

## IN BRIEF:

### SITE/LOCATION:

Warren, PA  
Conewango Township Municipality utilizing a Barnes Pressure Sewer System. System includes 156 Barnes Engineered Basins equipped with Barnes SGV grinder pumps, duplex commercial grinder pump stations, and two lift stations with Barnes SE Series 10 HP and 25 HP non-clog pumps.

### SITUATION:

In 1999, the Pennsylvania Department of Environmental Protection ordered Conewango Township to correct the problems associated with their failing septic systems. Due to the hilly terrain and locations of the homes, a typical gravity collection system was not financially practical.

### SOLUTION:

Northwest Engineering Inc. designed the collection system utilizing gravity and low pressure sewer reducing the project cost by 25%.

### Additional Advantages:

- Eliminates manholes
- Minimal disruption to the environment
- Sewer layout is independent of topography
- Typical pipe sizes range from 1 1/4"-6" diameter

## Applications & Systems

# Cost Competitiveness and Reliability makes Barnes® Pressure Sewer the Right Choice

## The Barnes® Pressure Sewer Solution

The Municipality of Conewango Township in Warren, PA was ordered by the PA Department of Environmental Protection to find a solution to their failing residential septic systems. The first option considered was to install a traditional gravity collection system but the hilly terrain made this option too costly.



A combination of gravity and low pressure sewer was the most cost effective solution. Northwest Engineering Inc. designed the collection system utilizing centrifugal grinder pumps as the sewer system backbone.

The collection system incorporated a small group of single family homes but later progressed to include 156 homes in the township. Piping was sized to achieve flow velocities to assure adequate pipe scouring and associated self-cleansing system. The basin lateral connections are 1 1/4" diameter pipe with the force mains sized 1 1/2" to 4" to optimize the function of the collection system.

In 1999, the Pressure Sewer system was installed with 156 Barnes Engineered Basins fitted with Barnes SGV centrifugal vortex grinder pumps, UltraCAP<sup>2</sup>s lids, Stealth control panels and float level controls. The system also included a few duplex commercial grinder pump stations with similar equipment and Barnes SE Series 10 HP and 25 HP non-clog pumps installed at the township's two lift stations.

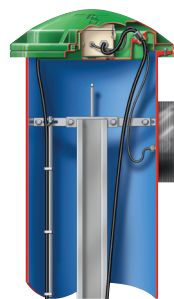
The township has not experienced any pipe clogging or odor issues and has not needed to flush the piping since 1999, they are very pleased with the system.

***"We just don't have any problems! It costs us more to service two emergency stand-by power generators than 156 grinder pumps."***

***- Chuck Barone, Conewango Township***



PUMPS & SYSTEMS



ENGINEERED BASIN



FLOAT TREE  
LEVEL CONTROL



SGV PUMP

**STEALTH**  
CONTROL PANELS

