

**Municipal**  
Solutions

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# Are Gravity Sewer Systems Holding You Down?



*Soar with a Barnes Pressure Sewer System and...  
reduce your costs, increase your flexibility, protect the environment*

## Old Technology Makes Way for New

Gravity sewer systems have been used since ancient times. They're...well, ancient technology that involves digging wide, downward sloping trenches. Okay for going downhill, but it's challenging when the terrain is uncooperative. The deeper you go, the more it costs to dig.

In addition, you have to periodically raise the sewage along the way with lift stations to keep the gravity flow going. So it's even harder if you're going uphill and takes more lift stations. It's also more costly when digging through rocky or sandy soil and traveling over long distances.

## A Barnes Pressure Sewer System Reduces Costs

Rather than gravity, the pressure sewer system defies gravity using submersible grinder pumps that grind sewage particles into a slurry and moves it along. It uses smaller diameter pipes that are less expensive and easier to install. Plus they follow the terrain, requiring a depth just below the frost line, and move directionally to skirt obstructions.

The result is a significantly lower cost of installation compared to traditional gravity systems.

*"We saved almost \$2.2 million in our installation cost simply by using a pressure sewer system rather than gravity."*





Developers must install water, sewer and utilities well in advance of any new home construction. It's a large capital expense with a long payback cycle. Time is money. It especially squeezes cash flow with a slow build-out rate. This is where a pressure sewer system gives you a financial boost.

The comparatively low upfront cost of a pressure sewer system forcemain versus a traditional gravity main represents a true cost savings. This combined with the deferred installation and cost of the grinder pump station to just prior to closing reduces cash outlay. So the time between your expense and funds from the house sale closing is greatly reduced.

Not only does the pressure sewer system cost less to install, but the cost savings grow proportionately as the number and size of lots increases. Since it's built for durability, it performs efficiently and with very little maintenance for years.

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



## Increased Flexibility

Modern homeowners want options. They build lakeside cottages, homes nestled into hillsides, and secluded getaways. It requires a level of flexibility that traditional, gravity sewer systems can't provide.

**But a Barnes Pressure Sewer System can!**

It travels long distances at a fraction of the cost of a gravity system, hugs the terrain, and can move up, down, and sideways. So it's a perfect solution for many unique site challenges.





*Replacing septic systems:* When a worn out septic system is at the end its useful life, a pressure sewer system will provide a cost effective method to connect to a municipal system.

*High Ground Water:* Both the construction and operation of a gravity sewer system are more costly under this condition. Furthermore, the potential infiltration of ground water into the system is a contamination risk. The extra burden can overload treatment plants.

*Lakeside or Ocean Front:* A residence next to water is a prime location, but the sandy, downward sloping terrain makes trenching for gravity systems difficult and expensive. Septic systems are a popular second choice, but they pose an environmental and health threat. A pressure sewer system offers a safe, secure alternative.

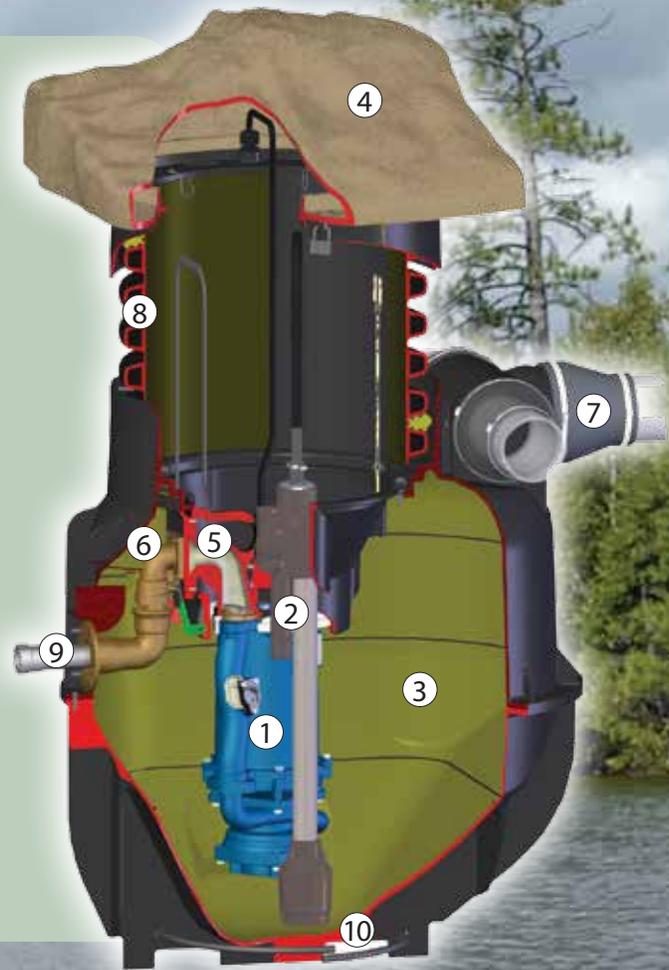


*Surmounting Barriers:* Roads and streams that separate lots from an existing sewer system are no problem for the Barnes pressure sewer system. Directional boring of the small diameter piping can greatly reduce the need for road repairs and traffic disruptions.

*Homes and Gravity Systems that don't Match:* When new homes added to a development are too low for basement sewer connections, a grinder pump and pressure sewer line is a simple solution for connecting to the nearest gravity main.

## System Features

1. *Grinder pump*
2. *Level control*
3. *High strength corrosion-resistant polypropylene copolymer tank*
4. *Lockable rock-shaped cover rotates to locked position. Vented to atmosphere or configured for flood plain.*
5. *Serviceable flap style check valve*
6. *Shut-off valve*
7. *Zero leak inlet connection*
8. *Day of installation depth adjustment*
9. *Stainless steel flexible discharge*
10. *Fiberglass rebar for simple concrete anti-flotation ballast*





## Protects the Environment

Gravity sewers are open systems. So after heavy storms, an excess inflow of water increases the risk of spillage contaminating the environment, and can also overwork treatment plants.

Pressurized systems are sealed so they prevent infiltration and excess plant inflow. Since treatment plants don't have to deal with excess water, they can be built smaller for improved economy.

Septic systems are another potential hazard to the environment. Especially as they age, these systems leak and contaminate ground water, streams and lakes. In fact, according to the EPA, around 10% of the current septic systems fail each year. Considering the US Public Health Service estimates that over 50% of available land in the US is unsuitable for septic tanks, a pressure sewer system is a safe, reliable and cost-effective alternative.

***A Barnes Pressure Sewer System provides higher cost-savings, flexibility and environmental protection. So defy gravity and soar with the advanced technology of a Barnes Pressure Sewer System.***

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A Crane Co. Company  
Printed in U.S.A.  
BPSMRKT - Rev. D (3/15)

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