

Sewage Overflow Basics and the Role of the Homeowner



Sewage 101

Everyday, we flush the toilet, drain dirty bath water or perhaps pour old cooking oil down the sink drain without thinking about where it goes next.

The wastewater or sewage we generate in our homes travels through a pipe, called a house lateral, that connects your home to the public sewage system. During dry weather, the sewage is adequately transported to the treatment plant. However, during rainy weather, much of the sewage overflows into our streams and rivers *before* it reaches the treatment plant. These overflows contaminate our local waterways where families swim, boat and fish.

With an average annual rainfall of 37.5 inches in Allegheny County, the sewage overflow problem has become critical.

What causes the sewage to overflow?

During wet weather (rain or snowmelt), too much stormwater gets into the separate sanitary

sewer system, which is the set of pipes designed to carry only wastewater. The pipes are not able to handle the extra volume of stormwater during rainy weather, so raw sewage overflows into our waterways before reaching the treatment plant. Most newer communities have these separate sanitary sewer systems; the stormwater is carried in a separate system and is discharged directly into our rivers and streams. However, some older communities have combined sewer systems, which carry both waste and stormwater in the same set of pipes. Check with your municipality to find out which type of system your community uses.

How does stormwater get into a sanitary sewer system?

A significant part of the overflow problem is linked to improperly connected roof and driveway drains and deteriorating house laterals, which allow stormwater to get into a separate sanitary sewer system.

This inflow results in overloading and overflows. Many communities now test for improper or poor connections with a dye that traces the path of stormwater from your home's drains and rain spouts. Homeowners are responsible for removing improper connections and repairing deteriorated laterals. New technologies can make parts of the repair possible without digging up a homeowner's property.

Stormwater can also enter the sanitary system through cracked or broken pipes. This is called infiltration. Allegheny County suffers from a deteriorated and aging sewer system, which increases the likelihood of infiltration during wet weather.

Why is the sewage overflow issue important?

These overflows not only violate the federal Clean Water Act, but they cause a host of other problems for communities and the region as a whole.

- Raw sewage in our waterways causes a public health risk.
- Families in downstream communities may experience chronic basement backups.
- Water quality may be unacceptable for boating, swimming or fishing for many days after it stops raining.
- Children can be exposed to raw sewage from overflowing manholes in the street or by playing in streams and creeks.
- 90% of Allegheny County residents get their drinking water from the three rivers.
- Overflows can kill fish and other river and plant life.
- It impedes economic development because communities can be restricted from tapping into sewers to build new houses or businesses until the problem is corrected.

What is being done about the problem?

In early 2004, the Environmental Protection Agency distributed an administrative consent order requiring the 83 Allegheny County Sanitary Authority (ALCOSAN) communities to complete specific activities, such as mapping, cleaning and televising the sewer system and making critical repairs.

With the help of 3 Rivers Wet Weather (3RWW) a non-profit

organization committed to improving our region's water quality, communities mapped 4,000 miles of sewer collection system, completed flow monitoring, which measures how much wastewater (and in some cases stormwater) the sewer system is carrying during both dry and wet weather, and completed feasibility studies, which examine alternatives for reducing, conveying, storing, or treating wastewater.

This information helps communities develop a long-term wet weather control plan, in cooperation with ALCOSAN to sustain rehabilitation efforts into the future.

What is my role as a homeowner?

As a homeowner, you can check with your municipality to find out if your community uses a separate sanitary sewer system. If your community has a separate sanitary system, ask the municipality how you can have your stormwater drains tested to ensure they are not improperly connected to the sewer system.

If your storm drains are connected to the sewer system, you may want to consult a professional to correct the problem.

Consider installing a rain barrel or rain garden on your property. During wet weather, a rain barrel collects stormwater through your home's downspout. During dry weather, a hose connected to the barrel allows water to

seep out to water your yard or garden. This helps to control stormwater, which contributes to sewage overflows polluting our waterways. A rain garden of native plants can hold large amounts of rainwater for up to 48 hours, slowly releasing it through the soil or allowing plants to soak it up.

Another way homeowners can help is to support their municipality's efforts to rehabilitate the public sewage system in order to comply with the EPA order. Fixing the problem in Allegheny County will require a substantial financial investment and while municipalities are seeking the most cost-effective methods for a solution, homeowners can expect higher sewage rates over the coming years. It will take the cooperation and support of many individuals and communities to ensure a solution that will protect our region's water resources.

For more information

Contact your municipality for more specific information about the sewer system in your community. To learn more about the wet weather issue, visit the 3RWW web site at www.3riverswetweather.org

