



Warren Sewer NEWS!



Sewer System Inflow and Infiltration Control Program

The Town of Warren operates and maintains the sewer system which serves approximately 2,000 customers in the Town of Warren and 1,750 customers in the village of West Warren. Wastewater flows that enter the collection system are conveyed to the Town's wastewater treatment facility (WWTF) for treatment and subsequent discharge to the Quaboag River. As part of maintaining the collection system, the Town strives to minimize sources of problematic **inflow and infiltration** in the sewer system.

What are inflow and infiltration (I/I)?

Wastewater entering the collection system is comprised of residential sanitary flow, non-residential sanitary flow, infiltration, and inflow. Inflow and infiltration are terms used to describe sources of "clear" water (typically groundwater and stormwater) that enter the sewer system. **Inflow** is water that enters the sewer system through improper connections from sources such as catch basins, yard drains, roof leaders, and sump pumps. During rain events or periods of high groundwater these connections can contribute inflow to the sewer system. **Infiltration** is groundwater that enters the sewer system through leaks in the sewer pipes and structures.

Why is I/I a problem?

Clear water does not belong in the sewer system. When clear water enters the sanitary sewers, it must be conveyed and treated like sanitary wastewater, increasing conveyance and treatment costs. In addition, the clear water entering the sewer system reduces the available sanitary flow capacity of the sewers, pumping stations and treatment facility, can shorten equipment life, and can impair performance of the WWTF. Too much clear water can also cause sanitary sewer backups and overflows, potentially impacting the public and the environment.

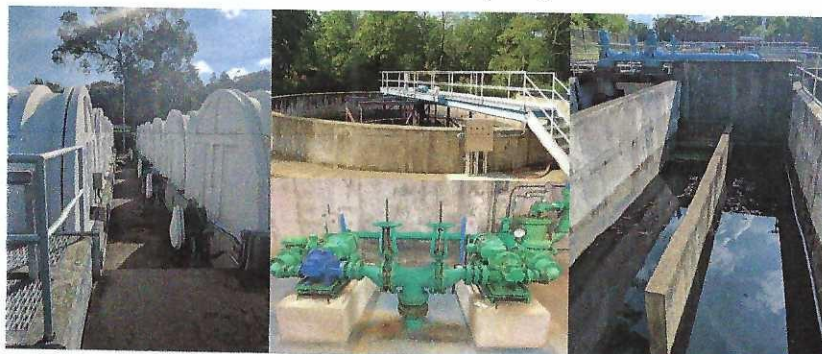
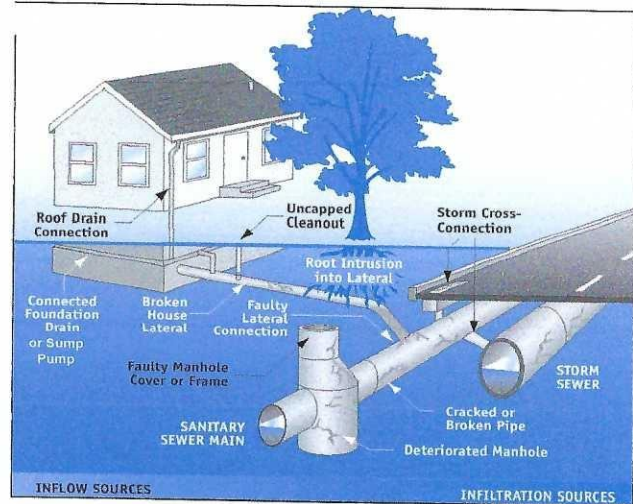
What is the Town doing to find sources of inflow and infiltration?

The Town completed a Preliminary Inflow/Infiltration Analysis and Control plan identify sewer drainage areas that have excessive I/I and has established an I/I Control Plan to systematically identify and remove inflow and infiltration. Additionally, the Town performs periodic manhole inspections to look for surcharges, backups and signs of infiltration as part of their routine maintenance procedures. Wastewater flows are regularly reviewed to determine if there have been changes in I/I that would trigger additional investigations.

What can you do to help?

To help minimize inflow and infiltration into the sewer system, and in turn reduce system operating costs, residents can ensure that sump pumps, roof leaders, and yard drains on their property are not connected to the municipal sewer system. Residents are encouraged to report observations of damaged manhole covers or exposed sewer pipes, especially those located near brooks or streams), as these are potential sources of I/I. Public input can help improve Town's effort to locate and control inflow and infiltration and reduce sewer system operating costs.

Any questions regarding the Town's Inflow and Infiltration Control Program may be directed to the Warren Sewer Department at (413) 436-5796 or (413) 436-7438.





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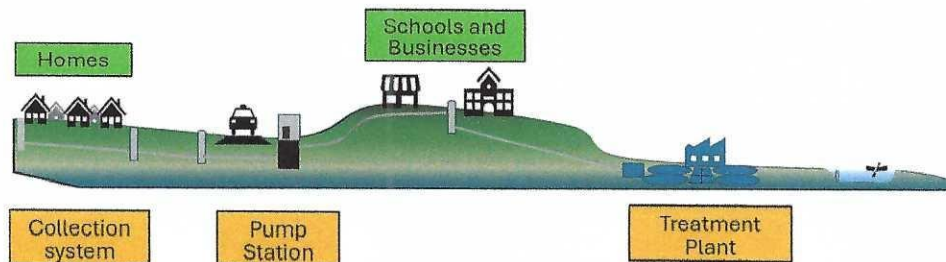
Sanitary Sewer System Operation and Maintenance

The Town of Warren owns, operates, and maintains 18 miles of gravity sewers, force mains, and sewer siphons, two pump stations and one municipal wastewater treatment facility. The Town's collection system serves approximately 2,000 customers in the Town of Warren and 1,750 customers in the Village of West Warren. Wastewater flows that enter the collection system are conveyed to the Town's wastewater treatment facility for treatment and subsequent discharge to the Quaboag River.

How does it work?

Each customer is connected by a service pipe to the Town's wastewater collection system. The collection system flows by gravity, to the extent possible. However, there are some low areas in Town that require that the wastewater be pumped up to a higher elevation within the wastewater collection system. The Town has two pump stations that are inspected daily. The Town maintains the sewers by performing inspections and cleaning when needed.

All of the wastewater in Town is conveyed to a wastewater treatment facility where a combination of biological and chemical treatment techniques are used to meet state and federal discharge requirements before discharging the treated wastewater into the Quaboag River.



What does sewer system maintenance and operation entail?

The Town conducts operation and maintenance within the sewer system. These activities include sewer manhole inspections, pipe cleaning, daily pump station and WWTF inspections and operation of equipment and systems, periodic replacement of components (piping, equipment, etc.), and repair work at the pump stations and wastewater treatment facility.

How much does Sewer System and WWTF Operation and Maintenance cost?

It currently costs just over \$900,000 to maintain and operate Warren's sewer system and WWTF, over 85% of which is operation and maintenance expenses. The remainder is debt and capital costs. These costs are recovered from customers through sewer use rates, which the Board of Sewer Commissioners reviews and adjusts as needed annually.



A homeowners guide for Warren's public sewer use

Why do sewer line backups occur?



One of the most common causes is tree roots that grow into the line. Trees won't bother an intact line, but any crack or separation will attract the roots to the moisture. Once they're in the line, roots will continue to grow - and continue to create the possibility of a serious backup. Homes built prior to 1980 have the highest risk for root intrusion, a problem which can be minimized by snaking and cleaning the line regularly.

In some cases, however, sewer line backups are caused when people put things down the drain or in the toilet that, over time, can cause serious clogs. Here are some things you can do to prevent that:



- Do not put greasy, dairy products or food scraps down the drain. Your garbage disposal doesn't break it down enough, and it can contribute to clogged lines. Instead, scrape food and grease off and put it in the trash.
- Do not flush hair, cigarette butts, aquarium gravel, kitty litter, Q-tips or cotton swabs down the toilet. The sewer lines are not designed to handle those things, and it can cause costly backups.
- Do not flush paper products other than toilet paper or tissue. Other paper products such as: paper towels or "flushable" wipes do not break down as quickly and can contribute to sewer problems.