

## GOALS OF REMOVING I/I

- Protect the local environment, rivers, and streams from pollution due to Sewer System overflows;
- Protect your property and that of your neighbors from sewer backups / overflows; and
- Reduce the volume of flow conveyed to the Town's WWTF and lower treatment costs.

## HOW IS WESTERLY ADDRESSING I/I ISSUES?

Since 2018, the Town completed over \$1 Million of work lining / repairing approximately 35,000 linear feet of sewer mainline to decrease infiltration in the public Sewer System. Despite all the work completed, there continues to be increased sewer flow during rain events. For example, during a rainstorm on October 27, 2019, flow at the WWTF spiked to approximately four times the average daily flow of 2.8 million gallons per day. These large spikes in flow during rain events are primarily a result of inflow sources from private homes.

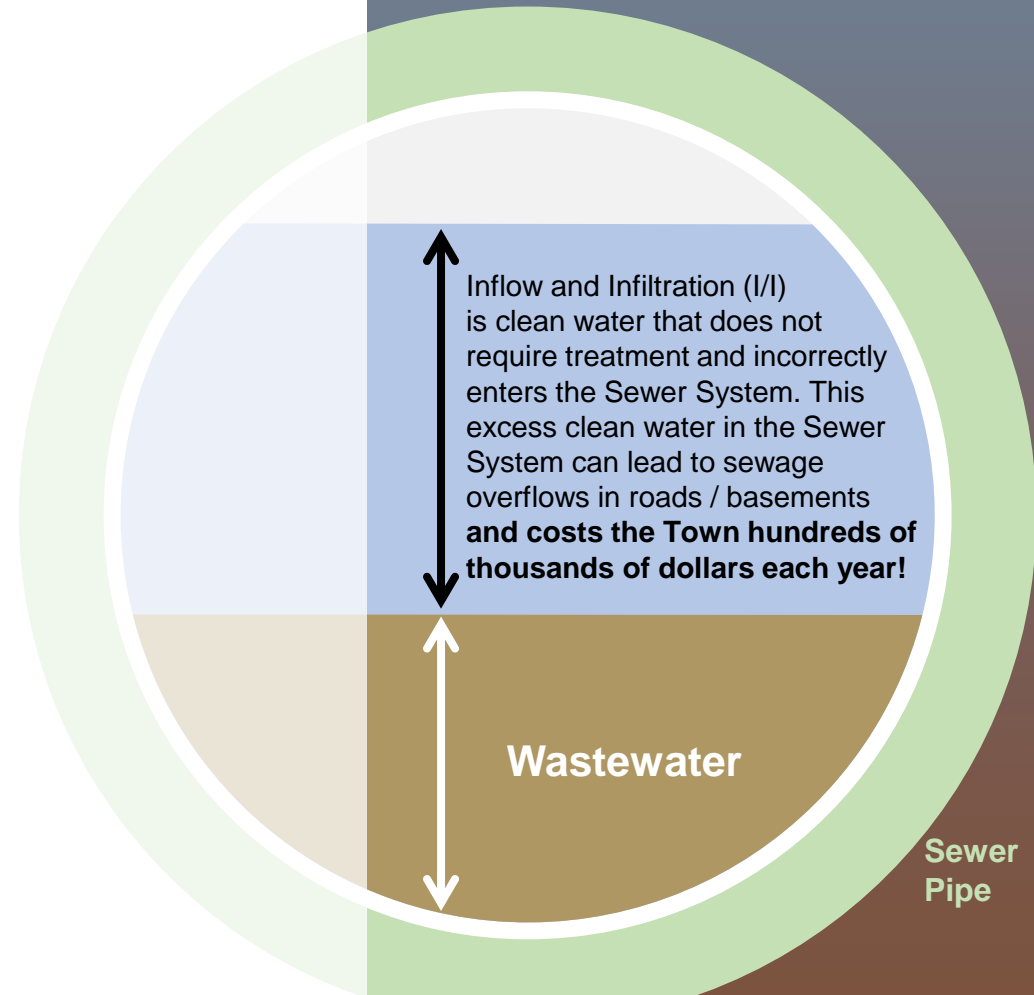
**Beginning in 2021**, the Town plans to begin performing sewer service inspections to identify and remove sources of inflow, such as sump pumps and roof downspouts, from the Sewer System. Sewer service inspections consist of a brief inspection of the basement or lowest level of your home to locate sources that may contribute clean water to the Sewer System. If your home has any of these sources, we will provide you with recommendations explaining how to correct the problem.

**Water and Sewer Department**  
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Town of  
**Westerly**  
RHODE ISLAND



## Understanding Westerly's Inflow and Infiltration Problem



## WHAT IS INFLOW / INFILTRATION (I/I)?

**Inflow:** Rainwater that directly enters the Sewer System, typically through a mistake in the piping (e.g., roof downspouts / sump pumps connected to the sewer) (red circles in diagram to right).

**Infiltration:** Groundwater that seeps into the Sewer System through cracks or leaks typically due to aging or damage (blue circles in diagram to right).

## WHY IS I/I AN ISSUE?

During rainstorms, I/I enters the Sewer System. I/I consists of clean rainwater and groundwater, thus does not require treatment. However, by entering the Sewer System, the I/I mixes with wastewater and is pumped to the Town's wastewater treatment facility (WWTF) for unnecessary and costly treatment. The Town spends hundreds of thousands of dollars on the unnecessary treatment of clean water from I/I sources.

In extreme rainfall events, excessive I/I could fill up the limited space in sewers, causing surcharging (or back-ups) with the potential to flood basements or roads with raw sewage.

**Example: A home with a roof downspout illicitly connected to the Sewer System collects all the rainwater that falls onto the roof and discharges it directly to the sewer. This rainwater is pumped to the WWTF and treated at the same cost as wastewater.**

## WESTERLY'S WATER COLLECTION SYSTEMS

The Town of Westerly has two separate collection systems to convey water away from your property:

**The Stormwater / Drainage System (blue pipes in diagram below)** collects rainwater and diverts it to local receiving waters. The rainwater does not create health risks, thus does not require treatment prior to discharge.

**The Sanitary Sewer / Wastewater System (brown pipes in diagram below)** collects and carries wastewater from homes/buildings to the WWTF for costly treatment and discharge. Wastewater includes flow from sinks, toilets, tubs, showers, washing machines, etc. When homes have illicit inflow connections, clean water enters the sewers, mixes with the wastewater, and is treated at the WWTF at the same cost as wastewater.

