

ATTACHMENT 1

PINELLAS COUNTY
FLORIDA

PRIVATE SEWER LATERAL
FIND AND FIX POLICY

November 2021

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I. Intent

Pinellas County Utilities (PCU) is committed to protecting public health and the environment through effective management of our wastewater treatment facilities and wastewater collection system. Groundwater and surface water inflow and infiltration (I&I) entering the wastewater collection system take up valuable sewer capacity, contribute to causes of sanitary sewer overflows (SSOs), and add costs for excess wastewater treatment. Defective private sanitary sewer laterals allow a significant amount of I&I into the wastewater collection system, and therefore, Pinellas County institutes this Private Sewer Lateral Find and Fix Policy (Find and Fix Policy).

The purpose of the Find and Fix Policy is to provide for the targeted reduction of I&I in PCU's wastewater collection system in selected neighborhoods where this approach is considered cost-effective. PCU will achieve this I&I reduction effort by implementing cost-effective, comprehensive rehabilitation and replacement of wastewater collection mains, manholes, and public and private laterals within selected Capital Improvement Program (CIP) project areas.

Reducing the I&I will increase available capacity within the PCU wastewater service area, aid in reducing the risk of SSOs, reduce flows to the treatment facilities, and reduce the need for new or expanded infrastructure system-wide.

II. Definitions

Cleanout means a segment of pipe connected to an underground private Sewer Lateral and rising to the surface, providing access to the sewer lateral for purposes of inspection and cleaning.

Comprehensive Rehabilitation means the rehabilitation or replacement of all gravity sewers, manholes, and public and private laterals, unless otherwise considered watertight, within a specific defined project area with the goal of maximizing the reduction of I&I entering from the project area.

County Sewer System (System) consists of the County owned collection and transmission system that conveys the wastewater to the treatment facility. This consists of sanitary sewers, trunk sewers, interceptors, lift stations, force mains, and all appurtenances between the private Sewer Laterals (or building sewers) and the wastewater treatment facility.

Defective means, as applied to a Private Sewer Lateral, a Private Sewer Lateral for which any of the following conditions exist upon inspection by a licensed plumbing contractor or other competent professional:

1. evidence of pipe or joint cracks or deterioration,
2. root intrusion into a pipe,
3. a misaligned pipe segment, sag, or lack of positive gradient,
4. a lack of a necessary cleanout cap,
5. a downspout, drain, defective cleanout, or other connection that allows storm water or other extraneous water to enter the sanitary sewer system, and/or
6. a defect (e.g., crack, fracture, hole, open joint) or active leak that allows the discharge of sewage on the property or the introduction of extraneous water into the County sewer system.

Infiltration means groundwater that enters a sewer system, including service connections, through defective pipes, pipe joints, connections, service connections, manholes, or lift stations. Infiltration does not include, and is distinguished from inflow.

Inflow means surface water and stormwater that enters a collection/transmission system, including service connections, from sources such as roof leaders, cellar drains, yard drains, area drains, drains from wet areas, foundation drains, cross connections between storm sewers and sanitary sewers, catch basins, stormwater, surface runoff, manhole covers, or drainage. Inflow does not include, and is distinguished from, infiltration.

Licensed Plumbing Contractor means a plumber licensed and insured in the State of Florida pursuant to Chapter 553 and Section 489.105, Florida Statutes.

PCU-Prequalified Plumber/Contractor is licensed plumber or contractor that meets the requirements specified by Pinellas County Utilities for registration as prequalified, which includes defined qualification criteria, an active license, familiarity with standard drawings and specifications and submittal requirements associated with this policy and providing a warranty for a minimum of one (1) year.

Private Collection and Transmission Systems (Private sewer system) are privately owned sanitary sewers, manholes, lift stations, force mains and any other facility that discharges into the County sewer system excluding single-family residences.

Private Collection and Transmission Systems (Private sewer system) Operating Permit is a permit from the County provided to owners of a private sewer system allowing the private owner to discharge wastewater into the County sewer system that includes terms and conditions and performance requirements for the owner to maintain and operate their system in accordance with County requirements.

Private Sewer Lateral means a pipe that carries wastewater, excluding storm, surface and ground water starting just outside the building and ending at the right-of-way or recorded easement, and connects directly to the County System.

Private sewer lateral maintenance means the routine inspection, flushing, rodding, and removal of grease, roots, and debris of a private Sewer Lateral of located within private property up to the right-of-way to maintain a free-flowing condition.

Property means any real property, or portion thereof, located in the County, including buildings or structures and private sewer infrastructure situated on the surface or beneath the surface of the property, including the private Sewer Lateral up to the right-of-way.

Reference Meter means a flow meter installed in a manhole for the purpose of measuring flows from a specified area where no rehabilitation work is being performed. The reference meter is installed and operating at the same time as the associated rehab meter. The purpose for the reference meter is to allow for an objective comparison of flows from a Find and Fix project area before and after construction.

Rehabilitation, as applied to private Sewer Laterals, means the lining of the complete length of the private Sewer Lateral with a cured-in-place pipe (CIPP) liner to bring the private Sewer Lateral into compliance with minimum functional requirements. This also includes any other work necessary to prepare the pipe for lining.

Rehab Meter means a flow meter installed in a manhole for the purpose of measuring flows under dry and wet conditions. The meter data may compare flows from an associated reference meter to allow for an objective comparison of flows from the Find and Fix project area before and after construction.

Replacement, as applied to private Sewer Laterals, means the installation of a complete new private Sewer Lateral and cleanout.

Sanitary Sewer Overflow (SSO) means a wastewater overflow from a manhole, a confined repair site, or directly onto the ground from a cleanout, or from the sanitary collection and transmission system (regardless of volume) within the County.

Smoke Testing involves pushing a simulated, non-toxic, non-staining simulated smoke through a community's sanitary sewer collecting system, then observing and documenting where the smoke exits. This method for identifying I&I typically involves residential, commercial, and industrial areas. Field technicians set up a blower over a neighborhood manhole, and non-toxic simulated smoke is pumped through the sewer line. The exiting smoke can indicate the location of a broken sewer pipe, manholes, catch basins, or where roof or foundation drains are connected to the sewer system.

III. Policy Applicability

The Find and Fix Policy applies only to residential properties located within a designated Find and Fix project area as determined by PCU.

IV. Find and Fix Policy Overview

Work is completed in conjunction with the rehabilitation and replacement of PCU's wastewater collection system. Private sewer lateral work within the same project area is performed as part of the public bidding process. Other private property sources of I&I in the project area must be removed at the property owner's expense as part of current PCU policy. Examples include downspouts, yard drains, or any other source of direct or indirect surface or groundwater that allows entry of I&I into PCU's wastewater collection system from private property.

The three phases of the Find and Fix Policy are:

- I. Design, including pre-construction flow monitoring, closed-circuit television (CCTV) inspection, smoke testing, and bid document preparation
- II. Construction
- III. Project area post-construction flow monitoring

The process begins when PCU identifies potential project areas based on an evaluation of various factors, including:

- Extent of I&I
- Known sewer system capacity issues, including historic SSO events
- I&I removal potential and downstream impacts
- Tidal influences
- Age of neighborhood

- Project costs

PCU further evaluates and confirms the feasibility of selecting a particular area for the Find and Fix Policy based on:

- Complexity
- Potential constructability issues
- Available funding

V. Design Phase

After a project area is confirmed as a candidate for the Find and Fix Policy and included in the CIP, PCU begins the design process by conducting preliminary engineering activities and preparing drawings and specifications for construction and bidding.

Preliminary Engineering Inspection. A qualified contractor performs various activities, including smoke testing and CCTV inspection of the public sanitary sewers, associated manholes, and both public and private portions of sewer laterals. Smoke testing identifies major defects or illegal connections that may be contributing I&I to the wastewater collection system. Any defects found on private property that are unrelated to the private lateral must be addressed by the property owner and will be managed with the current code enforcement process. The CCTV inspection locates the lateral for surveying later and provides visual inspection of its condition to determine if the lateral can be lined or if it must be replaced. PCU may also utilize leak detection technology in specific locations where the pipe appears to be in good condition to verify watertightness. If these pipes and laterals pass a leak detection test, they are removed from the rehabilitation list.

Survey. A survey is conducted on private property by a qualified licensed surveyor hired by the professional design consultant to survey the sewer lateral and any cleanouts. The surveyor also will survey the corners of structures and the outline of pavement in proximity to the private Sewer Lateral.

Property Access Documents. Pinellas County will secure access to the private property for lateral lining or replacement thru instruments, such as temporary construction easements.

Signing of Waiver. Property owners will be asked to sign a waiver to hold PCU harmless for work done on private property.

VI. Construction Phase

Once the project is bid, construction will begin. The selected construction contractor will perform the lateral repair, lining, or replacement.

Depending on the condition, a single lateral may be lined with cured-in-place pipe (CIPP) or replaced. A cleanout will be installed at the right-of-way and at the upstream termination of the lining or replacement. The contractor will perform post-construction testing, such as CCTV inspection and cured-in-place pipe (CIPP) strength testing. PCU may also require the contractor to use a PCU approved leakage test to verify water tightness. The contractor will be required to fix any defects identified at no cost to PCU.

VII. Post-Construction Phase

Once construction is completed, where applicable, the rehab and reference flow meters are placed in the same locations as pre-construction flow monitoring. The duration of monitoring will be a minimum of four (4) months. The I&I volume measured for each rainfall event will be recorded for both the rehab and reference monitor locations.

Rehabilitation Effectiveness Assessment: Pre- and post-construction flow monitoring data are used to analyze the I&I removal effectiveness in accordance with the PCU Pre- and Post-Construction Flow Monitoring and Analysis Standard Operating Procedure (SOP).

VIII. Policy Impact

The cost-effectiveness of the Find and Fix Policy is analyzed internally or through the support from an outside consultant as projects are implemented and as the engineering analysis progresses for the Wastewater Collection System Master Plan. Find and Fix project locations may be added or adjusted based on ongoing data analysis.