



The City of Lake Forest

Inflow & Infiltration Policy

Approved by City Council – January 21, 2020

I. Purpose

The purpose of this policy is to outline procedures for identifying and rehabilitating both public and private sanitary sewer inflows & infiltrations (later referred to simply as “I&I”). The City of Lake Forest maintains two separate and distinct systems of sewers; storm sewer for surface water and stormwater and sanitary sewer for sanitary and wastewater. I&I occurs when stormwater enters the wrong sewer system; the City's sanitary sewer system. This policy defines the responsibilities of both private property owners and the City in managing and repairing I&I issues. The policy also assists in identifying projects, programs, and initiatives that will reduce I&I within the City by cost effective means.

This policy requires that the transportation or movement of stormwater not occur by way of City's sanitary sewer system. Eliminating I&I from the sanitary sewer system can help to reduce damage to property and protect public health, the environment, safety, and general welfare.

It is not unusual for municipal sanitary systems to experience problems with I&I. In sanitary sewer systems where I&I is particularly bad, stormwater that has entered the sanitary system can easily overwhelm the ability of pipes and pumps to move waste water downstream and overburden the system. This can cause wastewater to back-up and, in some instances, flow back into residences. Excess wastewater in the system also causes pumps and wastewater treatment equipment at the City's pump stations be overburdened, lose efficiency, increase operational costs, and ultimately shortens their life spans. I&I also presents environmental concerns. If stormwater is able to enter the sanitary system, sanitary wastewater may also be discharging into an area untreated.

City ordinances (including section 150.385 of the City Code) prohibit property owners from directing and depositing surface water into the City's sanitary sewer system, or a fixture connected to a sanitary sewer, including, but not limited to, through connecting roof drains, footing drains, and garage floor drains.

II. Applicability

This policy applies to I&I issues, abutting or affecting any and all property within the City, whether public or private



III. Objectives

- A.** Outline I&I expectations and responsibilities for both City and private property owners
- B.** Be in compliance with all applicable Local, State and Federal Laws
- C.** Promote responsible and permitted methods to eliminate I&I
- D.** Promote awareness and understanding of I&I issues to residents through public information and educational programs
- E.** Promote public safety and health of the environment

IV. Implementation

A. Smoke Testing Program

The Department of Public Works conducts periodic smoke testing to identify I&I. Smoke testing is a very common I&I identification technique. Smoke testing is a relatively simple process that consists of blowing non-hazardous smoke mixed with large volumes of air into an identified portion of the sanitary sewer system. The smoke travels the path of least resistance and quickly shows up in areas that allow I&I. The testing identifies broken manholes, prohibited connections including roof drains, yard drains, uncapped lines and cracked mains and laterals.

B. City Owned Property I&I Procedures

The Department of Public Works will maintain a prioritized I&I public project list. The list will be developed based upon data obtained from smoke testing studies. Proposed public projects may be added to the list by the procedure described in this policy.

The Director of Public Works may recommend, and the City Manager may approve, funding for, and construction of, public I&I projects if the combined total expenditure for the entire project is under \$20,000. Such projects may be constructed by City staff or contracted to local underground contractors. All other projects with a total expenditure of \$20,000 or more must be approved by the City Council before implementation. For projects requiring City Council approval, staff will provide a recommendation regarding project approval, funding, and scheduling. Projects may be approved by appropriating funds during the annual budget process or by the City Council at other times



throughout the year. Any and all I&I projects will adhere to the City's Purchasing Policies and Procedures (Administrative Directive 3-5).

The City Council will be provided with the current project list on an annual basis at their November capital budget meeting. The City Council will ultimately decide which capital projects (I&I and non-I&I) are considered priority for the upcoming fiscal year.

C. Private Property I&I Procedures

The Public Works Department will maintain a list of identified and known private I&I issues. The list will be developed based upon data obtained from smoke testing studies. Mailed notification will be sent to the property owner of their identified I&I issue. The notification will encourage the repair to be completed and explain why making the repair is important.

1. The Public Works Department recommends that property owners contact the Department to schedule an onsite meeting to review their identified issue or issues in-person with a City staff person. Contact information details will be provided via the mailed notice.
2. The Public Works Department recommends that private property owners obtain multiple quotes for their repair or repairs from licensed plumbers. The City will maintain a list of multiple licensed plumbers. Please note that the list is not a City recommendation of plumbers but instead a list of licensed plumbers who, the City believes, have experience completing I&I related repairs.

This policy does not replace or supersede the City's Home Inspection Program which requires any identified illegal connections from the property to the City's sanitary sewer system be corrected prior to any change in ownership. The purpose of the inspection is to identify and correct any unauthorized connections to the sanitary sewer. City ordinances require a home inspection and final payment of water bills before water billing can be transferred from a seller to a buyer. After the inspection is complete, the inspector will provide the homeowner with a verbal report on whether any unauthorized connections were found.



1. If a Certificate of Compliance is issued, no violations have been identified. The Certificate will be forwarded to the Finance Department to finalize the water bill and verify that all other unpaid bills have been paid.
2. If a notice of violation is issued, information will be provided to the property owner about the corrections that need to be made by mail. All required permits must be obtained before the work is done. Once the corrections have been completed, a re-inspection should be scheduled with the Community Development Department. A Certificate of Compliance will be issued upon completion of a successful inspection.

V. I&I Management Program

A. Public Education

1. Provide I&I information on the City's website
2. Utilize the City's quarterly "Dialogue" publication
3. Provide a copy of this policy to local realtors for distribution when a property is listed for sale
4. Educate private property owners regarding their responsibility for the repair and maintenance of their private property service lines

B. Annual Public Property Maintenance Performed by the City

1. Sanitary sewer main cleaning
2. Sanitary and storm sewer lining and rehabilitation

C. Public Project Improvements

1. Smoke testing studies
2. I&I projects as recommended by the Public Works Director and approved by the City Council