

July 7, 2016

**RE: Inflow and Infiltration Smoke Testing July 19 – July 20 2016**

Dear Resident,

The City of Floodwood is beginning the process of reducing Inflow and Infiltration (I & I), unknown sources of water, into the wastewater system. You will find information regarding I & I on the enclosed FACT sheet.

We're planning to conduct smoke testing to our system on Tuesday July 19 and Wednesday July 20, 2106 in your neighborhood. You will find information enclosed on what smoke testing is and what you can do to prepare. You can also view videos of the process by choosing the "I & I" tab on our website [www.ci.floodwood.mn.us](http://www.ci.floodwood.mn.us)

If you have any questions please do not hesitate to call.

City of Floodwood  
Water and Wastewater Department

# IMPORTANT INFORMATION ABOUT SMOKE TESTING

## Process:

- Simulated smoke will be injected into the sewer system. As a result, smoke may be seen coming from manhole covers, storm drains, roof vents and building foundations.
- The simulated smoke will last approximately 30 seconds after each injection.
- Photographs will be taken to document potential leaks/defects.
- Inspection crews will not need to enter buildings.
- Faucets and bathroom facilities can be used during smoke testing.

## Tips to prevent smoke from entering your building or home (complete prior to test):

- Run water faucets for a few seconds in unused sinks, tubs and drains to fill the fixtures traps. Don't forget basement fixtures
- Pour at least one (1) gallon of water into each floor drain remembering basement drains
- If you have defective plumbing (i.e no trap), you should consult a licensed plumber

## If you notice smoke in your home or building:

- Do **NOT** become alarmed.
- Open doors and windows to ventilate the premises
- Contact city hall 218-476-2751 or 218-591-4333
- Simulated smoke will not stain walls or furniture; nor will it leave a residue
- Consult a licensed plumber in the near future to identify the smoke access area as the potential exists for sewer gasses to enter your home or building in the same manner.

## Safety/Health Issues:

- There is no danger of fire or explosion of sewer gas with the smoke testing process
- The City of Floodwood Police, Floodwood Fire Department and 911 Dispatch have been notified of the smoke testing
- Simulated smoke is NOT harmful to your health, but it may cause some coughing. Smoke irritation is temporary and should disappear after exposure has ceased. When possible avoid unnecessary exposure to the simulated smoke
- Simulated smoke is not harmful to pets, but it would be a good idea to leave several windows partially open for ventilation should smoke enter the building. If you have proper plumbing connections and all the drain traps have water in them, simulated smoke should not enter the building.
- If there is anyone in your home or building who has respiratory problems and/or mobility limitations please contact Floodwood City Hall 218-476-27551 before July 18, 2016.

**Thank you for your cooperation!**

## **What is Inflow and Infiltration (I/I)?**

**Inflow and Infiltration (I/I)** is the excess flow of clear water into the City's sanitary sewer system.

- **Inflow** is when clear water from illegal connections of sump pumps, downspouts, and foundation drains is channeled directly into sanitary sewer pipes.
- **Infiltration** is when groundwater seeps into sewer pipes via cracks or leaky joints.

Because the sanitary sewer system was not designed to handle this excess clear water, it becomes overloaded during times of high groundwater or heavy rainfall. This can cause basement flooding or bypassing of raw wastewater to local streams and lakes.

## **What's the problem?**

The excess clear water from I/I problems uses sanitary sewer capacity needed for wastewater. The result is **sewer backups** and **increased costs for needlessly putting clear water through the wastewater treatment process**.

## **I/I Inspection Program**

The City of Floodwood is planning to inspect homes and businesses in Floodwood to determine if roof drains, foundation drains, sump pumps and other clear water sources are connected to the sanitary sewer system. The goal of this program is to reduce excessive flows that entire the sanitary sewer system.

**Who is subject to inspection?** All properties in Floodwood will be inspected and required to be in compliance.

### **Compliance**

For properties that pass inspection, the City issues a Certificate of I/I Compliance to the property owner and keeps a copy on file at City Hall. Properties that don't pass inspection are issued a correction notice delineating the problems. City Code requires the repairs to be completed within 90 days. The City issues a Certificate of I/I Compliance upon a successful re-inspection.

## **I/I Problem Spots**

Roof drains and leaders direct storm water from roof gutters to the ground through pipes and downspouts. Roof drains should not be connected to the sanitary sewer but should discharge to the ground outside of a building. If your roof drains are connected to the sanitary sewer, disconnect them, plug any open connections to the sanitary sewer using a non-shrink permanent material, and redirect the roof drains onto the ground outside the building.

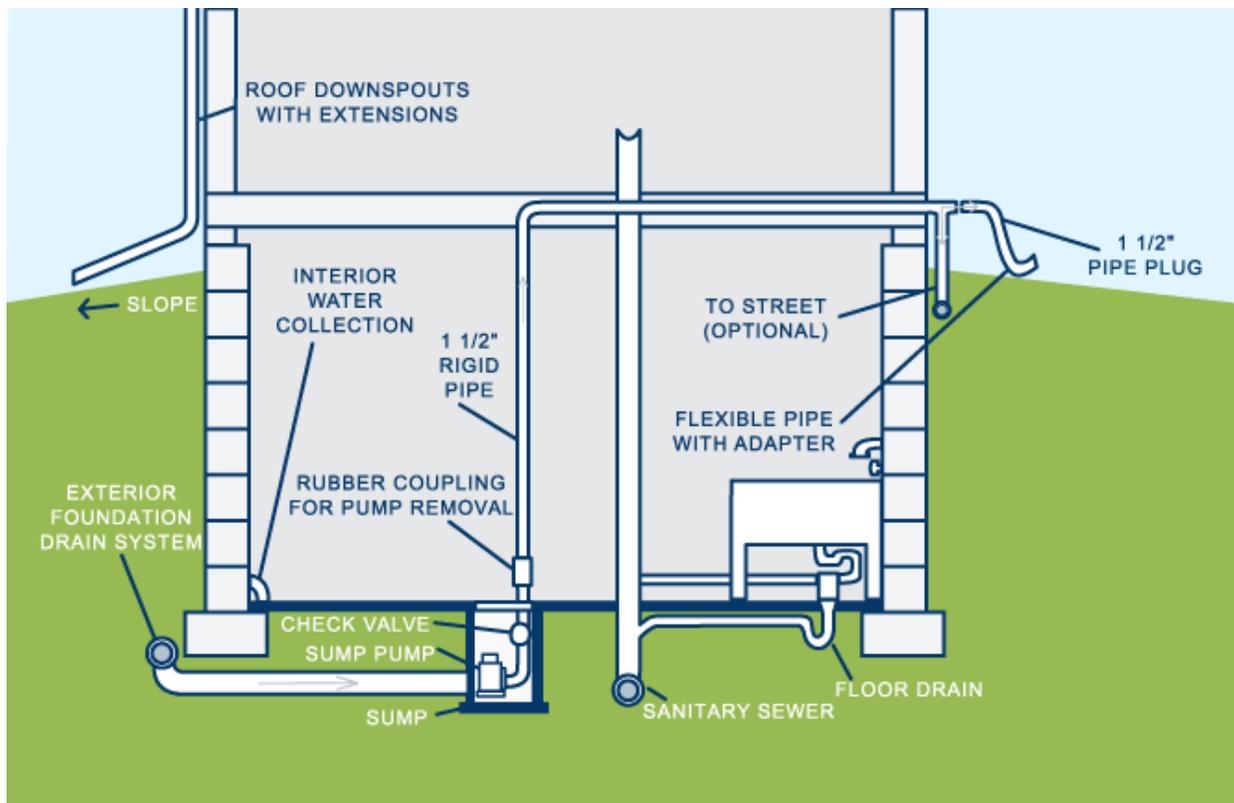
Foundation drains are underground pipes that collect storm water from around the base of a building and into a sump basket, where it is then pumped outside of the building. Foundation drains should not be connected to the sanitary sewer. If your foundation drain system is connected to the sanitary sewer, correcting the problem could be costly. The process could involve excavation to disconnect the foundation drain from the sanitary sewer and installation of a sump pump system. The new sump system must pump directly to the ground outside of the building or be connected to the City's storm sewer system.

Sump pumps: Sump pump systems are designed to capture surface or ground water that enters basements or crawl spaces and pump it away from the house. Cross connections (when sump pumps discharge into the sanitary sewer system) are against City ordinance and pose economic and environmental problems. Homeowners use sump pumps in their basements to battle moisture and flooding issues. The basic sump system includes drain tile, a sump pit (which extends below the slab and collects surface water that enters the basement/crawl space or groundwater that rises to the slab), a sump pump, a float or switch, and a drain line. The drain line should direct sump water out of your house and onto your yard (see illustration at bottom of page).

## **Why Are Cross Connections a Problem?**

**Clear water, such as that from a sump pump, overloads the sanitary sewer system.** During the rainy season (March through October), this clear water increases the flow through Floodwood’s sanitary sewer system one to two times the usual amount, primarily because of cross connections.

## **Redirecting Your Sump Pump Connection**



A proper sump pump connection. Sump pumps should drain directly onto the ground (preferably 20 feet from the house and not into a neighbor’s yard)