



Frequently Asked Questions (FAQ) Residential Footing Drain Disconnection Program

This FAQ is in the early stages of development. Up-to-date information will be added as the scope of the Footing Drain Disconnect Program and its details are developed. It is being released at this time as an aid to help understand the basics of how the program may work.

1. Why am I receiving this FAQ on this topic?

Answer: The City is in the early stages of designing a footing drain disconnection program (FDDP) as part of the Concept 5 Sanitary Sewer Improvements voted by City Council on March 10, 2021. The first step in this program is informing residents of the program's intent to increase capacity and improve the City's sanitary sewer system. This program will help avoid costly upgrades to the WWTP that would be required by the other alternatives presented to Council

2. Who is included in this program?

Answer: Projects that have been identified through flow monitoring and flow modeling in the Moorland and Whitewood areas. This program would include only the homes that were built in or prior to 1987 that are suspected to have footing drain connections to the sanitary sewer.

3. What is a footing drain?

Answer: Footing drains are external to the home and typically buried near the home's foundation. They collect groundwater from around the foundation to keep it from entering the home. These are sometimes connected to an internal sump pump or may be connected to the sanitary sewer lateral line outside of the home. Footing drains are not

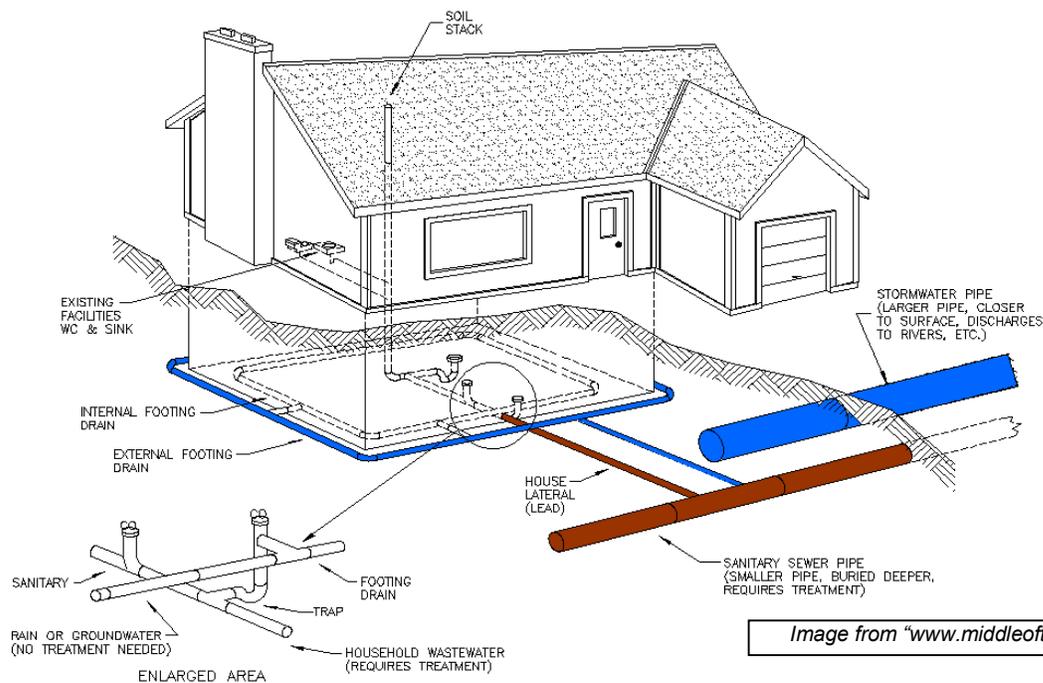


Image from "www.middleoftheleft.com"

visible from within the house; however a licensed plumber can quickly run a scoping camera down the lateral to determine if there is a connection between the sanitary sewer line and the footing drains. The City is not equipped to perform this inspection.

4. What are the potential impacts of connections like this to my property?

Answer: The primary danger is the potential for a damaging and expensive sewer backup to occur in your home. Excessive clear water entering the sanitary sewer collection system from footing drains and other illegal connections such as down spouts, yard drains, roofing drains etc. (Sewer ordinance **Sec. 28-110.2.**) in your neighborhood can overload the pipes and result in sewer backups through floor drains or fixtures, even if you do not have an illegal connection. If your home has a sump pump connected to the sanitary sewer, this is a source of clear water entering the system, as well as a potential outlet for sanitary sewage to enter your basement, and needs to be corrected.

5. What are the impacts of storm water and illegal connections to the sanitary sewer system?

Answer: Clear water sources, such as footing drains, take capacity away from and place stress on the sanitary sewer collection system. They can cause full pipes or surcharges, require excessive pumping, and have avoidable cost for the electricity and chemicals used to treat unpolluted water. Ultimately, these increase your bill as a utility rate payer.

6. When were footing drains removed from the sanitary system?

Answer: After October 26, 1987, any new installation of a downspout, weep tile, footing drain, sump pump discharge, or any other conduit that carries stormwater or groundwater shall not be allowed to discharge into the sanitary sewer, building sanitary sewer, or lateral sewer.

7. What does this program do?

Answer: Firstly, this program will assist homeowners in identifying if their footing drains are connected to the sanitary sewer. Secondly, it will separate the footing drains and connect the drainage to the stormwater system through the use of a sump pump. The particular details of the program are still in the design phase and will take into account homeowner input through public comment and targeted neighborhood meetings.

8. My basement doesn't flood, so why do I need to participate in this program?

Answer: The Wastewater Treatment Plant (WWTP) is designed to collect and treat wastewater, not stormwater or groundwater. The addition of stormwater and groundwater can overload the system, causing backups in lower-lying homes and/or sanitary sewer overflows (SSOs). The program is being initiated as a community solution to a community problem. The more homes that are disconnected, the greater the protection for the system. Removing clear water from the sanitary sewer system creates capacity for the collection system to convey the sewage, preventing backups into homes. This particular program also helps avoid other costly upgrades at the WWTP, which would require higher rates be charged to all system users.

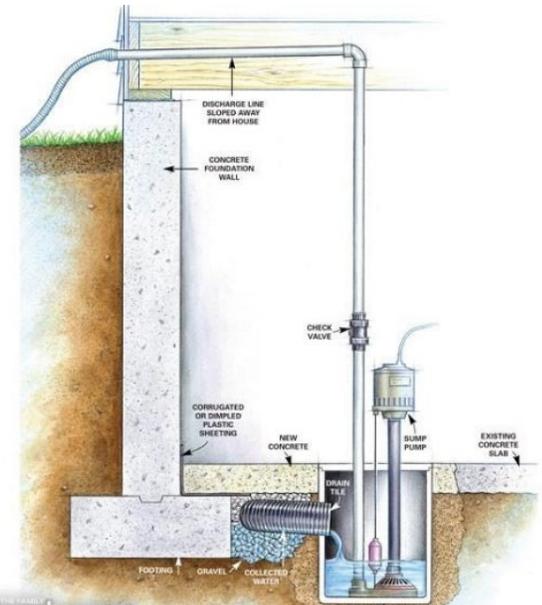
9. Why were the Moorland and Whitewood neighborhoods chosen as the first projects?

Answer: Sewer monitoring and modeling has been performed throughout the City and in each of these neighborhoods since 2018. Studies concluded that corrective actions for problems associated with basement backups in these particular areas were needed. The studies also concluded that a Footing Drain Disconnection Program was the appropriate corrective action for these neighborhoods in conjunction with the upsizing of some sanitary sewer pipes, sanitary sewer lining, and manhole rehabilitation.

10. What is a sump pump and how does it work?

Answer: A sump pump collects water from the footing drain around the house and directs it into a crock, usually located in the basement. The pump lifts the water up past a backflow valve, discharging the water to the outside. The water passes through an air gap and will flow by gravity into a buried 4" or 6" PVC pipe that will either connect to the City's stormwater system or discharge to a ditch or creek.

The air gap protects the home in the event the stormwater system is surcharged or flooded (in extreme cases) by allowing the sump to discharge to the exterior of the house into the lawn. The backflow valve prevents the water from flowing back into the home through the discharge pipe. In the event of widespread overland flooding, it would prevent water from entering through the discharge pipe; however, if this were the case, water would likely already be entering the home through window wells or other vents.



Example doesn't show 4" or 6" buried PVC line and associated air gap.

11. What type of work at my home will be included in this disconnection program?

Answer: The particular details of the program are still in the design phase and will take into account homeowner input through public comment and targeted neighborhood meetings; however, the basic elements of work will include:

- Initial inspection of footing drain and property (identification and estimate)
- Disconnection and rerouting of footing drain (if connected to the sanitary)
- Standard sump crock and sump pump installation with check valve and air gap.
- Installation of sump pump discharge piping to the stormwater system or to a drainage area.
- Basic restoration of interior and exterior work areas, including lawn reseeding and, if necessary, restoring the floor, ceiling surface, or drywall patching.

12. Will my floor drain still work?

Answer: Yes. The floor drain will still be operational, unless it drains into the footing drains. Then it must be abandoned per plumbing code.

13. Who pays for the disconnection?

Answer: The City will cover all costs for the plumber to perform the tasks associated with the homeowner property up to \$7,500.00. If the quote comes back above \$7,500, the City will request that the homeowner obtains another quote or the designated program director

will approve the higher quote on a house by house basis given possible unique circumstances surrounding a particular house.

14. What is the scope of an FDDP for your home and what is covered by the City?

Answer: The scope of the FDDP within homeowner property boundaries is defined as the following:

- Basement floor demolition
- Sump crock installation
- Sump pump installation
- Electrical connections
- Footing drain tie-in to sump crock
- Sanitary lateral backflow preventer, if applicable (refer to next section)
- Sump pump discharge piping, check valve, shut-off valve
- Internal home restoration, as necessary
- Discharge air gap external to home
- Underground piping from air gap to property line connection to City-owned lateral
- Underground piping from air gap to drainage ditch daylight in backyard, when applicable, including rip-rap
- Turf re-establishment and basic landscaping repair
- Small tree and shrub removal, if applicable

All of these items will be covered by the City within the \$7,500 cost threshold for the plumber.

15. Are backflow preventers an option? What is a backflow preventer, who pays for its installation, and who is responsible for maintenance?

Answer: If a homeowner desires a sanitary sewer lateral backflow preventer to be installed, the City will cover the costs for the plumber to install one. These will help prevent sewage from backing up into the basement if the downstream sewer is full of water. These require routine maintenance and will be the responsibility of the homeowner to maintain these devices.

16. What is the surcharge for non-participating homes?

Answer: The surcharge for homes that elect to not participate was calculated based on two categories:

- Conveyance and treatment of clean water
- Additional capital costs needed to maintain the same level of capacity as a complete FDDP (i.e. what pipe size upgrades and/or lift station upgrades would be required to maintain the same pipe capacity within the system as will occur with a complete FDDP)

The total of these two categories resulted in a surcharge of \$94.34/month, which would be added to your current sewer bill.

17. What other communities have had success with the implementation of an FDDP?

Answer: Grand Rapids, Grandville, Georgetown Township, Durand, Monroe, Dundee, Wakefield (all in Michigan).

18. When will more information be available?

Answer: Public information meetings will be held starting in late 2021 in the program neighborhoods. As the program is developed, meetings will be held publicly through City Council meetings and posted to the City's website.

Some Specific Homeowner Scenarios:

19. I have a visible floor drain in my basement but no sump pump. Am I in compliance?

Answer: Floor drains are typically connected to the sanitary system, which is permitted. An inspection will still need to determine if there are footing drains connected to the sanitary sewer system.

20. I have a visible sump pump and it discharges the water through my basement wall onto my yard (or into a ditch or creek). Am I in compliance?

Answer: Yes. A sump pump that discharges unpolluted water to the exterior of the house into a drainage area or storm drain is permitted. Only sump pumps that discharge to the sanitary sewer line are illegal. However, a yard discharge shall not negatively affect a neighbor, sidewalk, or street as these can cause ice buildup or ponding water.

21. If I have a newer home, am I in compliance?

Answer: Homes built after 1987 were required to be separated upon construction. Only homes built in 1987 and prior that are suspected to have footing drains connected are included in this program.

22. I currently experience water in my basement. Will the disconnection program solve this problem?

Answer: The disconnection program is designed to improve the Level of Service of the sanitary sewer system in the program neighborhoods. It will prevent homes that experience problems as a result of heavy rain, including 25 year/24 hour events, from experiencing basement backups by eliminating sanitary sewer surcharges from these events. The disconnection program will not solve problems associated with leaks in basement walls or floors, poor site drainage, or blockages in footing drainage pipes. It will not protect from overland flooding events when surface water enters homes.

23. Is an exterior sump pump installation possible to minimize disruption to the interior of my home?

Answer: Although an exterior installation may be possible, an interior installation is the preferred method as it is easier to maintain and generally more economically feasible. Installation location must be determined on an individual basis by the plumber doing the initial investigation and providing the estimate.

For more information on this topic, please email footingdrains@midland-mi.org using the subject "FDDP." Please leave your questions and preferred contact information so staff can respond to address your concerns.