



CSO CONTROL PROGRAM

www.cityoflansingmi.com/cso
Inflow Helpline: 517.394.5577

— WE NEED YOUR HELP! — Property Owners' Responsibilities

Inflow sources must be removed from your property prior to CSO construction in your area. The City will mail you multiple reminders, giving you plenty of time to budget and complete the work:

- First notice: 18 months prior to construction
- Second notice: 10 months prior to construction
- Third notice: 1 month prior to construction
- Final notice: 3 days prior to construction on your street
- Notices of non-compliance: fines and increased property owner costs can result if inflow sources are not removed prior to construction

The most common correction, downspout disconnection, is explained in detail on the inside of this brochure, and costs around \$25 to complete (per downspout). You can easily complete this work on your own by following the instructions provided.

Other common sources of inflow are shown on the back page of this brochure. Here are approximate costs to remove some of these sources: Catch Basins and Patio Drains: \$30 per foot of new pipe; Sump Pump Disconnections: \$8 per foot of new pipe. These more complex inflow removals may require the assistance of a professional contractor.

Inflow removal isn't something you usually have to deal with, so the City has established a helpline to answer questions and offer advice on how to identify and remove inflow. Call 517.394.5577 and a representative will be happy to help you! More detailed information is also available on the City's web site at: www.cityoflansingmi.com/cso.

The City of Lansing thanks you for helping to remove inflow sources. Working together, we can achieve our environmental protection and economic revitalization goals more quickly!

What is Inflow?

Inflow is rainwater that enters the sanitary sewer system through:

- "Disappearing" Roof Downspouts
- Catch Basins
- Loading Dock Drains
- Internal Roof Drains
- Yard and Patio Drains
- Pumped Footing Drains

This excess flow can lead to:

- Basement Backups
- SSOs: Sanitary Sewer Overflows
- Unnecessary costs to treat rainwater

Rainwater doesn't need to be treated, so it makes economic sense to remove inflow. As part of the Combined Sewer Overflow (CSO) Control Program, every property owner becomes part of the environmental protection team and is required to remove all sources of inflow from their private property and to cover associated costs.

This brochure will help answer some frequently asked questions and provide resources for additional information.



Help Protect Our Rivers!

DOWNSPOUT DISCONNECTION

Anyone can learn how to disconnect a downspout from the sanitary sewer system and redirect it onto the lawn. All you need are a few supplies, and these instructions. Remember, you can always call the Inflow Removal Helpline, 517.394.5577, if you have a question. This work does require a daytime temperature of 50 degrees or greater for proper concrete curing (read concrete mix instructions before proceeding.)

Tools Needed:

- Hacksaw
- Tape Measure
- Hammer
- Screw Driver
- Pliers
- Pencil

Supplies Checklist:

- Sheet Metal Screws
- Downspout Bracket and Elbow
- Downspout Extension, Splash Block
- Thin Wire Hangers (2)
- Stack of Newspaper
- Concrete Ready Mix

Safety Gear:

- Eye Protection
- Work Gloves and Disposable Gloves



Believe it or not, a single downspout left connected to the sanitary sewer can lead to a basement backup at a neighbor's home!

— Removing the #1 Source of Inflow —



Step A: Disconnect the Downspout

- 1.) Measure nine inches from where the downspout enters the sewer pipe and mark the spot with a pencil.
- 2.) Cut the downspout with the hacksaw, being careful not to cut into the siding (place some newspapers in-between to prevent damage.) The cut edge will be sharp. If there isn't a bracket securing the downspout to the siding, attach one a few inches above the cut using the sheet metal screws, leaving enough room to attach the new extension. Now that you have removed the downspout from the sewer pipe, you need to permanently plug the sewer pipe opening.



Step B: Plugging the Sewer Pipe - Wire Basket Assembly

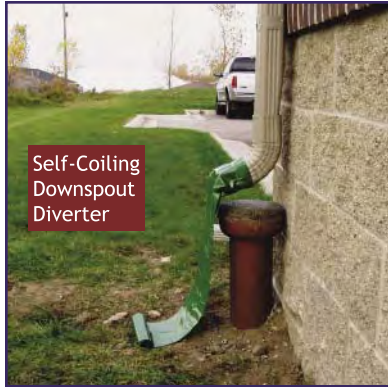
The City requires a permanent plug for the abandoned sewer pipe opening. If the abandoned pipe is raised and you want it closer to the ground to cover it with landscaping, start by cutting the pipe to ground level, being careful not to drop anything into the sewer pipe opening. Once the pipe is at the desired height, make a wire "basket" to hold crumpled newspaper and a concrete plug inside the sewer pipe, as explained below.

- 3.) Using the pliers, cut off the tops of the two hangers. Bend each hanger piece into a long "U" shape, about 15 inches long on the sides, and about 3 inches across on the bottom. At the top of each "U," bend the ends outward to create hooks. Place the base of one "U" on top of the other to form a cross. Use a piece of scrap wire (or a twist tie) to secure the midpoint. You now have a wire basket.
- 4.) Place the basket inside the sewer pipe, securing it to the sides with the hooks, and bending it to fit, as needed. The four hooks should be evenly spaced around the pipe and the bottom should form a cross to hold the newspaper in place.
- 5.) Starting at the bottom of the wire basket, fill the pipe with tightly crumpled newspaper. Leave about six inches at the top for the concrete plug.





Flexible Extension



Self-Coiling Downspout Diverter

DOWNSPOUT OPTIONS: The cheap and the innovative

There's nothing wrong with using a simple downspout elbow and extension, but sometimes a different solution is needed. Here are some other options for redirecting the rainwater from your downspout. They are available at most home improvement centers.

- Self-Coiling Downspout Diverter: expands when it rains, rolls out of the way when dry.
- Swivel/Flip Downspout Extender: Swivels in any direction to control drainage, flips up and out of the way for mowing.
- Flexible Extensions: Can be routed around objects or buried underground.
- Gargoyles/Decorative Diverters: Make sure these decorative items still drain at least four feet away from the foundation.

Make it Fun!
**HOLD AN
INFLOW REMOVAL
BLOCK PARTY!**

- ❑ Pick a warm day, invite your neighbors
- ❑ Buy one 80# bag of concrete for everyone to use
- ❑ Share your tools and knowledge
- ❑ Ask the kids to help crumple newspaper
- ❑ Call the Helpline for support: 517.394.5577

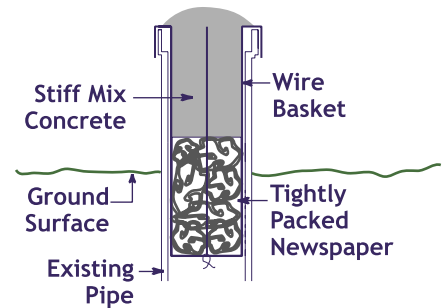


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Steps B and C: Sewer Pipe Plug Detail



Step C: Plugging the Sewer Pipe - Concrete Plug

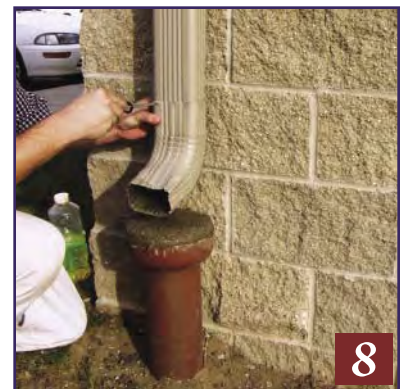
It is least expensive to purchase an 80-pound bag of concrete and share it with your neighbors.

- 6.) Follow package instructions, and prepare a stiff concrete mix. The concrete should not be runny, it should hold the shape of the cup you are using (like a sand castle).
- 7.) Fill the top of the pipe with the stiff mix. Be sure to wear disposable gloves; cement can burn your skin. The plug should be secure and not be able to turn or be removed.

Step D: Attaching the Downspout Extension

There are many downspout extension options available to suit a variety of needs. Below are general instructions for the most basic installation.

- 8.) Attach the downspout elbow.
- 9.) Add the extension and place it on top of the splash block to route water away from the building. It is recommended that water drain at least four feet away from the building.



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CONGRATULATIONS!
YOU'VE REMOVED A MAJOR SOURCE OF INFLOW!



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FREQUENTLY ASKED QUESTIONS

Why do I need to do this? The City is in the middle of a 30-year program to separate its combined sewer system. This is required to prevent combined sewage overflows into the Grand and Red Cedar Rivers. Once the system has separate sanitary and storm sewers, all rainwater will need to be directed to storm sewers, or basement backups could occur. Believe it or not, a single downspout illegally connected to the City's sanitary sewer can lead to a basement backup at a nearby home! Each property owner is responsible for making sure that all sources of water from their property are routed to the correct pipe.

Do I have to remove inflow sources from my property? Yes. By law, (City Ordinance 1040.10) property owners cannot discharge "stormwater, surface water, ground water, roof run-off, cooling water, or unpolluted industrial process waters into any sanitary sewer." State of Michigan Public Act No. 4 of 1998 also requires immediate disconnection of eaves troughs and downspouts from the combined sewer system.

Am I responsible for the costs associated with removing inflow from my property? Yes, but the City is helping by providing a free helpline for property owners who have questions or require advice on how to remove their inflow. Call 517.394.5577 for assistance.

Will I need to hire someone to do the work? Most inflow removal projects are easy enough for a do-it-yourselfer to complete. See the instructions inside this brochure and find more information at www.cityoflansingmi.com/cso. However, there are some more complicated inflow source removal projects (driveway drains and patio drains) that will require a permit and a licensed contractor. Call the Helpline, 517.394.5577, for assistance.

When do I have to complete the work? Inflow sources must be removed before construction for the CSO Control Project begins in your area. A notice and detailed schedule will be mailed to you, but consider removing inflow sources immediately.

What happens if I don't complete the work? A project representative will inspect your property when construction begins in your neighborhood. If your property has improper inflow sources, you must correct them within 15 days. Properties remaining in violation will face fines and other penalties.

What if I'm not sure what I have to do? Call the Inflow Removal Helpline at 517.394.5577 for friendly advice and assistance. Most inflow disconnections are easy to do, and we will be happy to help you learn how to do it!

Where can I get more information? The City of Lansing's Public Service Department is committed to providing outstanding customer service, including ongoing public outreach activities and easily accessible information.

- www.cityoflansingmi.com/cso has more detailed inflow removal, up-to-date project information, contacts, and much more.
- **517.394.5577 Inflow Removal Helpline**
Call the Helpline for advice, answers and coordination for completing private property inflow removal.

FACT: Every downspout can deliver up to 12 gallons of rainwater a minute during a heavy storm. Downspouts left connected to the sanitary sewer burden it with millions of gallons of rainwater!

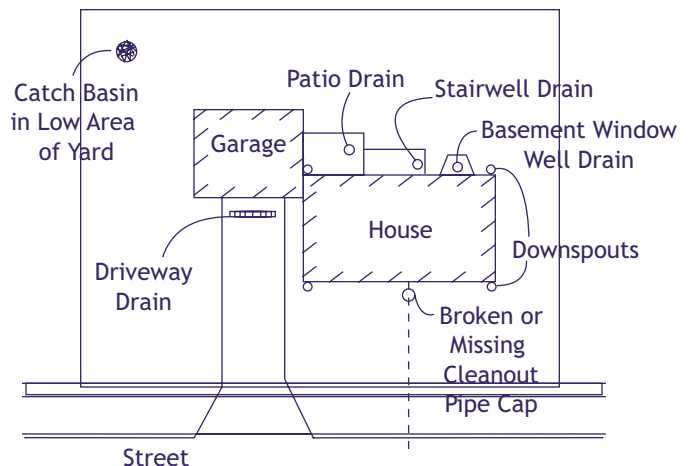
OTHER INFLOW SOURCES: Learn to identify them

There are a number of other ways rainwater can enter the sanitary sewer system besides downspouts. It is important that **ALL inflow sources be identified, removed, and redirected.** To make sure this happens, and that the storm sewers in your area are designed to serve your needs, property owners will be asked to complete a pre-design questionnaire prior to construction in their area.

To complete the questionnaire, review the diagram to the right, then walk around your home and identify any potential inflow sources to be removed. Note these findings on the pre-design questionnaire, and return it to the City by the due date. To ensure all sources are identified, City inspectors will visit your neighborhood.

One typical problem to look for, besides disappearing downspouts, is a broken or missing cleanout pipe cap. Caps can be easily broken if hit by a lawn mower. Replacement caps are inexpensive, easy to install, and readily available at hardware or building/plumbing supply stores. Some cleanout pipes are buried. It's important to locate yours and make sure it's capped.

For a more detailed description of typical inflow sources, please go to www.cityoflansingmi.com/cso. If you do not have web access, please call 517.394.5577 for assistance.



TOGETHER, WE CAN PROTECT OUR RIVERS!