

# Basement Flooding

Helping homeowners understand the cause, prevention and cleanup methods for basement flooding.



City of East Lansing  
Department of Public Works  
(517) 337-9459

[www.cityofeastlansing.com/dpw](http://www.cityofeastlansing.com/dpw)



Is your basement flooded? Call the East Lansing Department of Public Works at (517) 337-9459 or (517) 351-4220, option 1 (after-hours emergency calls).

Basement flooding is a source of frustration and stress for everyone involved. The City of East Lansing is a resource for information regarding the potential causes of flooding, the effects on your home, how to recover from the damage it may cause and how to reduce the risk of it recurring.



## DETERMINING THE CAUSE

The first step in preventing flooding is to understand the most common causes. The three most prevalent reasons for flooding are:

### 1. Groundwater seepage through the basement walls

- Groundwater seepage is the most common contributor to basement flooding.
- Flooding is caused by heavy rains or snow melting and high groundwater levels around the basement walls.

#### Prevention

- Keep water away from the foundation by making sure gutters are clean, down spout extensions are installed and in good condition and all ground surfaces adjacent to the home slope away from the foundation.
- Look for cracks in basement walls and poorly functioning drains. Implement waterproof seals where necessary.

## Are you insured?

Homeowner's or renter's insurance can protect you against some flooding damages, but not all.

Understanding your insurance policy is very important. Read your policy carefully and, if you have questions, contact your insurance agent.

Policies vary among insurance carriers. Determine whether adding flood damage protection to your insurance would be a good decision for you. Without this insurance, you will be responsible for all costs associated with most flooding damage and repairs.

- Consult with a foundation contractor for all of the options available for your situation.

### 2. Surface Runoff

- Surface runoff can result from water entering a home through exterior openings, such as window wells, vents or exterior stairwells.
- Heavy rains or snow melt, along with a poorly graded ground surface, can create surface runoff.

#### Prevention

- Properly seal any exterior opening to the basement, including windows and vents.
- Keep water away from the exterior foundation openings by making sure gutters are clean, down spout extension are installed and in good condition, and all ground surfaces adjacent to the home slope away from the foundation.
- Consider raising window wells above the anticipated outside water level.

### 3. Sanitary Sewer Backup

- Sanitary sewer backups can be caused by backups in private sewer lines (also known as lateral sewer lines).
- Blockages in laterals, which cause backups, can be caused by improperly discarded items (ie. trash, grease, paper towel, etc.), obstructions from tree roots and/or collapses in pipes. Footing drains and sump pumps connected to the sanitary sewer lateral cause it to become overloaded.
- Backups can also be caused by obstructions in public sewer lines or extreme wet weather.

#### Prevention

- Check lateral sewer lines on a regular basis for blockages and root damage.
- Sanitary sewer laterals and sewer pipes are designed to carry wastewater with toilet paper and minor amounts of food waste that are properly run through a disposal.
- Keep grease, paper towels and trash out of your sewer lines.

## OTHER PREVENTION OPTIONS

In addition to some of the previous prevention tips, there are a few other options to reduce the risk of sewer backups. Always consult a licensed plumber to evaluate which options may be most effective. A permit may also be required, so check with the City prior to making changes. Here are the pros and cons of other prevention options:

### 1. Floor Drain Plug

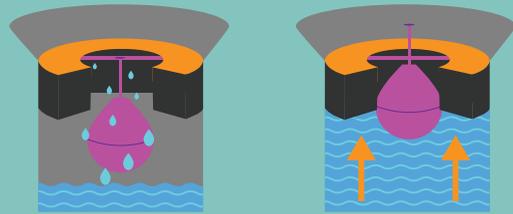
- It is inexpensive and easy to install.
- Float plugs help prevent backups, but allow the drain to function during normal circumstances.
- Requires regular maintenance.

## 2. Standpipe

- It is inexpensive and easy to install.
- Functions as a small drain extension that prevents minor flooding.
- Standpipes only protect up to the height of the standpipe, normally less than three feet.

## 3. Backflow Preventer / Check Valve

- It is fully automatic.
- Closes the valve when the City's sewer becomes full.
- Prevents the main sewer line from backing up into the basement.
- When closed, you cannot use water in your home due to your drain being closed off from the City sewer.
- Requires regular maintenance.

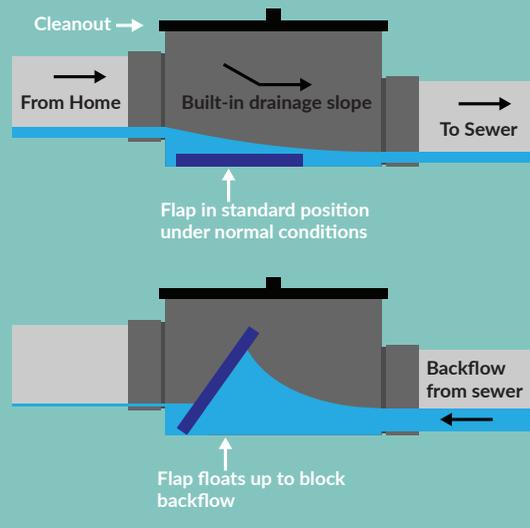


## FLOOR DRAIN BACKFLOW PREVENTER EXAMPLE

A floor drain backflow preventer protects individual drains, but requires regular inspection and maintenance. They can become stuck in the closed (up) position, preventing water from exiting the floor drain. To fix the problem, tap the ball once with a screw driver and clean the material on the ball that caused it to stick. These only protect one drain and the water will seek out the next lowest overflow point, such as another floor drain, shower drain or toilet.

## WHOLE HOUSE BACKFLOW PREVENTER EXAMPLE

This whole house backflow preventer is installed on the main sanitary lead exiting the property. These can work well, but require regular maintenance. If not cleaned and maintained regularly, the hinge can get gummed up and stop working. In addition, waste material can accumulate on the seal, preventing it from sealing completely. If things like rags and paper towels are flushed down the toilet, they can get caught on the flap, causing it to remain significantly open during a storm event. All of these issues can be minimized with regular inspection and maintenance.



## 4. Sewage Ejector Pump

- Pumps sewage to the public sewer.
- Installed under the basement floor or outside the home.
- The most effective and reliable system for preventing sewer backups.
- Requires maintenance and electricity to function.

## HEALTH & SAFETY

If your basement has flooded, please keep the following tips in mind when cleaning up:

- Contact your insurance company and a qualified restoration contractor prior to initiating cleanup.
- Protect yourself from exposure by wearing protective equipment, including gloves, boots and eye protection.
- Clean and disinfect the area as soon as possible. Disinfect all areas and equipment that come into contact with flood water with a solution of eight tablespoons of liquid chlorine bleach per gallon of water. This will remove odors and bacteria.
- Discard small items exposed to sewage. Take photographs of ruined items for insurance claim purposes. Move undamaged items away from the sewage to avoid spreading the damage.
- Remove damaged drywall within 24 hours. This will help eliminate the growth of mold.

### DO NOT:

- Don't allow children to play in the basement until it has been thoroughly sanitized.
- Don't track sewage into other areas of the house.
- Don't carry or place cleaning gear and equipment in other parts of the house without sanitizing.
- Don't use heat to dry building interiors. This may cause mildew and additional damage.
- Don't clean electric appliances and duct work yourself. This exposes you to risk of electrocution. Call a qualified service technician to clean these and inspect all appliances before using them again.

## CITY RESPONSIBILITY

### Municipal Liability for Sewage Disposal System Events

When is the City responsible for damages? Act 170 of 1964, as amended by Public Act 222 of 2001, generally provides municipalities with governmental immunity from basement flooding damages, unless an East Lansing property owner can demonstrate all of the following:

- The City of East Lansing is the appropriate governmental agency.
- The public sewage disposal system had a defect.
- The City of East Lansing knew about the defect or, in the exercise of reasonable diligence, should have known about the defect.
- The City of East Lansing failed to take reasonable steps in a reasonable amount of time to repair, correct or remedy the defect.
- The defect was a substantial proximate cause of the event and the property damage or physical injury.

The public sewer system is not considered defective if the sewage backup was caused by a rain event greater than what the sewage system was designed to carry.

If you believe you have fulfilled the above eligibility requirements, please contact the administrative assistant at:

East Lansing Finance Department  
410 Abbot Road  
East Lansing, MI 48823  
(517) 319-6911

Once the required information is received, the City will conduct an assessment of the claim and damages.