

# Wet or Damp BASEMENTS

## CAUSES AND SOLUTIONS

Basement wetness or dampness may occur for a variety of reasons, but in many cases can be reduced or eliminated.

### CAUSES

- Cracks, holes or other leaks in basement walls, floors, windows or doors.
- Failure of foundation drains (footer tile).
- Inadequate or improper lot drainage.
- A backup of wastewater in the municipal sewer system, or a combination of wastewater and rainwater from the sanitary or sewer system.
- Overflowing gutters.
- Leaking or plugged gutter troughs or downspouts.
- Blocked sewer lateral that connects a building's plumbing system to the municipal sewer system. Tree roots and failed tile frequently cause sewer lateral blockages.
- City sewers and sewer laterals are often bedded in stone and laid in trenches. Groundwater can collect in the stone-filled trenches around these pipes, which may serve as conduits for groundwater to enter building foundation drainage systems. When this occurs, sump pumps may have inadequate capacity to handle groundwater volumes.
- Power outage or failure of sump pumps used to remove water from foundation drainage systems.
- Power outage or failure of municipal sewer pump/lift stations used to pump stormwater or wastewater from a lower elevation to a higher elevation, causing sewers to fill and back up into buildings.



### SOLUTIONS

- Check for and repair/seal cracks, holes and leaks in basement walls, floors, windows and doors.
- Ensure downspouts drain freely onto lawns or into rain gardens, ideally at least six feet from the structure.
- Repair/replace damaged foundation drainage systems.
- Ensure building insurance coverage includes adequate flood insurance.
- Disconnect downspouts and sump pumps from sewers and drain onto lawns or rain gardens.
- Clear overflowing eaves troughs and downspouts of leaves or other debris.
- Install a check valve in the building's sewer lateral to prevent sewer backups from entering the basement.
- Regularly inspect basement protective devices such as check valves, sump pumps, and caps to ensure proper operation. Disconnect floor drains outside foundation.
- Make sure the grade around buildings allows water to drain away from basement walls and foundations.
- Consider soft surface landscaping (i.e., increased grassy or mulched areas, porous pavement) that allows stormwater to soak into the ground instead of entering the municipal sewer system.
- Do not plug sewers by disposing of grease in drains or flushing objects down toilet.
- Construct bentonite or clay dams around sewer laterals to prevent groundwater from following sewer trenches into foundation drainage systems.



### If you have a SUMP PUMP check the following



- Verify the sump pump discharge line is equipped with a working check valve.
- Disconnect sump pumps from sewer laterals and instead direct the discharge onto the ground away from the building or into a rain garden.
- Install a backup sump pump. Pumps and motors can and sometimes do fail when needed. Backup pumps may be powered by electricity, batteries or City water pressure. Battery and City water pressure types are designed to operate during power outages. Local plumbers can assist with selection and installation of backup sump pumps.
- Install a basement water detector, which can be purchased at many hardware stores.

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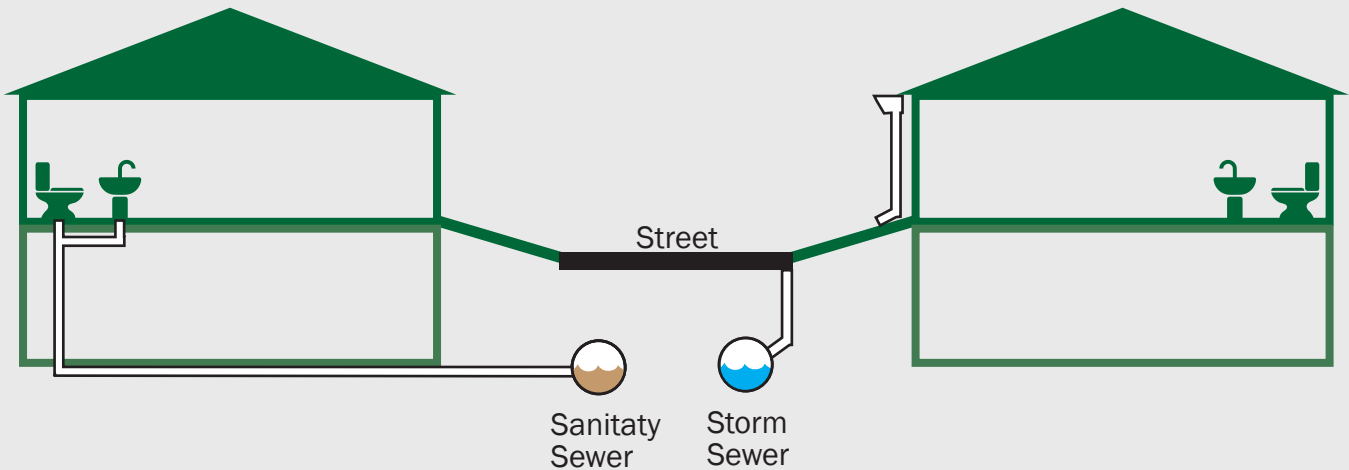
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### SANITARY

Wastewater (sewage) produced through use of plumbing fixtures (such as toilets, sinks, bathtubs, showers, etc.) is moved through a sanitary sewer lateral from the building to municipal sanitary sewers, typically located under or near streets. Sanitary sewers carry wastewater by gravity and the use of lift stations to the Wastewater Treatment Plant.

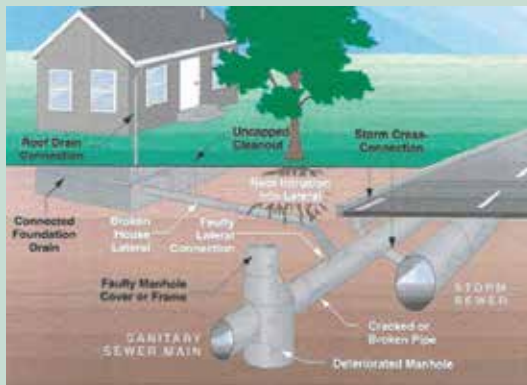
### STORM

Storm sewers collect rainwater and melting snow through catch basins, eaves troughs, downspouts, foundation drains, etc., and carry this stormwater to detention ponds, local ditches and nearby streams. Typically, stormwater is moved by gravity sewers, but in some cases stormwater pump/lift stations are utilized.



### The Problem: Inflow & Infiltration (I/I)

I/I occurs when ground water and storm water enters into the sanitary sewer. This can happen through leaking components or through improper connections such as downspouts, sump pumps, and drains.



### What to do if you experience a wet basement:

- Remove valuables from wet and damp areas.
- Verify proper sump pump operation.
- Call City of Lima Utilities Dept. at (419) 221-5294 and report the problem.
- Call a local plumber if additional pumping assistance is needed.
- Take photographs to document what occurred. This will help evaluate and solve problems.

**Direct any questions to the City of Lima Utilities Department.  
(419) 221-5294 - [www.cityhall.lima.oh.us](http://www.cityhall.lima.oh.us)**