

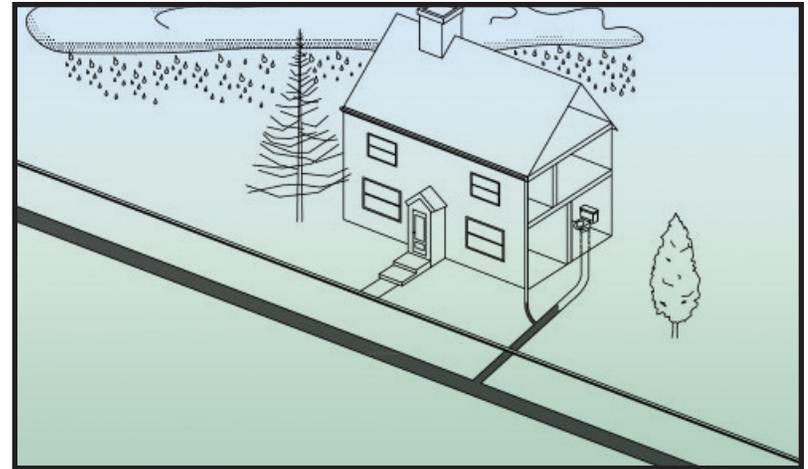
# What You Can Do to Improve Water Quality

**Everyone is concerned about the future of our environment. Almost every day, we hear stories about polluted water and the negative effects on people's lives. You may be able to help at home.**

Our sewer system is designed to send sewage to the wastewater treatment plant, however, these sewer pipes are not large enough to handle stormwater. When it rains, excess water enters the sewer system and, in extreme cases, the sewers can fill to the level where the raw sewage can exit the sewers and cause backups into streets and people's homes, or flow directly into ditches and streams. The sewage introduces potentially harmful bacteria and viruses into the environment.

High flows in sewerage systems can be caused by a number of factors. Some of these include non-sanitary flows directed to the sewers. These can include roof drains, sump pumps, open-ended cleanouts, yard and driveway drains, deteriorated service connections, and basement perimeter drains. Discharge of these non-sanitary flows into the public sewer is prohibited by the sewer use ordinance.

The following pages help to explain each of these potential situations, and offers suggested solutions.

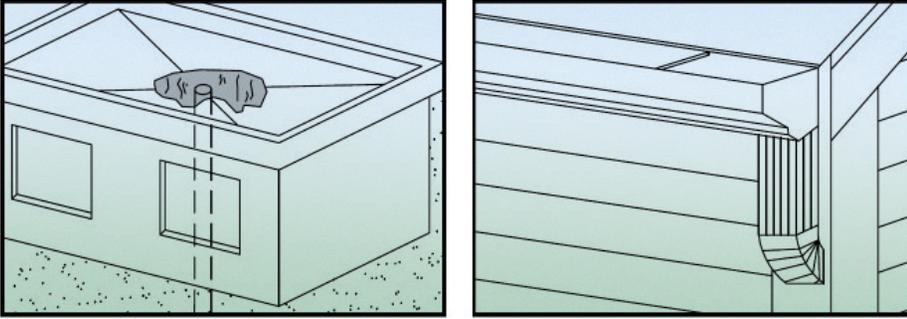


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# ROOF DRAINS

## The Problem



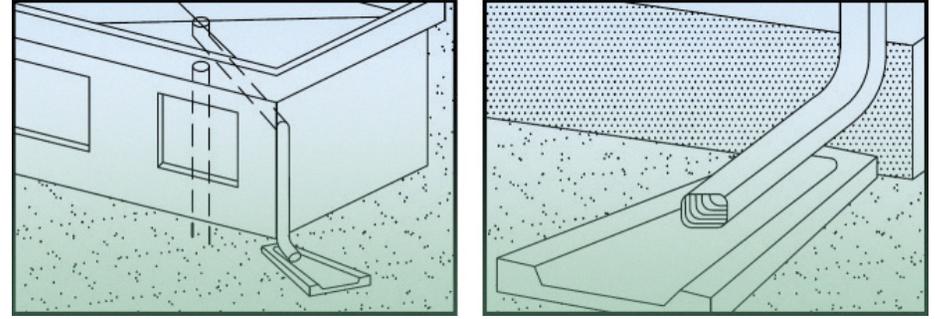
If the roof drains, gutters, and/or downspouts on your building are connected to the sewer service, the rain that falls on your roof runs quickly into the sewer, using storage and conveyance capacity of the sewer pipe, and adding to the problem.

### How to Correct this Problem

Observe where your downspouts connect into the sewer system. This connection is usually either a pipe that bends and goes into your house, or goes directly underground with no visible outlet.

1. If the downspout enters your house by a pipe, pull the downspout out of that pipe. Remove the pipe that goes into your house and seal the hole by securing a cap or mortaring it closed with concrete so no rainwater can get into it.
2. If your downspout goes directly underground, dig around the pipe to expose the point where you can pull the downspout out of the pipe. Remove the downspout and either secure a cap or mortar it closed with concrete. You should contact the Town for an inspection before backfilling over the sealed pipe.
3. Redirect the downspout as far away from your house as possible so water running off it will drain away from your building and windows. You may want to place a concrete or plastic splash pad at the end of the downspout outlet to prevent erosion. Try to avoid running water directly across sidewalks or other walkways.

## The Solution



Once corrected, your roof drains, gutters, and/or downspouts will drain onto your property. The pipe that previously connected to the sewer service will be securely blocked to prevent any rainwater from entering the sewer.

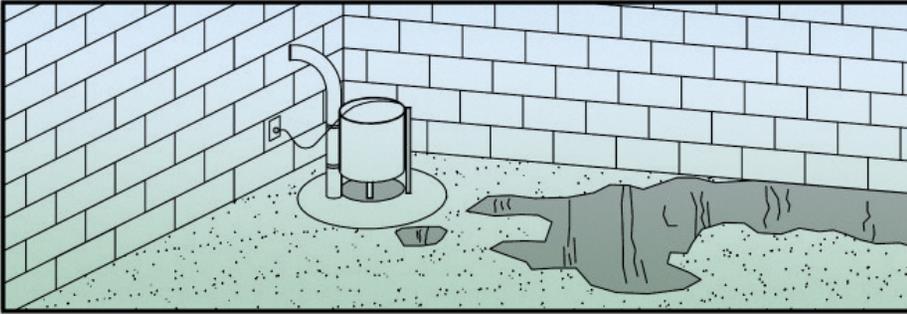
### Other Creative Solutions

For those property owners interested in taking this project a step further, we offer these creative solutions.

- Store the water in a trough and use it to water flower boxes and/or vegetable gardens.
- Rain barrels are especially appropriate storage containers in historical districts.
- You might choose to redirect the water by building a stone ditch leading to a flower bed or vegetable garden.
- Not a gardener? Create a small pond, being sure to allow for overflow in the construction, or redirect the water to a natural drainage area

# SUMP PUMPS

## The Problem

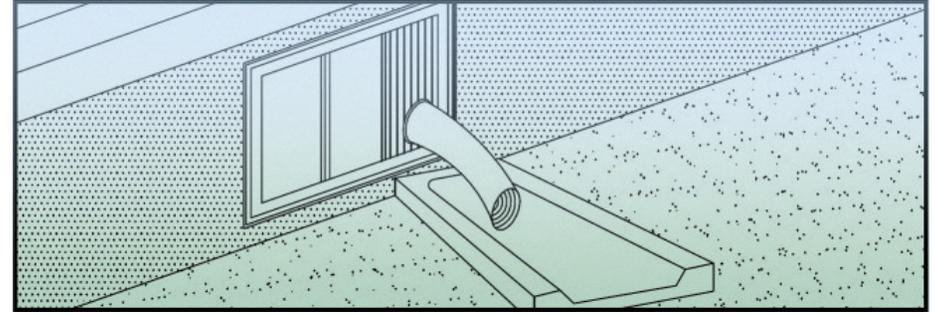


A sump pump is designed to collect groundwater that seeps through basement walls and foundations. During wet weather, the sump pump forces water into a sink or other direct connection to the property's sewer service. The water from the sump pump quickly enters the sewer, using storage and conveyance capacity of the sewer pipe.

## How to Correct this Problem

1. Determine what your sump pump collects and where it outlets. If your sump pump collects any wastewater, such as from your washer or sink, contact the Town for further instructions. If only groundwater enters the pump, follow the instructions given below.
2. Redirect the pipe leaving your sump pump to the outside, possibly through a basement window. Replace the closest basement windowpane with a piece of plywood, sheet metal, etc. Cut a hole to match the size of the outlet pipe. Run the pipe through the hole and caulk any gaps between the pipe and the opening.
3. If no basement window exists, or is too far from the sump pump, drill a hole through the sill of the building (the vertical wood piece that sits on top of the foundation wall). Outlet the pipe through this opening, and caulk any gaps between the pipe and the opening.
4. Extend the outlet pipe as far away from your house as possible so water running off it will drain away from your building and windows. You may want to place a concrete or plastic splash pad at the end of the downspout outlet to prevent erosion. Try to avoid running water directly across sidewalks or other walkways.

## The Solution



Once corrected the outlet pipe of your sump pump will exit your building, draining onto your property.

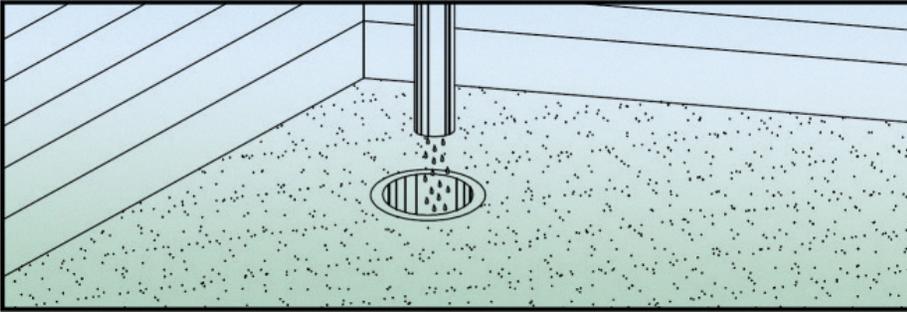
## Other Creative Solutions

For those property owners interested in taking this project a step further, we offer these creative solutions.

- Store the water in a trough and use it to water flower boxes and/or vegetable gardens.
- You might also try storing the water in an underground tank fitted with a pump for access.
- Your land may be suited for an underground dry well, a large gravel area that holds the excess water until it can be absorbed into the surrounding soil.
- You might choose to redirect the water by building a stone ditch leading to a flower bed or vegetable garden.
- Not a gardener? Create a small pond, being sure to allow for overflow in the construction, or redirect the water to a natural drainage area.

# OPEN PIPE

## The Problem

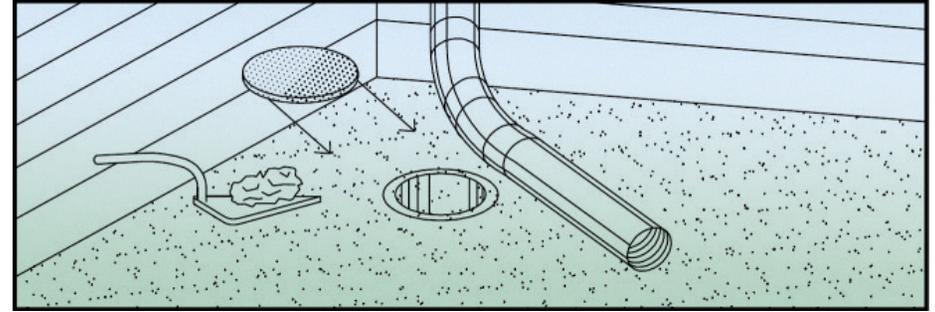


An open pipe is any pipe near your house that allows water to enter your building's sewer service. It may have served as a connection for a roof drain downspout into the sewer service at some point in the past. The water quickly enters the sewer, using storage and conveyance capacity of the sewer pipe.

## How to Correct this Problem

1. Locate the pipe opening adjacent to your building.
2. Either secure a cap available from the hardware store or mortar it closed with concrete

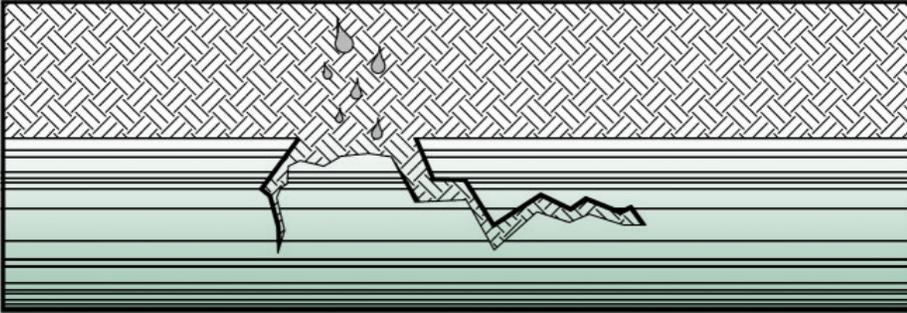
## The Solution



Once corrected, the open pipe on your property will be securely covered. Rainwater will not be able to enter the pipe.

# SEWER SERVICE CONNECTION

## The Problem



If your sewer service is defective, it may have separated joints cracked sections allowing groundwater to enter. The water quickly enters the sewer, using storage and conveyance capacity of the sewer pipe.

## How to Correct this Problem

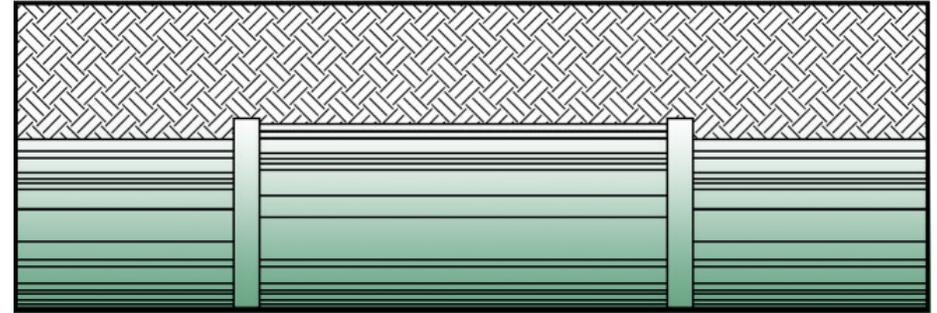
Some portion of your sewer service pipe may need to be replaced with new pipes that do not leak. This involves excavation around your home and possibly Town property.

Tree roots often find their way into cracked sewer pipes. These roots, over time can cause sewerage backup into your basement. Tree roots can also find their way into the Town's sewer, which can cause sewerage backup into other homes, as well as yours.

## NOTE

**DO NOT ATTEMPT TO DO THIS WORK YOURSELF.** Contact a licensed contractor or plumber, and contact the Town for additional guidance.

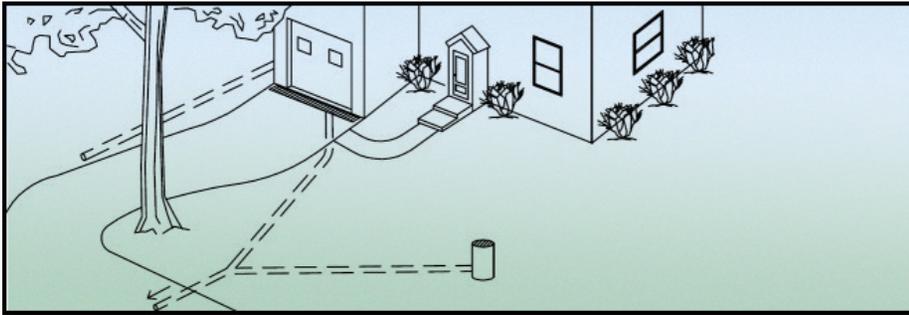
## The Solution



The new replacement pipe should be water tight, and should not allow roots to enter at the new joints.

# YARD AND DRIVEWAY DRAINS

## The Problem



A yard or driveway drain collects water which would otherwise form a pond in a low spot because it cannot drain away by gravity. The water quickly enters the sewer, using storage and conveyance capacity of the sewer pipe.

## How to Correct this Problem

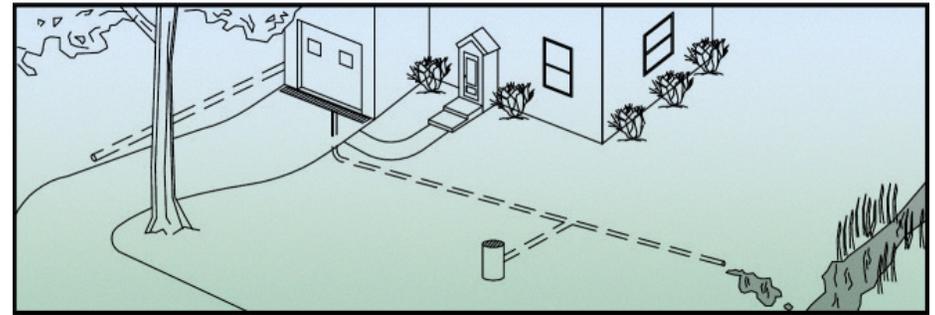
The pipe that connects the yard or driveway drain should be disconnected from your sewer service pipe. The water can be piped by gravity or pumped to a separate storm drain system, or a suitable free outfall.

This involves excavation around your home and possibly Town property.

## NOTE

**DO NOT ATTEMPT TO DO THIS WORK YOURSELF.** Contact a licensed contractor or plumber, and contact the Town for additional guidance.

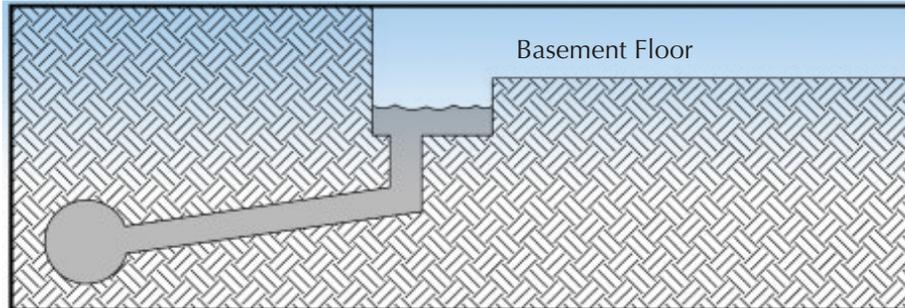
## The Solution



Relocated driveway and yard drains.

# BASEMENT PERIMETER DRAINS

## The Problem

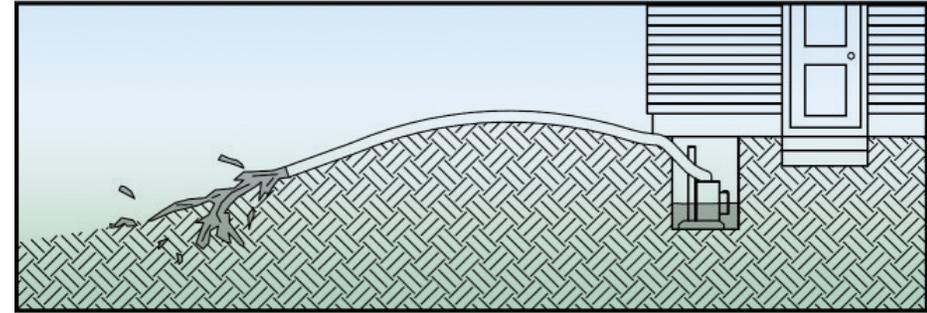


A basement perimeter drain is usually some type of trench running along the bottom of your basement wall to collect water that seeps through your basement walls or foundation. The water quickly enters the sewer, using storage and conveyance capacity of the sewer pipe.

## How to Correct this Problem

1. Locate where the basement perimeter drains collect water and the pipe that discharges it to the house sewer service.
2. Determine the size of the pipe opening and the material (or the color of the pipe if unsure of the material). Permanently seal the open pipe with concrete mortar or a cap.
3. Install a sump pump to route the water outside. Direct the pipe leaving your sump pump to the outside, possibly through a basement window. Replace the closest basement windowpane with a piece of plywood, sheet metal, etc. Cut a hole to match the size of the outlet pipe. Run the pipe through the hole and caulk any gaps between the pipe and the opening.
4. If no basement window exists, or is too far from the sump pump, drill a hole through the sill of the building (the vertical wood piece that sits on top of the foundation wall). Outlet the pipe through this opening and caulk any gaps between the pipe and the opening.
5. Extend the outlet pipe as far away from your house as possible so water running off it will drain away from your building and windows. You may want to place a concrete or plastic splash pad at the end of the downspout outlet to prevent erosion. Try to avoid running water directly across sidewalks or other walkways.

## The Solution



Once corrected, your basement perimeter drains will no longer connect to your sewer service connection. You will have securely covered any open pipes. The outlet pipe of your sump pump will exit your building, draining onto your property.

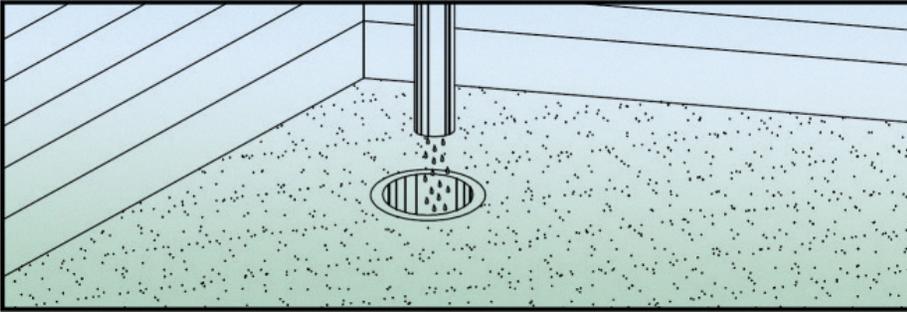
## Other Creative Solutions

For those property owners interested in taking this project a step further, we offer these creative solutions.

- Store the water in a trough and use it to water flower boxes and/or vegetable gardens.
- You might also try storing the water in an underground tank fitted with a pump for access.
- Your land may be suited for an underground dry well, a large gravel area that holds the excess water until it can be absorbed into the surrounding soil.
- You might choose to redirect the water by building a stone ditch leading to a flower bed or vegetable garden.
- Not a gardener? Create a small pond, being sure to allow for overflow in the construction, or redirect the water to a natural drainage area.

# OPEN CLEAN OUTS

## The Problem

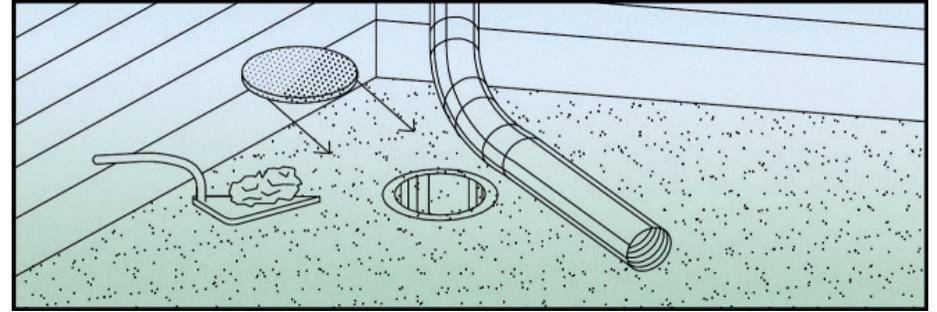


A clean-out is a section of pipe connected to the building's sewer service that allows access to the service for cleaning. Typically a clean-out is inside the basement, but it may be outside. Clean-outs that are not closed properly allow rainwater or basement water to enter it. This water quickly enters the sewer, using storage and conveyance capacity of the sewer pipe.

## How to Correct this Problem

1. Determine where the clean-out is located.
2. Note the size and material (or color of pipe if unsure of the material), and purchase a cap that fits or screws onto the clean-out. Your hardware store can recommend the best method based on the size and material of the pipe.
3. Complete the plugging process.

## The Solution



Once corrected, the clean-out on your property will be securely covered. Rainwater or basement water will not be able to enter the clean-out.