During heavy rains, the sewer system can become overwhelmed, leading to street ponding. Combined sewers can overflow, causing excess untreated wastewater from your house to flow to the city’s sewer system. This combined sewage, along with stormwater runoff, can cause temporary street ponding of water, backups in basements, and combined sewer overflows (CSOs) to the river system (this is called a combined sewer overflow, or CSO).

Diagram I: When your rainwater is directed to the sewers, causing temporary street ponding of water, backups in basements, and combined sewer overflows (CSOs).

Diagram II: When your rainwater is directed to the sewer system, causing temporary street ponding of water, backups in basements, and combined sewer overflows (CSOs).

The City of Chicago is faced with the challenge of managing stormwater runoff while still providing the hard surface needed to protect our streets and sidewalks. However, the rain barrel is a simple and effective way to manage stormwater at home.

A How-to Guide for Chicago Residents

Managing Stormwater at Home

How you can help manage stormwater

The first step to managing stormwater at home is disconnecting your downspout from the sewer system if conditions are right. The goal is to reduce the amount and speed of stormwater leaving your property. You can simply direct the downspout water with a splashblock or extension to an existing area in your yard that needs water . . .

Classroom Your Downspout

Then put the stormwater that comes from your downspout to work in your yard:

Install a Rain Barrel

Save the water in a rain barrel for later use.

Grow a Rain Garden

Direct the water to landscaping with deep roots such as a rain garden, tree or native plants, to soak up even more stormwater than a typical lawn.

Install Permeable Paving

Install permeable paving on your patio or driveway to let the water soak in below while still providing the hard surface you need.

Or a combination of the above

This brochure is a guide on how to make these options a reality in your home.

Contact: 312-743-9283 or rainbarrel@cityofchicago.org

A Message from the Mayor

Managing Stormwater: The Issue

This guide provides you with information and technical assistance to make use of stormwater and its many benefits.

What are the benefits to managing stormwater at home?

• Improve water quality in the Chicago, Calumet, and Des Plaines Rivers by helping to prevent combined sewer overflows;

• Help to prevent flooding on your street and basement back-ups in your neighborhood;

• Keep water in the natural water cycle and increase groundwater supply by directing water to your yard instead of sending it to the sewers;

• Save the water in a rain barrel for later use.

• Help prevent flooding in neighborhoods.

• Beautify your yard and attract birds and beneficial insects, if planting deep-rooted plants or trees is part of your project.

• Save money on your water bill if your home is metered;

• Help to prevent basement back-ups in your neighborhood;

• Keep water in the natural water cycle and increase groundwater supply by directing water to your yard instead of sending it to the sewers.

• Improve water quality in the Chicago, Calumet, and Des Plaines Rivers by helping to prevent combined sewer overflows;

• Help to prevent flooding on your street and basement back-ups in your neighborhood;

• Keep water in the natural water cycle and increase groundwater supply by directing water to your yard instead of sending it to the sewers;

• Save money on your water bill if your home is metered;
During heavy rains, the sewer system can become too full, causing untreated combined sewage to back up into basements and the street and flow into the river system (this is called a combined sewer overflow, or CSO).

I. Basement Flooding

Diagram I: During heavy rains, the sewer system can become too full, causing untreated combined sewage to both back up into basements and the street and flow into the river system (this is called a combined sewer overflow, or CSO).

II. Disconnected Downspouts and Rainblockers

Diagram II: Keeping stormwater out of the sewers helps to prevent basement back-ups and combined sewer overflows (CSOs).

Disconnected downspouts, if directed to pervious surfaces, allow stormwater to soak into the ground. Rainblockers, placed in the catch basins by the City, also help by slowing the flow of stormwater entering the sewers, causing temporary street ponding of storm-water. As this brochure describes, additional features such as rain barrels, permeable paving, deep-rooted landscaping and green roofs also help to keep water out of the sewers.

Note: Disconnecting your downspout is not always appropriate.

Chicago residents can help prevent flooded basements, and protect the quality of Chicago's water resources! Read on...
Managing Stormwater at Home: A How-to Guide

Disconnect Your Downspout

Is it appropriate in my yard?

Before you begin, decide whether or not it is appropriate to disconnect your downspout(s). Your project should be a permanent solution which is beneficial to your grass, flowers, shrubs and trees. In a one-inch storm, a 1,000 square foot roof will accept 625 gallons of water. Consider where you are directing the stormwater.

• The area surrounding the downspout should have enough permeable surface to soak up stormwater without flooding.
• Your stormwater should not go onto your neighbor’s property. If your downspout is located between houses, consider using an extension to redirect the water to your front or back yard.

• To avoid seepage into building foundation, land should slope away from the house.

• The downspout extension (or extension plus splashblock) should end at least five feet away from the building foundation.

• Stormwater should not flow over walkways since the water will freeze in cold weather and cause slippery conditions.

If you want to re-use your stormwater:
Install a Rain Barrel

Installation

• Choose a downspout on your house or garage that is close to the plants you want to water most.
• Follow downspout disconnection instructions through Step 2.
• Place your rain barrel under the downspout elbow, so the water from the downspout enters through the screen on top of the barrel.
• Optional: Attach a hose to the spigot and/or to the overflow hole on the top-side of the barrel to direct rainwater to another area of your yard. A soaker hose is a great option.

You may want to place the rain barrel on concrete blocks if you are going to use a hose to direct the water to your garden or to fill up a watering can from the spigot. Gravity will help move the water and the height will make better access for your watering can.

Maintenance

• DO NOT DRINK THE WATER.
• Empty your barrel frequently.
• Keep your rain barrel spigot closed when you are not using the water so that the rain barrel can collect water.
• Regularly check your gutters, downspouts, and rain barrel for leaks, obstructions or debris.
• In the winter, keep your rain barrel spigot open so that water does not accumulate in the rain barrel and freeze. Drain your rain barrel before temperatures drop below freezing.
• Mosquitoes should not be a problem if installation and maintenance instructions are followed to prevent standing water outside of the barrel. Check your mosquito screens periodically to keep mosquitoes out.

Other options for managing stormwater and enhancing your home:
Install Landscaping, Permeable Paving, and/or a Green Roof

Follow downspout disconnection instructions through Step 3. Amend your soil with compost to improve drainage and allow soil to absorb moisture more effectively. Then install one or more of the following options:

• Trees are great stormwater managers as their roots absorb large quantities of water. In addition, they cool through shade and evapotranspiration, provide habitat for birds and beneficial insects, and create year-round beauty.
• Deep-rooted plants absorb more water than turfgrass. Native Midwestern plants have evolved to thrive in our natural conditions, and once established, require minimal maintenance. They also attract birds and beneficial insects and provide four-season interest.
• A rain garden is a garden with a slight depression planted with deep-rooted, water-loving plants. It is best planted in an existing damp area or placed in the path of the water from your disconnected downspout.

• Permeable paving has openings that allow water to pass through the surface and soak into the ground. Replace your driveway, walkway and patio cement with bricks or other pavers with spaces between them, permeable concrete or asphalt, or a combination of grass and gravel.
• A green roof is a layer of landscaping installed on the top of a building. The plants retain and filter rainwater, reduce heating and cooling costs, extend the life of the roof, and improve air quality. Depending on the location of your roof, the structural capacity of the building, your budget and maintenance capabilities, you may be able to install a shallow (“extensive”) or deeper (“intensive”) green roof on your house or garage.

For more information, check your local garden center or visit www.cityofchicago.org/Environment.

Questions? Contact the Chicago Department of Environment at rainbarrel@cityofchicago.org, 312-743-WATER (743-9283) or 311.