

Contain Your Rain

To Improve Recharge and Control Flooding

Passaic River Coalition's Homeowner Guide #2

What does "Contain Your Rain" mean?

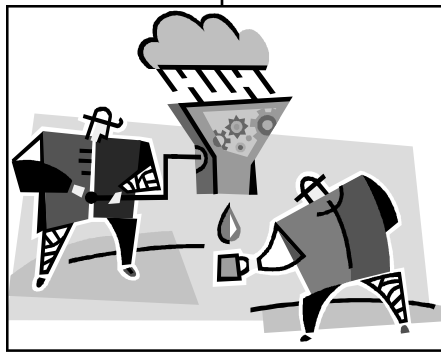
It means keeping the rainwater where it falls by allowing the runoff from your roof, patio and driveway to soak into the ground rather than piping it directly into the stormwater sewer.

Why is it important to "Contain Your Rain"?

The place you call home, whether it is rural countryside, urban cityscape, or suburban landscape, helps to recharge drinking water supplies. Once you understand how Containing Your Rain in your backyard improves drinking water supplies and helps control flooding, it then makes sense to keep the rainwater close to home rather than to send it down the storm drain.

Improving Recharge

Over 70% of the drinking water used in the Upper Passaic Watershed is pumped from underground sources. To recharge these sources, large amounts of rain and snow need to soak into the ground. This becomes increasingly difficult with more buildings and roadways. Buildings and roadways cover the ground with impervious surfaces and prevent water from soaking in, so there is little or no ground water recharge. When recharged, ground water feeds local streams during rainless periods by providing a continual "base flow" of seepage through the riverbeds.



Controlling Flooding

Flooding is a major concern in developed areas where buildings, roads and other impervious surfaces prevent rainwater from soaking into the ground. Rain falling on a roof or on pavement gets piped away as stormwater runoff. The runoff goes down a storm drain, which empties into a nearby stream or river. The stream then has to carry all of the extra runoff that would naturally have soaked into the ground. Excessive runoff not only causes flooding and erosion, but also flushes pollutants into rivers and reservoirs used for drinking water supplies.

How do you "Contain Your Rain"?

Homeowners can use these yard care methods to keep rainwater clean and allow runoff to soak into the ground. Other methods improve recharge by disconnecting the systems which send stormwater from roof to river and diverting the water into the ground. Following the tips and suggestions on this flyer will help to recharge ground water, remove pollutants from runoff, and control flooding.

<i>Yard Care Methods</i>	<i>Benefits</i>
Limit the size of your lawn area.	Conserves water, reduces chemical use, increases biodiversity, requires less maintenance than turf.
Mow high, setting blade to 3 to 4 inches.	Taller grass helps choke out weeds.
Leave grass clippings on the lawn.	Grass clippings act as a natural fertilizer by returning vital nutrients that keep soil healthy.
Consider alternatives such as ferns, myrtle, pachysandra, trees, bushes, or wildflowers.	Long roots aerate soil and allow rain to soak into the ground. Dense turf doesn't allow much soaking.
Don't apply fertilizer just before a heavy rain. Use only as much as is needed. Try natural organics.	Preventing fertilizer runoff keeps drinking water clean. Natural organics contain no synthetic chemicals.
Use pesticides as a last resort, spot treat where needed. Use predatory insects for pest control.	Keep children and pets safe from toxic pesticides. Using predatory insects is educational and fun for children.

Do-It-Yourself Downspout Disconnection

See http://www.city.toronto.on.ca/water/protecting_quality/downspout_diy.htm for step-by-step photos.



1. Measure 9 in. from where the downspout enters the sewer connection.
2. Cut the downspout with a hacksaw.
3. Cap the sewer standpipe to prevent water from going in. Use a simple rubber cap secured by a hose clamp or a wing-nut test plug.
4. Insert the downspout into the elbow, as this will prevent leaks. Crimp the end of the downspout with a pair of pliers to get a good fit.
5. Attach a downspout pipe extension to carry the water at least 4 ft. from the house and foundation. Use a hacksaw to cut the extension to the desired length. Be sure to insert the elbow into the extension to prevent leaks. Secure the elbow and extension with sheet metal screws. To prevent erosion where the water drains, place a splash pad at the end of the downspout extension.

Tools & Materials Needed:

- Hacksaw
- Tape measure
- Hammer
- Screw driver
- Pliers
- Sheet metal screws
- Downspout elbow
- Downspout extension
- Splash pad (optional)
- Rubber cap, hose clamp or wing-nut test plug

PRECAUTIONS!

- Make sure the slope of the yard drains water away from your house.
- Make sure there is room for the downspout extension to extend at least 4 feet into *your* yard, don't aim it into the neighbor's yard.
- Avoid directing downspout water into an area that doesn't drain well, is too close to a retaining wall, lies above an oil tank, or spills across a walkway.
- If room is tight, have downspout drain into a rain barrel for a slow release of water through an attached hose. Another option is to use the rain barrel to store water for garden irrigation between rain storms.

About Rain Barrels

Excerpt from <http://dcgreenworks.org/LID/rainbarrels.html>

A rain barrel is a system for collecting and storing rain that falls on rooftops. Simply, a rain barrel system consists of a large drum or barrel, PVC or brass couplings, vinyl hose, and a screen or grate to keep debris and insects out. A rain barrel can be incorporated into the stormwater management of virtually any building of any size with an external downspout.

Rain barrels typically range in size from 55 to 75 gallons. Several barrels can be linked in series to increase storage capacity. Rain barrels can be inexpensively and easily constructed from recycled materials and/or those purchased from most hardware stores. You can also buy many different styles of rain barrels, which typically cost about \$75 to \$150.



See http://www.lid-stormwater.net/raincist/raincist_construct.htm for a guide on how to build your own.

Containing Your Rain is possible by directing storm water into the ground instead of piping it to a stream. For more information on how you can Contain Your Rain, please contact the –

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