Rainwater Harvesting

Information Sheet

Making a difference...together

Preventing Stormwater Pollution

Rainwater harvesting is simply the collection and storage of rainwater. Collecting rain from your downspouts to use on your lawn and garden helps to slow stormwater runoff, a rising issue in our region as we face climate change and increased rainfall. Rainwater harvesting is a perfect fit with other natural yard care techniques, such as going pesticide free, building healthy soils, using native plants, and using water wisely.

Collecting rainwater helps to protect our watersheds, streams, creeks and shorelines by reducing the volume of water entering the stormwater system. Historically, stormwater systems were designed to move water off the land quickly, away from streets and buildings. Today, we know that it's important to allow rainwater to infiltrate the ground to avoid pollution, erosion and other impacts on our waterbodies. During rainfall events, large volumes of rainwater enters the stormwater system, which heads straight to creeks, streams and the ocean. This causes flooding, erosion and habitat destruction when it is discharged downstream. When rainwater is collected and used on lawns and gardens it helps reduces the impact on our waterbodies. When roof downspouts are connected to the stormwater system, pollution from roofing material, cleaners, paints and other chemicals cause pollution in our creeks and streams.

Storing Rainwater

There are many types and sizes of storage containers for rainwater, look for one that is durable, rot resistant and opaque. Other important factors to consider

- Kid, pet and pest-proof lids or covers
- Valves for hose attachments
- Screens and/or filters to keep debris out of the container and to prevent mosquitoes from breeding
- Decide what cleaning compounds, if any, to use. Use the least toxic products.

Note: It is important to use a downspout connection kit to ensure water is directed back down the downspout when the container fills, or have an overflow hose directed away from your house for heavy rainfalls.

Water Conservation

Because of the dry summers in the capital region, smaller sized containers, such as a 200L rain barrel will not collect enough water over the summer to help reduce your water bill. To increase water savings and environmental benefits, consider installing several rain barrels connected together or use a larger container.

How Much Rainwater Can Be Harvested?

The annual rainfall for the capital region is about 1000 mm, with the majority falling from October to March. An average of 200 mm falls from April to September.

- To calculate the amount of rain your roof will collect, determine the area of your roof, and the depth of rainfall in mm. **Rain collected (litres) = rainfall amount (mm) x rooftop area (m2)**
- Remember to divide the amount by the number of downspouts you have to determine how much will be collected from each downspout.
- Connect storage containers together to increase your harvesting capacity.
- **Caution:** do not use untreated rainwater for drinking, cooking or bathing.

Installing Your Rainwater Harvesting Container

Consider the following when placing your container:

- On level ground, close to your downspout and near the plants you want to water
- Raise the container to provide easier access to the spigot
- Use a downspout connection kit
- If you are not using a downspout connection kit, use a section of hose to direct overflow water away from your house into a vegetated area, such as a rain garden, but not towards neighbouring property
- If your house is on a steep slope, ensure you direct the overflow back into your existing drainage system

Maintaining Your Rainwater Collection System

- It is important to clear off leaves and other materials from the screen and overflow to prevent clogging.
- Clean your gutters regularly.
- Do not let the water sit for longer than a month.
- Empty and clean the container annually; typically during a dry period.
- If your container fills during a heavy rainfall, check to make sure the downspout connection kit or overflows are working properly.
- Remember to use the water you collect — drain the vessel between rainfall events

Roof Types

If you are collecting water from the following roof types, only use the water to irrigate lawn and ornamental plants:

- Wood shingles or shakes treated with chemicals (i.e. chromated copper arsenic) to make them resistant to moss, lichen and algae growth
- Copper roofs
- Zinc (galvanized metal) roofs
- If your roof has been treated with any chemicals in the last several years
- Asphalt shingle roofs

This sheet contains general principles only and they may not be appropriate for every property or project. You assume the risk and are responsible for any modifications to your property or drainage flow, for legal compliance, and for necessary permits and authorizations. Check with your municipality if you are unsure of regulations or requirements.

To learn more about living green and protecting the environment at home, visit www.crd.bc.ca/cleanwater.

Capital Regional District
Environmental Protection
625 Fisgard Street
Victoria, BC V8W 1R7