

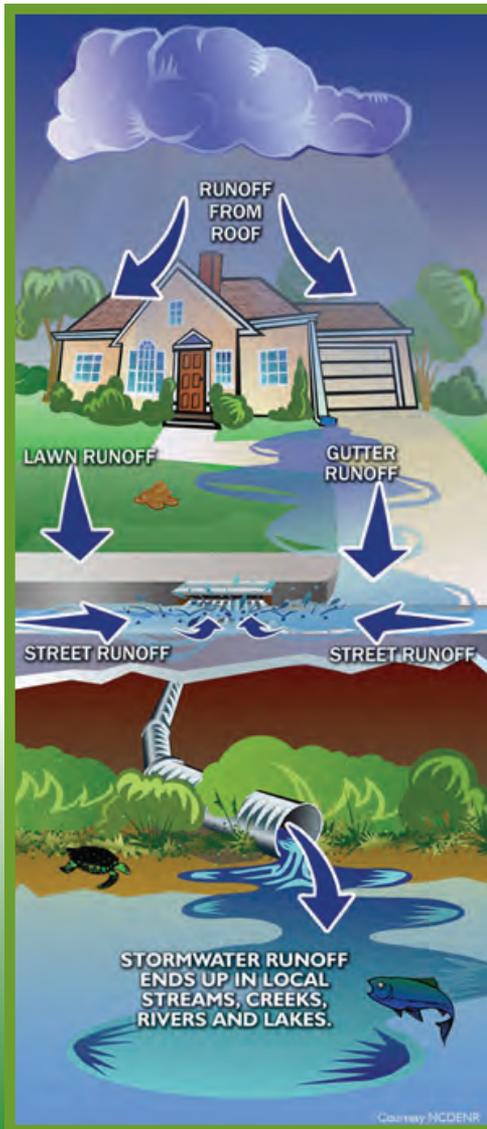


A Homeowner's
Guide to
Rainwater Harvesting



“Rainwater harvesting” refers to the collection and storage of rain. The water is generally collected from rooftops and stored in cisterns or barrels. Stored water can be used for irrigation and vehicle washing and other non-potable (not for drinking) purposes. Rainwater harvesting systems can range from one simple barrel at the bottom of a downspout to a series of tanks with pumps and controls. This guide will show you how any homeowner can take advantage of rainwater harvesting with one (or more) rain barrels.

Why Rain Barrels?



Harvesting rainwater with barrels is easy, helps conserve our fresh water supply, and reduces stormwater pollution. The water collected in a rain barrel would normally flow off the roof or through roof gutters and downspouts and become stormwater runoff. This runoff can collect pollutants such as motor oil, pet waste, fertilizers and pesticides, and sediment. Eventually stormwater flows to a storm drain, which leads directly to our local waterways. Collecting roof runoff with a rain barrel reduces the volume and rate of stormwater runoff from your property.

All storm
drains lead
directly to our
waterways!

Collect Rainwater in Pacific Northwest?



The Pacific Northwest's reputation for rainy winters makes it hard to remember that summers are often dry. Between the months of May and September the Springfield/Eugene area receives on average about six inches of rain, only 13 percent of our average annual precipitation. Having a rainwater harvesting system available during the summer months can take advantage of the small amount of rain that we do receive. It also conserves your tap water for potable uses, stretching supplies further. Remember, every drop counts - even in Oregon!

To get a rough idea of how much water you can collect during a summer rain event use this calculation.

$$\frac{\text{collection area (sq.ft.)} \times \text{rainfall (in.)}}{12 \text{ (in./ft.)}} = \text{cubic feet of water}$$

$$\text{Cubic feet} \times 7.43 \text{ (gallons/cubic foot)} = \text{gallons}$$

For example, if you had rain barrels set up to collect all of the runoff from a 1000 square foot roof during a small rain event - 0.3 inches - you would collect almost 186 gallons of water.

Please note: this calculation is for horizontal areas and does not take into consideration system losses such as evaporation and leakage.

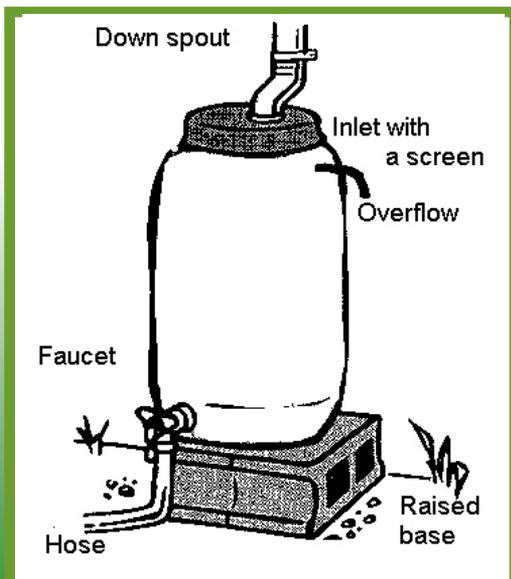


Basics of a Rain Barrel

You can do an internet search to find a rain barrel pre-made or instructions on how to construct your own rain barrel. Rain barrels are available in a variety of sizes, colors, and styles. Whether you buy one or make one there are a few key requirements that your barrel should meet in order for it to function properly.

- The barrel should be made of a material that is light-blocking to stop the growth of algae.
- Use a tight-fitting lid to keep children and animals out of the water.
- Add a screen to keep leaves and other debris out of the water.
- Some type of outlet at the bottom of the barrel - a faucet that you can attach a hose to is useful.
- Use an overflow device to direct excess water away from your home's foundation when the barrel is full.
- Monitor the barrel to make sure intakes and overflows are not blocked.

Most rain barrels are placed next to the house on wooden or concrete blocks to provide height for gravity flow purposes. You may also hook multiple rain barrels to each other using hoses or pipes to maximize storage capacity. You can purchase barrels designed to hook together or build your own.



Using Water in Your Garden

Remember, the water you collect in a rain barrel is not potable - or “drinkable” - water. All rain barrels are required to have non-potable labeling. Water from your roof can contain chemicals from roofing materials or moss killers and bacteria from bird and other animal waste. How you use the water and what kind of plants you use it on is an important consideration. Avoid using the water on vegetable gardens or on plants that are eaten. Rain barrel water should not be used for washing fruits, vegetables, or other foods prior to eating!

Maintaining Your Rain Barrel

In the winter months, empty the barrel between rain events or simply disconnect your rain barrel and reconnect, or redirect, your downspout during the wet season. See “Homeowner’s Guide to Rain Gardens” for information on redirecting your downspout to a garden. You may want to consider storing the barrel in a garage or shed during the winter months to prolong its life and aesthetic appeal.

Prior to the next use, give the interior of your barrel a scrub with vinegar or other non-toxic cleaner. Dispose of the wash water into your wastewater system by way of a laundry sink, toilet, or bathtub.

Permits

A plumbing permit may be required for larger rainwater harvesting systems. Contact the City of Springfield at 541.726.3753 if you are installing a rainwater harvesting system larger than 55 gallons.





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