

HARVESTING RAIN IN THE PACIFIC NORTHWEST

RAIN BARRELS

Why Harvest Rainwater?

Continued residential and commercial development in Clark County increases stormwater flows directly to streams, often causing erosion, flooding, and habitat degradation.

Harvesting rainwater provides the homeowner with a free source of clean water for gardening or landscaping while also reducing their impact on water quality. Rainwater often collects contaminants before draining to streams. This can include excess fertilizer, herbicides, oils, pet waste (with its nutrient and pathogens), and other items commonly found in households.

Rain barrels provide an easy way to store rainwater for use in the garden or on landscaping.

Do not drink the water! Roofs pick up contamination from leaves, bird droppings, dust, and other airborne material. Sometimes,

the roofing material itself can contaminate harvested rainwater. In the case of some roofs, such as old tar and

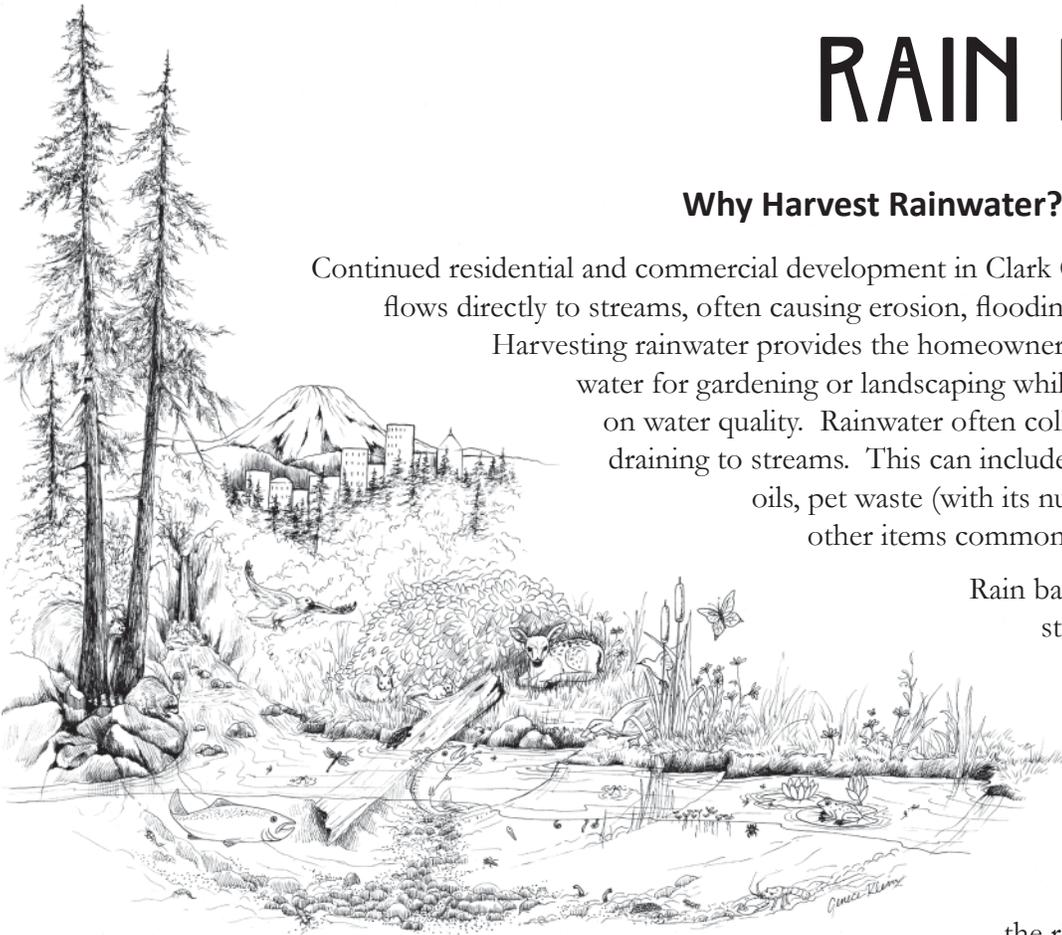
gravel, old asbestos shingle, or treated cedar shakes, the homeowner should not harvest roofwater.

How Does a Rain Barrel Work?

Basically, a rain barrel collects roofwater from a home's downspouts. Attaching a hose bib to the bottom of the barrel allows the homeowner to tap the water for use in the garden. An overflow located near the top of the rain barrel takes the overflow and directs it elsewhere. In Clark County, larger storms will almost always result in overflow, so do not skimp! Overflow should be channeled away from a home's foundation to reduce the likelihood of flooding or water in the crawl space or basement. Overflows should also direct water to areas where it will not cause problems, such as mud, flooded walkways, etc.

Several types of commercial rain barrels can be found on the web or at local retailers. Choose one that fits your needs and is in keeping with the look of your garden. While most barrels are plastic, you might want a rustic looking whiskey barrel, but be prepared to pay more.

Rain barrels should be a solid color since translucent barrels encourage algae growth. A screened inlet prevents leaf litter and mosquitoes from entering the rain barrel. A secured lid makes the rain barrel safe for children.



Building A Rain Barrel

The Barrel. A rain barrel system can be relatively simple to build, requiring only basic tools and skills. To start, look for 55-gallon food grade plastic drums which are often available from food manufacturers, feed stores, or similar businesses for reasonable prices. (Fancier alternatives such as whiskey barrels will cost more and may require modifying fittings.) Calling around takes a little time, but it saves a lot of money. Plastic trash cans do not work since they will not support the weight of the water (water weighs about 8 pounds per gallon). Barrels used to store cleaning supplies or other toxic chemicals should not be used, since the substances may leach out into the water.

List of Materials

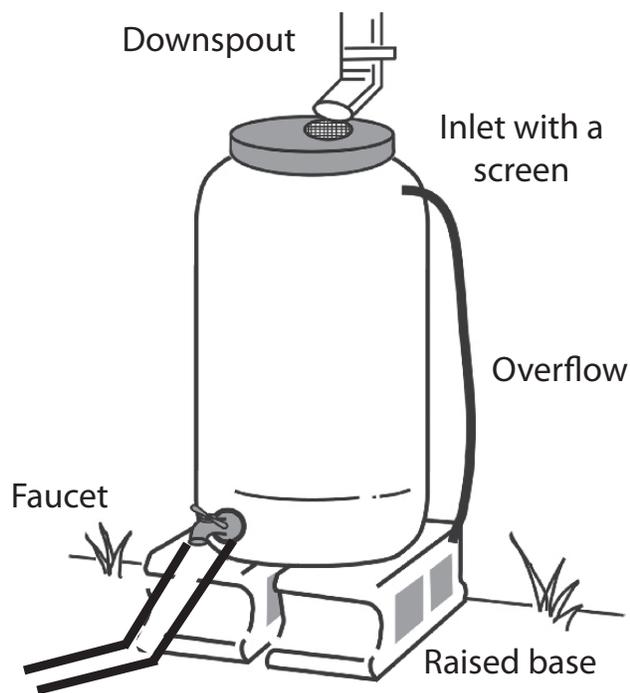
55-gallon plastic food grade barrel
Standard hose bib with 3/4" male thread
6" by 6" window screen mesh (to keep debris out)
3/4" to 1" threaded elbow for overflow
4" plastic grates
Two or four concrete blocks
Short length of 3/4" garden hose
Hose clamp

Tools

Adjustable wrench
Power drill with 1" bit
Keyhole or saber saw
Plumber's putty/caulk
Hack saw

Single Rain Barrel System Assembly

1. Cut a 4" diameter hole in the top of the barrel using the keyhole or saber saw. This will be the fill point from your downspout.
2. Sandwich the window screen under the plastic grate cover and press into the hole on top. Alternatively, secure your downspout directly into the hole to avoid splashing and spillage.
3. Drill two 1" diameter holes in the barrel, one approximately three inches from the top (for overflow) and one approximately three inches from the bottom (for watering).
4. Screw the hose bib into the hole in the bottom and seal the outside with putty or caulk.
5. Screw the 3/4" fitting into hole in the top. Seal the fitting (optional).



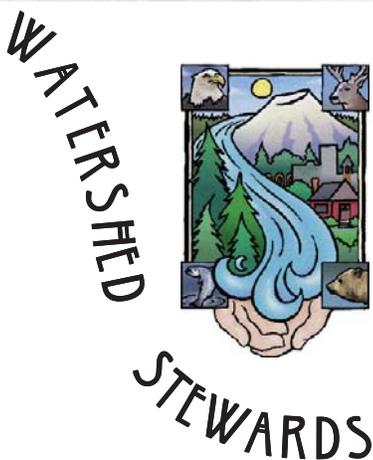
Multiple Rain Barrel System Assembly

1. Drill a 1" diameter hole about three inches from the bottom of each barrel and 90 degrees from the hole for the hose bib.
2. Install a 3/4" fitting into the hole in each barrel using putty or caulking.
3. Cut a scrap length of standard 3/4" garden hose to length and clamp onto each fitting to join the barrels together.

Installation. Place the rain barrel(s) on top of level concrete blocks. These blocks raise the barrels to provide better gravity flow (pressure) to the outlet. Once the rain barrel is in place, cut the downspout approximately one foot above the top of the rain barrel. In most cases, you will be able to re-install the L downspout fitting to direct water into your rain barrel. Next, clamp a length of standard 3/4" garden hose to the overflow fitting at the top of the rain barrel and direct the hose at least 10 feet away from the foundation of the home.

While many people choose to simply fill a watering can from the rain barrel, a hose can be used but may need more than one layer of concrete blocks to increase water pressure.

Maintenance. Check the screen on top of the rain barrel periodically and remove any debris present. Clean the inside of the rain barrel at least once a year to remove sediment that may build up in the bottom of the barrel.



Resources and Information

No endorsement is intended of any business listed here, nor is any criticism of unnamed businesses implied.

Rain Barrel Guide www.rainbarrelguide.com/ - Information and rain barrel sales

Portland Purple Water <http://www.pdpxpurple.com/> - Water catchment systems and installation

Rain Ready www.rainbarrelsconserve.com - Rain barrel sales

The Rain Barrel Man www.rainbarrelman.com - Rain barrel sales in Portland

Rainsaver Systems www.rainsaverusa.com - Rain barrel sales, diverters, pumps, rain chains

Garden Water Saver www.gardenwatersaver.com - Downspout diverters and instructions

Gardeners Supply Company www.gardeners.com/Watering/Watering.default,sc.html?SC= Rain barrel sales

The Green Culture www.watersavers.com/rain-barrels.php - Rain barrel sales

Freewater Rain Collection Systems www.cypressdesigns.com - Rain barrel sales, 95 gallon low profile systems

Harvest the Sky <http://harvestthesky.com/> - Cisterns and installation

Department of Ecology's rainwater harvesting home www.ecy.wa.gov/programs/wr/hq/rwh.html

Texas Water Development Board www.twdb.state.tx.us/innovativewater/rainwater/resources.asp - Texas rainwater harvesting manual

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For more information and classes, check out Watershed Stewards program
<http://clark.wsu.edu/volunteer/ws/index.html>

Watershed Stewards is sponsored in partnership by
WSU Clark County Extension and Clark
County Environmental Services.



Environmental Services

Extension programs are available to all without discrimination.
Report evidence of noncompliance to your local Extension office.

Harvesting Rain in the Pacific Northwest: Rain Barrels

