



Pierce County receives 38-56 inches of rain per year. Rain that runs off your roof flows into stormwater pipes, streams, or groundwater. A rain barrel can capture some of that rainfall for reuse on your property. Capturing and reusing rainwater from your roof surfaces protects the quality of streams and groundwater.



Rain Barrel how-to's:

What is a rain barrel?

A rain barrel is a simple rainwater collector that is connected to the gutters on your house. Instead of your downspout sending water to the ground near your house or into the storm drain system, the downspout is connected to a barrel that stores some of the runoff water from your roof for later use.

Generally rain barrels are constructed of sanitized food storage barrels that are 55 or 90 gallons in size. Much larger rainwater collection systems called cisterns are sometimes used, but are more complex to build, install, and maintain.

Why install a rain barrel?

Rain barrels temporarily store water which can be reused for gardens, lawns, and other outdoor uses. They are also used to move water away from basements and crawlspaces prone to flooding, and to route runoff to an area where it can infiltrate such as a bio-swale, rain garden, or storm drain.

Want to install a rain barrel? Here's how:

Observe your site. Where does your rainwater go now? Some downspouts are tied into storm drain systems and go straight into an underground pipes, but most are directed away from the house to a hard surface that leads to a storm drain. The simplest place to locate a rain barrel is at an existing downspout. The average 2,000 square foot roof generates about 30,000 gallons of rainfall runoff each year. A 55 or 90 gallon rain barrel will only capture a fraction of that, so you must have a safe overflow location for your rain barrel. The best location for runoff is likely the same location as your current runoff, unless that location has been problematic.

Build your own rain barrel — see other side for do-it-yourself instructions.

Buy a pre-built rain barrel. There are many local outlets that sell pre-built rain barrels — some even provide installation. If you don't want to build your own rain barrel, check your local hardware or garden retailer, or search the Internet for rain barrel suppliers.

Secure your rain barrel on a flat, elevated surface. A full 55-gallon rain barrel weighs over 400 pounds, so be sure to secure it to your house so it doesn't tip over. Rain barrels should be elevated, so gravity will assist in draining the barrel. Most barrels are just elevated with concrete blocks. Be sure the overflow built into your rain barrel is directed away from your house.

Maintaining your rain barrel

Prevent problems by ensuring your entire stormwater system is maintained. Remember to clean gutters seasonally and make sure they are tilted to direct water to downspouts. Make sure the rain barrel and all of its parts are securely fastened. Drain the rain barrel and check for damage once a year. Repair any leaks or holes and replace any damaged parts.



How to build your own rain barrel:

Tools:

- Drill
- Adjustable wrench
- 1-inch hole saw (for overflow)
- 1-inch spade bit (for spigot)
- Heavy-duty scissors (for cutting screen)
- Adjustable wrench
- Utility knife
- Safety glasses
- Caulk gun
- Hacksaw
- Tape Measure
- Screwdriver or nut driver
- Pliers or crimpers

Materials:

- 55 to 90-gallon food grade, plastic barrel with lid (These can be found online or at local restaurant and food distributors, nurseries, or gardening supply stores.)

The following can be purchased at most hardware stores in the plumbing section:

- Hose spigot with 3/4 inch threaded inlet and 3/4 inch male hose end
- Two 3/4 inch galvanized locknuts (to secure spigot from the inside of the barrel)
- Four 1-inch (opening) washers (to provide rigid surface to fasten hose bib)
- Teflon tape
- Silicon adhesive or outdoor caulking
- Window screen mesh (enough to completely cover the barrel opening)
- Downspout elbow (to route the downspout to the barrel)
- Clincher strap (to attach downspout and barrel to the house)
- Small pieces of wood (to use behind the clincher strap, if necessary)
- 1/4 inch #6 sheet metal screws (for downspout)
- 2-inch overflow pipe fittings



Directions

- 1. Inlet:** If the lid for your barrel does not have an opening, you will need to cut an opening adequate in size for the downspout to drain into the barrel. You may also want to add additional openings to collect rainwater falling into the barrel. Use the screen to cover openings - secure it with a lid, glue, or screws to prevent mosquitos breeding in the standing water.
- 2. Overflow:** Drill a hole near the top of the barrel for an overflow pipe that is at least 2 inches in diameter. If the overflow pipe elbow seals and seats securely, it can be threaded directly into the barrel opening. If not, it should be secured with washers on both sides of the barrel and a nut on the inside. Use Teflon tape around the threads and a bead of silicon caulking around the opening to ensure a tight seal.
- 3. Outlet:** Drill a hole near the bottom of the barrel to attach the drain spigot. If the spigot seals and seats securely, it can be threaded directly into the barrel opening. If not, it should be secured with washers on both sides of the barrel and a nut on the inside. Use Teflon tape around the threads and a bead of silicon caulking around the opening to ensure a tight seal.
- 4. Foundation:** Create a raised, stable, level base (like concrete blocks) for the rain barrel to sit on. You might want to test stability by filling the rain barrel with water before attaching it to your structure. A full rain barrel is very heavy and has a tipping risk if left unsecured.
- 5. Downspout:** Cut the downspout with a hacksaw so the elbow will sit just above the rain barrel inlet. Attach the elbow over the downspout with a screw and secure the downspout to the house with the strap.
- 6. Attach Barrel:** Set up the barrel beneath the elbow so the water from the downspout will flow directly into the barrel. Secure the barrel to the house with the strap. Cut and attach the overflow pipe to the overflow elbow and direct overflow to the existing discharge location.
- 7. Use It:** Fill a watering can using the bottom spigot or attach a hose to use the water where it is needed. If the barrel becomes full during the rainy season, but water is not needed, discharge water on dry days to make room for future rain in the barrel. This will reduce the amount of overflow coming out of the barrel during rain events. This practice is recommended if your property experiences flooding or saturated soils during rain events.

For more detailed
rain barrel plans go to:

www.piercecountywa.org/rainbarrel