

RAIN BARREL RESOURCE GUIDE



Spokane County
WASHINGTON



Table of Contents

CALCULATE YOUR RAINWATER HARVESTING POTENTIAL

MAKE A HOME FOR YOUR BARREL

HOW TO INSTALL A RAIN BARREL

HOW TO CONNECT MORE THAN ONE BARREL

MAINTENANCE & MOSQUITO PREVENTION



CALCULATE YOUR RAINWATER HARVESTING POTENTIAL

Harvesting the rain with a barrel is a simple way to recycle water. Before you get started collecting it, calculate your catchment to determine just how much rain falls above your head!

By harvesting the rain, we can collect every drop and grow healthy gardens instead of letting run-off to pollute our watersheds and river. Follow the instructions below to calculate your catchment, build and install a rain barrel of appropriate size and do a rain dance!

MATERIALS & TOOLS

Tape measure or string, Pen, paper (or calculator) for calculations

INSTRUCTIONS

01. Using your tape measure or string, measure the width and length of your home, classroom, office, etc.

02. Calculate the square footage (width x length {floor in feet} = catchment area [square feet]).

03. Awesome! Let's assume the square footage is equal to its roof. Now you can estimate how much rainwater you could collect.

04. Harvested Water (Gal) = Catchment Area (sqft) x Rainfall Depth (inch) x Conversion Factor (0.623)

05. For example, let's pretend your square footage is 3,000 square feet and it rains 1 inch.

06. $3,000 \times 1 \times 0.623 = 1,869$

07. That's 1,869 gallons of water that we could potentially divert from the drain and into our garden!

TIPS

Ready for a challenge? Calculate how much rain the houses on your entire street could collect (assuming their catchment area is the same). Install a rain barrel at your home, and then inspire your neighbors to do the same!

MAKE A HOME FOR YOUR BARREL



Congratulations! You have a 55 gallon rain barrel. Now, where should you install it?

Proper placement of your barrel is important to maximize your barrel in terms of aesthetics and function. The options on where to place your barrel might seem infinite. Follow the instructions below as they are here to help.

MATERIALS & TOOLS

55 Gallon rain barrel, bricks, cinder blocks, wood stand, etc., tie-down straps (optional)

INSTRUCTIONS

01. Determine which downspout to use. Once located, there are a few questions to ask before you choose which downspout to place your barrel underneath: What is the potential harvest of this section of roof? This is easy to determine using the resource on the following page. How easy will it be to access your barrel? Is it near or far to the garden? Is it blocking a walkway that people or trashcans regularly move through?

02. Build the foundation- Once you've chosen a downspout, you're ready to build the foundation for your barrel. Make sure the ground is solid and level. If the area is concrete or asphalt, you should be good to go! If it's comprised of dirt, consider using bricks, pavers, tiles, broken concrete, or whatever you have to provide a solid base. If you place your barrel onto bare dirt, it could shift and become unstable when it rains.

03. Make a stand- The purpose of a stand is two parts. One, is to provide easy access for a watering can, or female hose end, to the barrel spigot. Two, is to lift the barrel off the ground just enough to use the force of gravity for water pressure. Use what you have to make a stand. Get creative! Stack cinder blocks or bricks, or build a simple wooden stand. If building your own stand, keep in mind the weight of a full barrel (55 gallons @ 8 lbs/gallon = 440lbs). You can research online how to build a simple bench seat with a few nails and 4x4 boards.

04. Install- Now that your barrel is beneath a downspout and above solid ground, you're ready to install. Follow the instructions on the following page if you need some installation tips. 440 pounds of water could fall and injure someone or something. If this is a concern, use a tie-down strap or rope to secure it to your home.

HOW TO INSTALL A RAIN BARREL

Did you know 1" of rain yields approximately 600 gallons per every 1,000 square foot of roof space? With a rain barrel you can capture that rain and reuse it to feed plants with nutrient-dense water, save money on your water bill and reduce harmful urban run-off that would otherwise pollute our watershed and river. Installing a rain barrel is easy. Here's how:

MATERIALS & TOOLS

Measuring tape, material for solid surface base, 1 1/4" hole saw or drill bit, spigot and gasket, diverter (optional), fill hose, winter hole cover, and water seals

INSTRUCTIONS

01. Select a site for your new barrel- close to a downspout, near the desired area of use, and on a solid surface.

02. Build a level platform for your rain barrel before beginning the installation process. The platform will allow your barrel to fully drain using gravity. Ideal height will be 18-32", based on your needs.

03. On the barrel, measure 2" down from the top and drill a hole using 1 1/4" hole saw. Insert gasket. This is for handling overflow.

04. Measure 2-4" from the bottom of the barrel. Drill a hole using 1 1/4" hole saw or bit. Insert gasket and screw in spigot. This is where you will connect your hose to water your garden. Empty barrel of plastic shavings left behind from hole saws.

Move on to step 7 if you are not installing a diverter.

WITH DIVERTER

Additional Materials: Measuring tape, pencil, drill, Phillips screwdriver and screws.

05. Position barrel. Use the beam level and pencil to mark a reference line on the downspout, at the height of the barrel, then measure 2" below that. Here, drill a hole in your downspout with the 2 1/8" hole saw. Note: Make sure the hole in your downspout is level with (or slightly below) the hole in your barrel.

06. Connect fill hose to diverter. Insert diverter into downspout hole, funnel facing up, and tighten with the 2 screws provided.

07. Connect opposite end of fill hose to barrel. Cover with the lid and lock into place.



HOW TO CONNECT MORE THAN ONE RAIN BARREL

A 55 gallon rain barrel will fill up and overflow with even a small bout of rain. Connect two barrels and double your rain water harvest potential! Also known as “daisy chaining.”

MATERIALS & TOOLS

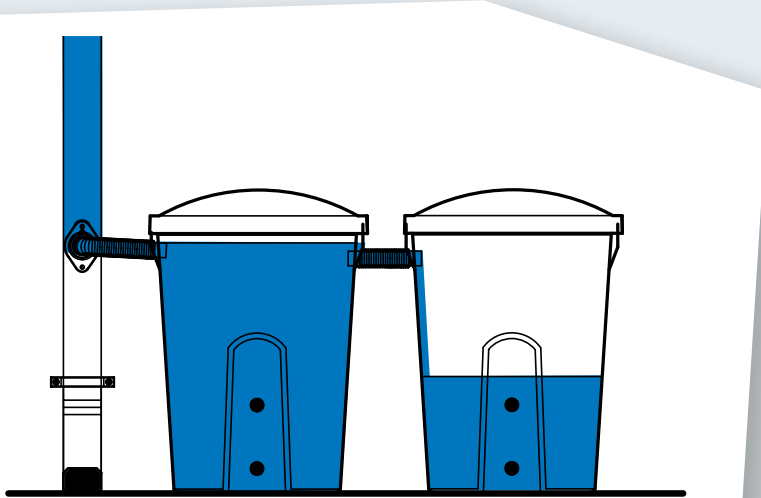
Two or more 55 gallon rain barrels, DIY rain barrel diverter & parts kit, power drill, pencil, female garden hose end or male-to-female hose adapter

INSTRUCTIONS

01. Install your first rain barrel. Since you are connecting two or more barrels, ensure you have sufficient, sturdy, and level space. This is important, especially if you want barrels to act as a single unit, they must be level.

02. Connect barrels at the top so the surplus will flow into the second barrel. Install your first barrel under a downspout. Using the 1.5” hole saw, drill a second hole, either at the same height of the existing hole or about 2” from the top, in the first barrel. Insert the fitting. Position the second barrel adjacent and connect both holes with the hose provided.

03. Connect barrels in a series so the barrels act as a single unit- Measure 2” from the bottom on each barrel. Mark with a line. Using the hole saw, drill a hole using the 1.5” hole saw at the line. Insert threaded seal into hole. Attach hose to bottom drain on first barrel. Connect other end of hose to the bottom of second barrel. Viola! As your first barrel fills, the second barrel will fill at the same level.



RAIN BARREL HACKS

With a little creativity, you can use about anything to make a rain barrel. Keep in mind that if you’re capturing rain to water a garden, to be safe, your barrel should be food grade. Here’s a few ideas:

- Purchase a new plastic garbage can and lid
- Search Craigslist but check what was stored in them first- make sure they haven’t had any toxic chemicals stored in them
- Call local Food distributors/bottlers
- Check local wineries that will sell you used oak barrels
- Visit Earthworks Recycling at 723 N. Napa in Spokane

RETROFIT KITS

The parts and pieces put together in one pretty package. We’ve sampled and approved the following sets:

- **Earthminded DIY Rain Barrel Diverter Kit (our favorite) can be found at Home Depot and other online stores. We recommend typing “Earthminded DIY Rain Barrel Diverter Kit” in your search engine and find an online vendor, price is right around \$30 +/-**
- <http://store.rainbrothers.com/products/DIY-Rain-Barrel-Construction-and-Installation-Kit-Downspout-Diverter.html>

NO GUTTERS, NO PROBLEM

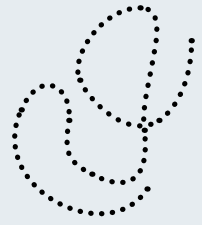
Even homes without gutters can use a rain barrel. During the next rain event, observe the water dripping from your roof, some spots drain more water than others. Without gutters, you’ll want an open top and will skip all steps involving a diverter. Make sure you have the top covered tightly with mesh window screening to prevent a breeding ground for mosquitoes.

WEBSITES / HOW TO VIDEOS

We’ve sifted through all of the not so good sites and videos to give you the best.

- <http://extension.usu.edu/waterquality/urbanstormwater/rain-water-harvesting/>
- https://www.youtube.com/playlist?list=PL87_1taNYDIFJwBY-SIRsYu780MmkigPHu
- <https://youtube/ylr3u9GR-Gk>

MAINTENANCE & MOSQUITO PREVENTION



MAINTAINING YOUR BARREL

- Regularly check your gutters, downspouts, rain barrel water intake screen, and rain barrel spigot for leaks, obstructions or debris.
- Clogged spigot? Remove spigot and flush out with a hose that is hooked up to a faucet for greater pressure.
- Keep your rain barrel lid sealed.
- Drain your rain barrel before temperatures drop below freezing.
- In the winter, keep your rain barrel spigot open so that water does not accumulate in the rain barrel and freeze. You can also turn it upside-down or bring it inside to ensure that no water accumulates in the barrel.

PREVENTING MOSQUITOES

Your rain barrel should be equipped with a mosquito proof screen under the lid and inside the overflow hole to keep mosquitoes and other insects out.

- Place your barrel on a pervious surface so that overflow water soaks into the ground instead of pooling on paved surfaces.
- Keep your rain barrel lid sealed.
- Keep your barrel free of organic material.
- During the rainy season, every 3-4 days use your hand to splash off any water that may collect on the top of the barrel.
- If mosquitoes are breeding in your rain barrel, empty your barrel completely. This will kill all mosquito larvae that may be in your barrel. If your mosquito netting is intact and there are no leaks where mosquitoes can enter the barrel, your rain barrel should be mosquito-free.

PREVENTING ALGAE

- Place barrel on North or East side of your home to minimize sun exposure
- Use dark plastic barrels
- If algae growth does occur, fill rain barrel completely and add 2 oz. of bleach. This can also be a part of your weatherization for winter.