How to Build a Rain Barrel Out of Food Grade Polyethelene Drums

Basic Components
1. 55 gallon food grade drum (barrel) $5 - $75. For suggestions of locations to find recycled drums in Cochise County, call Water Wise 520-458-8278 x 2139. Clean before assembly.
2. Downspout & downspout extension
3. Roof & Gutters

Shopping List

Inflow parts
1. Downspout extension to match your gutters: A-elbows x 2 $5.00
2. 20" diameter plastic planter saucer $8.00
3. Fiberglass Window Screen $6.40

Outflow parts
1. 3/4" Hose bib (spigot) $5.00 or 1/2"
2. 3/4" Bulkhead Union $14.00
3. Teflon tape $5.00

OR
Sediment Faucet/Outdoor Faucet: $12.00

Overflow parts
1. 2" PVC Threaded Male Adapter $1.40
2. 2" Locknut $2.00
3. 1 foot length of 2" PVC pipe $2.00
5. 2" PVC 45 degree elbow x 2 $4.00
6. 2" Flexible backwash hose 25 feet $22.00
7. Hose clamp $1.80

Approximate cost of parts: $48.00 - $77.00

TOOLS
• Utility knife & stapler
• Long handle pliers
• Drill
• 2" Saw hole attachment to cut 2-3/8” hole
• 1-3/8” Saw hole attachment to cut a 1-1/2” hole
• 1/4” Drill pilot bit (to center hole)

Step 1: Cutting the Hole for the Spigot
Decide where you want your overflow and spigot before cutting holes. (If you want the spigot in front and the overflow to the right. Consider your downspout location.
1. Locate a position for 1-1/2” hole 4” from the barrel’s bottom.
2. Cut the 1-1/2” hole using a hole saw or a spade bit.

Note: The 1-1/2” spigot hole should be smooth so that the bulkhead fitting will seat properly.
3. With a utility or pocket knife, clean the plastic shavings from the holes.

Step 2: Cutting Hole for the Overflow
You need a good sized overflow. A 2-3/8” hole will be used for your overflow.
1. Confirm what side of the barrel you want your overflow hole to be on.
2. Mark roughly 4” down from the top of the barrel. Ideally you want a flat spot. Since these barrels bevel, use silicone around the edges of your PVC Adapter.
3. Using an appropriate saw, cut out a circle. Scrape edges. Note: The 2-3/8” hole is appropriate for the 2” PVC male adapter.
Step 3: Install the Overflow Connection
Overflows are important even for rain barrels. We use a 2” overflow. Some advocate 3” overflows. Neither will totally capture a large, fast rain. However, with a larger overflow attached to a hose, you can direct more water to where you want it.

1. Thread a 2” PVC male adapter through the hole in your barrel and screw on a lock nut inside the barrel to secure the connection.
2. Mark and cut the PVC pipe into a 2” long section.
3. Join the 2” section to the threaded PVC male adapter you installed on the outside of your drum.
4. Join a 45 degree elbow to 2” section.
5. Stretch the flexible backwash hose and fit it over the end of the short PVC section. Use a hose clamp to secure the backwash hose to this section.

Note: These sections of pipe do not need to be glued together. This makes it easier for maintenance or reconfiguring your system.

Step 4: Install the Bulkhead Fitting
The best way to make sure you have a leak-proof connection for your spigot is to use a bulkhead fitting.
1. Insert the threaded end of the bulkhead fitting through the outside of the barrel. (The thick rubber washer should be on the outside of the barrel.)
2. On the inside of the barrel, using a pair of long handle pliers and an assistant, place the thin, hard plastic washer onto the bulkhead fitting followed by the large nut. Turn counterclockwise to tighten.

Note: The word tighten on the large nut faces the inside of the barrel.

Easier Spigot Assembly!
1. Use a 3/4” spade bit to drill spigot hole.
2. Screw in an 1/2” sediment faucet. Threads will expand as tightened. A nut can be used inside the barrel.

Step 6: Cut a Hole for water to enter the barrel from the downspout: inflow
1. Cut an hole approximately 7-8” diameter in the center of the 20” planter saucer with a utility knife.
2. Cut 12” diameter piece of screen.
3. Staple the screen to the saucer at close intervals to keep out mosquitos.
4. You can also cut a smaller hole for a downspout extender hose to go directly into the barrel.

Step 7: Install Your Rain Barrel
1. Install barrel on flat surface. Add a layer of pea gravel to absorb overflow water.
2. Attach a downspout A-elbow to your downspout.
3. Cut downspout extender to the length that extends the downspout to directly over the inflow screened hole.
4. Join second A-elbow to downspout extender to focus water over the inflow screened hole. Make sure a 6-9 inch gap exists between the downspout and inflow.
5. Move the end of your overflow backwash hose to water a tree or garden area.

Note: Consider raising your barrel for better pressure and flow, using cinder blocks, railroad ties, etc.

Drums with tops
White drums: Direct a flexible downspout extender into an appropriate hole in the barrel. Or, consider using a ‘downspout diverter kit’. No overflow pipe is needed with a diverter. Buy one that only needs a hole cut out of the downspout for tubing. Drill a hole sized to the tubing on the barrel top.

Note: Be sure you have a vent hole in the top of your barrel if you inflow is completely sealed.

Red drums:
1. Tops on these drums have two parts: a ring and a pan. Unscrew the ring from the pan. Cut 12 holes in pan with a spade bit.
2. Cut screen in a circle several inches wider than the pan. Place screen over the pan.
3. Tighten the ring down onto the screen to hold it tight. Screw the ring back onto

Neat and Tidy Rain Barrel Platform
1. Grade surface of the area for barrel to sit.
2. Spread 1/2 bag of crushed play sand.
3. Place 24” square paving stone on sand.
4. Put 4 cinder blocks on the paving stone.
5. Place a second paving stone on the cinder blocks.