

One hundred and thirty dollars for a rain barrel?

Plenty of gardeners who support water preservation – recycling rainwater for keeping gardens well-watered – are willing to pay that much and more. But not everybody.

"My wife wanted one [a rain barrel], and it cost \$130," said David Hovis. "My mother bought it for her, but I thought \$130 was ridiculous, so I figured out how to build one."

Hovis has a doctorate in material science and is a researcher at Case Western Reserve University, so he's way ahead of most people as far as building things goes. But he insists that assembling and installing a rain collector isn't as tricky as it might sound, it's less expensive than ready-made barrels and, well, fun.

Hovis lives with his family in Cleveland's EcoVillage on the West Side. He and his wife are active in the community garden behind their home. During the past few years, he has assembled and taught others how to assemble about 200 rain barrels.

The materials Hovis uses to build rain barrels cost less than \$100, a small savings, but a savings nonetheless from buying one. And he doesn't underestimate the challenge and feel-good factor of making your own.

## Materials

Assembly requires a drill, 15/16th-inch drill bit, a 55-gallon barrel, downspout diverter, hose, hose adapters, marker, faucet and Teflon adhesive tape.

Barrels can be found at recycling centers or for \$13.50 at Cleveland Container Recycling (216-271-5700). At Container Compliance Corp., (216-961-0035) barrels are \$13.

A downspout diverter is about \$25 at [www.gardeners.com](http://www.gardeners.com). The site also has installation instructions. Go to the site and type downspout diverter in the search area. If you don't have access to a computer, call 1-888-833-1412 for a catalog.

A marker to remind yourself where the connector hoses will go.

A 15/16ths-inch drill bit to make the openings where the connecting hoses will be inserted. They cost about \$26.

1/4-inch NPT pipe tap to snugly run through the barrel to cut threads after a hole is drilled. Taps are about \$5.

Two 1/2-inch male hose adapters, which are about \$2 each.

A faucet, also just a few dollars.

Teflon adhesive tape, about \$2, to wrap around the end of the hose that will connect the barrel to the downspout diverter and around the faucet insertion.

Filled with rain, the barrel can weigh more than 400 pounds, so make sure you level the ground underneath. Hovis puts his on cinder blocks.

### Assembly

Start with a 55-gallon plastic barrel sealed with an opening at the top that can be plugged. Mark the barrel where the hoses will be inserted.

Using the 15/16th-drill bit, drill a hole at the bottom of the barrel where the faucet will go. Stand the barrel upright, and place it near the downspout. Decide where on the downspout the diverter will go. Drill a hole near the top of the barrel, parallel to where the hose will be inserted into the downspout.

Using the NPT pipe tap, thread both of the holes. Insert the male end of the adapter into the barrel. Wrap adhesive tape tight around the female end of the adapter, getting into the creases. Attach hose to the female side of the adapter. The other end of the hose runs to the downspout diverter.

The faucet gets inserted into the hole at the bottom of the barrel.

Hovis said he is often asked about the quality of the rainwater that rolls off roofs, and whether saving the water is a mosquito hazard.

"Keep in mind that this is for watering plants, not drinking," he said. "Rainwater is actually better for plants because it isn't chlorinated. . . . Chlorinating kills microbes that are beneficial to the soil."

As far as mosquitoes, there's nothing to worry about if the barrels are sealed, Hovis said. Mosquitoes breed in stagnant, open water.