Rainbarrel Tutorial: How to make a rain barrel

The total cost of making one barrel (including the cost of the barrel) is about $15-20.

Step 1: Drill three of four holes in the barrel. One of these is for the bibet to connect your garden house to the barrel and the other fittings will allow you to add more barrels in the future. One of the barrels must have an overflow fitting near the top of the barrel. If you plan on using 3/4 inch fittings use a 1 inch hole saw to cut the holes. If you have an adjustable hole saw make it a little smaller than 1 inch.

Step 2: Place plumbers goop on a 3/4 inch nipple. Using a 3/4 inch galvanized metal nipple and some locking pliers, thread nipple into the barrel. the hole for

the fitting. Place Plumbers goop or some other adhesive on the thread.

Step 3: Now the real fun part. Cut the down spout at the proper height. You should place the rainbarrel on one or two concrete blocks and then determine the proper height. After cutting the down spout attach the necessary elbows and extensions to have the down spout reach the barrel. I still am trying to create a non ABS or PVC way to divert the first couple of gallons after each rainfall (this will keep the sediment from clogging up the screen). Attach a 4 inch by 2 inch ABS plastic converter to the end of the down spout and attach a fine mesh screen over the converter (you can use a paint sprayer filter which you can get at a hardware store for about $1).

Step 4: If you are adding more barrels do this now. Attach a garden hose Y fitting on the 3/4 inch nipples. Position the barrels on top of the concrete blocks and cut the right length of garden hose to connect the barrels (with male fittings attached to both ends).

Step 5: The final product. You must attach an overflow line on the first barrel (the one on the far right in this picture). This must be placed near the top of the barrel and it should be attached to some form of hose or tube to discharge any overflow. Please note that you must remove one of the two bung fittings

on the top of the barrel and cover it with a small screen. I used the paint sprayer filter with a rubberband to hold it in place.

You can get the 55 gallon barrels for $3 at Yoshida Group out by the airport (telephone number 503-284-1114 ask to speak with shipping). They are in the Yellow Pages.

Brief Overview of Rainwater Catchment:

Rainwater catchment is the process of capturing water runoff from an impervious surface for later use. A system can be as simple as a whiskey barrel placed under a rain gutter downspout for watering a garden or as complex as an engineered, multi-tank, pumped and pressurized construction to supply residential and irrigation needs.

Rainwater catchment systems were once fairly popular in the United States and supplied many rural and urban dwellings with part or all of their water. Rainwater is still one of the main sources of water used in many island communities, such as Bermuda, the U.S. Virgin Islands, and Hawaii, and is being heavily promoted as an alternative water source in Austrailia.

Why Consider a Rainwater Catchment System in Portland:

The City of Portland's Bureau of Environmental Services is advocating people to disconnect their downspouts. In some areas they are actually paying the homeowner $53 per disconnected downspout. The motivation for this project is to reduce the input of storm water into the city's sewer system. Currently the program recommends extending the downspout and discharging the water onto the lawn/garden or having the rainwater discharging into a dry well. Installing a rainwater catchment system allows a person to disconnect downspouts and use the water for indoor and outdoor purposes, reducing an individuals water bill and pressure on local water supplies.

An Inexpensive Method:

Although a complex engineered system would be ideal, the price can be prohibitive. I decided to create an inexpensive system using 55 gallon plastic barrels after finding them for $5 apiece. Taking into consideration the future sale of a home, it was also determined that such a system should be easily removed if no longer wanted. The steps to create this system are detailed on the following pages. All of the materials were cheap and found easily.

Calculation to Determine Rainwater Discharge from Roof:

The city of Portland receives an average of 37 inches of rain annually, and the following equation can be used to determine a roofs discharge of rainwater:

Rainfall (in.) x Collection Area (sq. ft.) x 0.6233= water discharged (gallons)

Brad's house in Portland (which is a typical Portland Bungalow) has a total collection area of 1650 sq. ft. So about 38000 gallons of water are discharged into the City of Portland's storm water system from his roof every year.

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