

## How to build a rain barrel

1. Purchase a 55 gallon drum (200L). Can usually get them used on Kijiji for roughly \$15-30. Make sure it is food grade where you will be harvesting the water and releasing it back to the environment (ex: molasses, juice, seaweed, etc.).

\*be sure to **wash your barrel out** before use – hot water works fine, ¼ vinegar, or biodegradable dish soap – do not use bleach as it is harmful to the environment.

2. Purchase your fittings and materials needed – a list will be attached. Everyone makes rain barrels slightly different, so select methods/fittings of your own and best interest.
3. Gather tools/materials.

You will need the following tools:

- Rasp or file
- Hole saw kit (5“, ¾“, 1 ½“)
- Mandrels (2 sizes: A- hole saws up to 1 1/8<sup>th</sup> (29mm), and B- fits all larger hole saws (greater than 29mm)
- Cordless or regular drill
- Gloves (preference)
- Vice grips – easier for taking mandrels off of hole saws
- Measuring tape
- Permanent or black marker

**Steps:** “easy as **1-2-3**”

### 1. (1<sup>st</sup> hole) Faucet:

- Mark off 4 inches from the **bottom** of the rain barrel with your tape measure and black marker
- Tip the barrel onto its side (easier to place between legs, or work in two’s and get someone to hold barrel and other to drill) and drill your first hole for the ¾” rain barrel spigot. The hole saw being used – ¾” where the spigot threads are also ¾”.
- Wrap Teflon tape around the rain barrel spigot threads, and then twist into newly drilled hole until secure and tight

### 2. (2<sup>nd</sup> hole) Overflow:

- Mark off 4 ½ inches down from the **top** of the rain barrel, 90degrees away from last hole drilled
- Flip barrel on its side and drill another hole but using the 1 1/2” hole saw piece this time, and using a mandrel that fits hole saws greater than 29mm

- Apply Teflon tape to the 3/4" bulkhead fitting for this hole, and place in, threading the washer on reverse thread
- Then apply the 3/4" poly overflow adapter into the bulkhead fitting, applying Teflon tape around the threads for this fitting beforehand as well

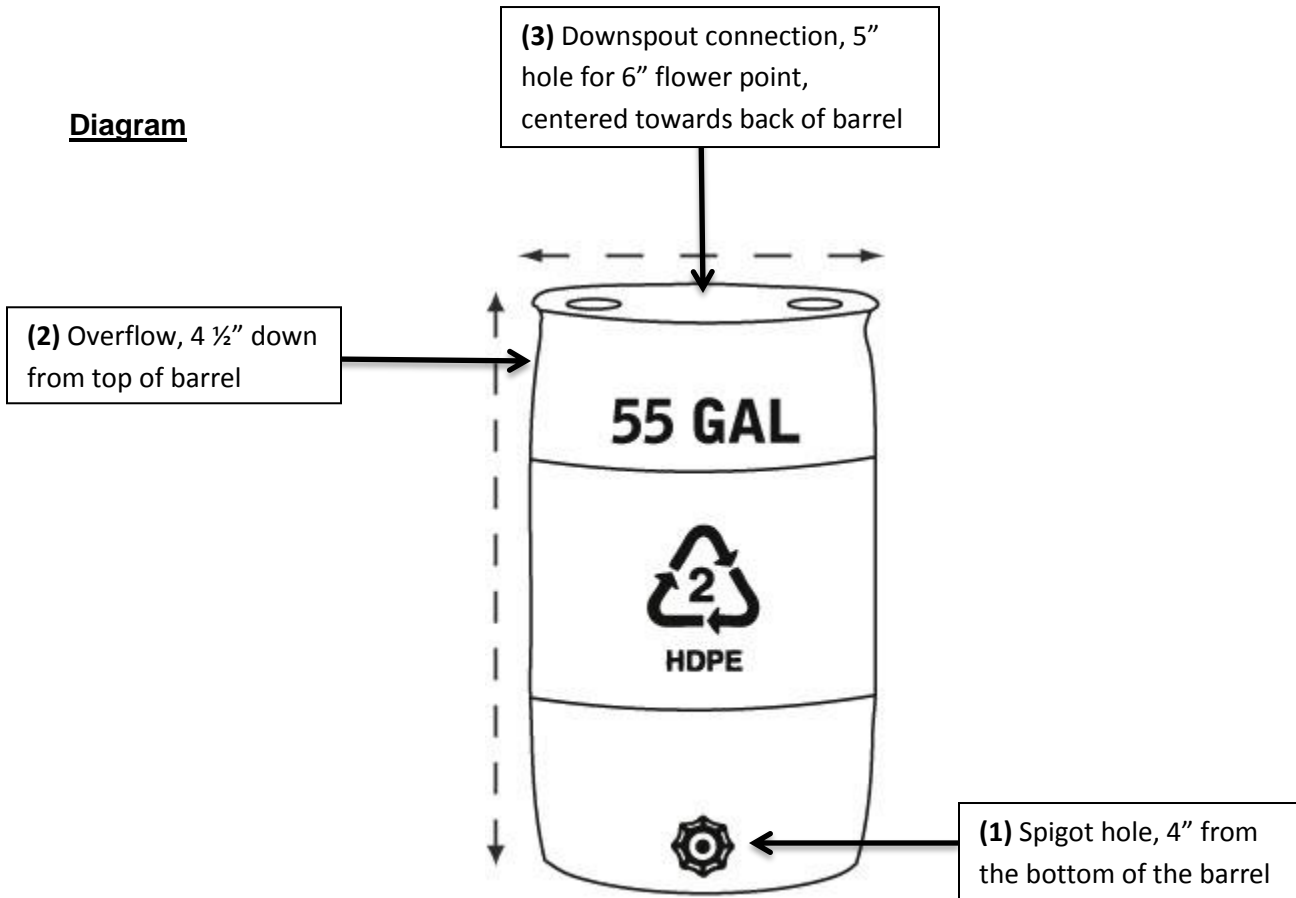
### 3. (3<sup>rd</sup> hole) Downspout:

- Drill your final hole on the top of the rain barrel using the 5" hole saw, 90degrees from the overflow hole and centered towards the back of the barrel (see diagram for clarification)
  - *Should ultimately be 180degrees from spigot*
- Use a rasp or file to file away any burs (this goes for all holes if possible)
- Place one 6inch flower pot in the newly drilled 5" hole, then place the 10x10 mesh, and another flower pot on top to ensure proper filtration

### Additional steps:

- You will also want to attach a hose to your overflow adapter, and secure with a hose clamp. You can then direct this water away from your home and into a garden for example
- Place your rain barrel on the prepared site, placing on top of two cinder blocks to help with gravity and efficient flow
- Redirecting your downspout: cut your downspout 4" from the top of the rain barrel, and then add a flexible elbow attachment to redirect water into the flower pot which then gets filtered into the rain barrel
- Paint your rain barrel! Paint your rain barrel to avoid the growth of algae, and prolong the life of your barrel. You will want to prime your barrel beforehand, and can use acrylic outdoor paints for best results.

**Diagram**



## Cost and Sources of Rain Barrel Components

	Components	Price with HST	Source
Workshop Rain Barrel	55 gallon barrel	\$30 each, used	Kijiji
	6" flower pots x2	\$1.71 each x 2 = \$3.42	Home Hardware
	One ¾" bulkhead fitting (poly tank adapter)	\$11.49 each	Home Hardware
	¾" plastic poly hose adapter, 1 pk hose clamps 25pk = \$14.97	0.79 each (adapters), 0.60 each for clamps	Home Hardware
	Rain barrel spigot	\$13.79 each	Home Hardware
	Teflon tape	\$1.14 each	Home Hardware
	10" X 10" wire mesh (1.5 mm (1/16th inch)) or 8x8 mosquito net	0.99/ft = \$1.14	Home Hardware
Required for Installation	Flexible downspout attachment	\$4.00-10.00	Home Hardware
	¾" Overflow hose with valve and fittings (including hose clamp) (8 feet @ \$1.49/foot)  *will use 16ft for an example, \$23.84+hst = \$27.42	8ft @ 1.49/foot *this is flexible depending on where you want the water diverted to (eg. into a rain garden, storm drain, etc.)	<i>Priced by Coastal Action at a local hardware store in Lunenburg area</i>
	Cinder blocks x2 *average here, inc. tax	\$3.00-\$5.00 each ( <b>\$10.00</b> )	Home Depot
	Total cost per barrel without installation material	\$62.22	
	Total cost per barrel with installation material	\$109.64	

\*A hole saw kit is needed for the installation of the fittings (*can purchase, or rent from your local Home Hardware store*)

***Purchase new:*** \$40-150 (Canadian Tire)

***Rent from Home Hardware p/day:*** around \$30.00 per day

***\*Can also purchase downspout diverter kits from Home Hardware for \$30-\$50***

