S Y S T E M

## HORTICULTURE SERIES

# Agriculture \& Natural Resources TIMELY INFORMATION 

## Constructing a Rain Barrel

## Supply List

55 Gallon Barrel (color other than clear or white is preferred to prevent algae growth)
$3 / 4$ " Faucet (Garden Spigot or Hose Bibb)
$3 / 4 "$ PVC T Fitting With Female Threads on One Side of the $T$
15/16" Spade Drill Bit
O Ring Washer To Fit $3 / 4$ " Faucet
Concrete Blocks(optional for raising barrel off the ground)
A 3" Piece of 3" Diameter S\&D Pipe (lighter duty sewer and drain pipe)
2-3" S\&D Plastic Pipe 90 Degree Fittings (Elbows) or One Coupling and One 90 Degree Fitting
PVC Glue
Aquatic Plant Basket or Similar Perforated Basket
Plastic Spray Paint (for painting clear or white barrels or to change color as desired)
Flexible Downspout Extension
Insect Screen (for mosquito exclusion)


## Tools Needed



## Installing Faucet

Drill a hole 6 inches from bottom of the barrel. With the wood boring $15 / 16$ " drill bit, drill the hole slowly, so you will not damage the circumference of the hole.

Use a $3 / 4$ " tap tool (pictured here) to make the threads in the newly drilled hole. Cut the threads slowly and in a level position. Otherwise, the faucet will be at an angle and the T with the washer on the backside will not tighten flush and a small leak may

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result. It is possible to thread the faucet without making threads with a tap tool but a leak is more likely and you will need to use a 1 " bit instead of the $15 / 16$ " bit.

Carefully thread the faucet into the tank (use pipe Teflon or pipe sealant compound on the threads). You should allow $1 / 2$ " or more of the threaded faucet nipple to protrude into the inside of the barrel. Reach in and install the rubber " O " ring and threaded T (as picture above illustrates) to hand tight. Naturally this step will be done after the top cut
 is made unless the barrel has a removable lid. It is not recommended that you over-tighten this, as you will stretch the "O" ring.

## The Lid

Cut the top entry hole to the desired size and shape by drilling pilot holes at the corners and use a ruler to make straight lines. If the hole is on the same side as the faucet it will be easier to attach the washer and threaded T. Use the aquatic plant basket to determine the hole size to be cut.
The two most used sizes are 9 " and 12 " but this is not critical.
 However, if the lid of the barrel does not remove use the larger basket size, if available, to gain easier access to the inside of the barrel to attach the washer and T. Cut hole about $1 / 2$ " smaller (on all sides) than the top of the basket size to allow basket to seat in the hole but not fall through. For added security against mosquitoes line the basket with plastic insect screen.


## Overflow

You must have an overflow hole for excess water which will be needed with any significant rainfall event. Although the overflow need not be as large as the downspout size a minimum hole of 2 or 3 inches is advisable. The directions here call for a $3^{\prime \prime}$ overflow which should be sufficient for most rain events.

The overflow should be located near the top of the
 barrel in the position you wish to divert the overflow water. Make certain it does not obstruct the aquatic plant basket placement. The best location for the overflow is usually near the point the original downspout was prior to the rain
 barrel installation. Drill or cut the hole to the desired size based on the pipe size being used. For 3" S\&D PVC pipe use a $31 / 4$ " lockset type drill bit (like the ones used to drill a hole for a door knob but somewhat larger).

Cut a piece of 3" S\&D PVC pipe about 3" long. Place the 3 " section through the drilled or cut hole with one half of the pipe inside and the other half protruding out. Using PVC glue attach one of the 3 " elbows inside the barrel and the other on the outside. The
inside elbow should point up and the outside elbow down. If the fit is not tight against the inside and outside of the barrel use some silicone caulk to seal potential leaks. Instead of using an elbow fitting on the inside you may choose to place the exit hole slightly higher and use a straight coupling. This would reduce the chances of a leak developing around the point of attachment.

You may then attach a drain pipe to the outside elbow and direct the excess flow wherever desired (possibly a nice rain garden).

## Installing Your Rain Barrel

Position your rain barrel on level ground in front of a downspout close to the garden you wish to water if possible. Ideally the rain barrel would be raised up on concrete blocks so that you can get a watering can under the faucet. The higher you can get it the more water pressure you will
 have. If you do this, make sure the ground is firm and blocks are level.


Cut the downspout (a hacksaw works well for both metal and plastic downspouts) a couple of feet above the top of the barrel.

Remove the lower section of the downspout and slide the barrel into the permanent position.

Attach a downspout flex extender to the downspout and place the other end into the aquatic plant basket

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