

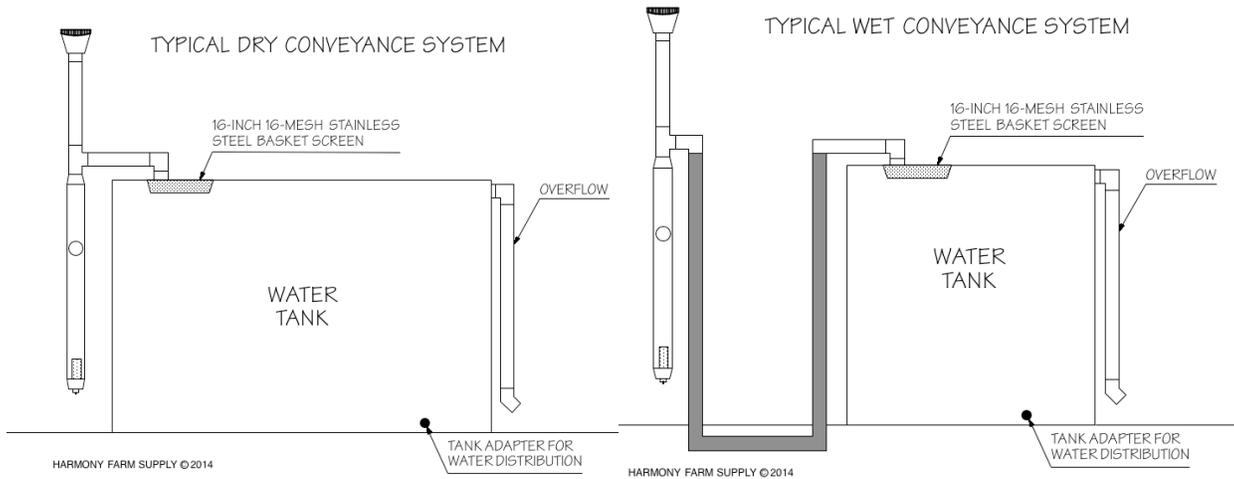
RAIN WATER TANK MAINTENANCE AND OPERATIONS MANUAL

A short video of the basic operation and maintenance for rain catchment tanks:

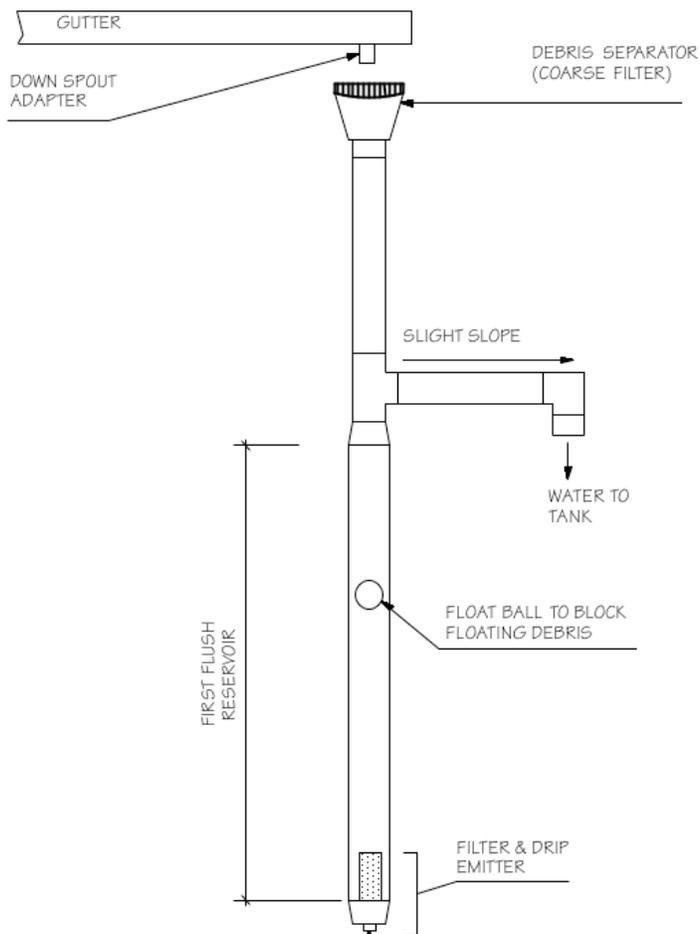
https://www.youtube.com/watch?v=boyUkU_TocU&t=2s



Typical Rainwater Catchment Designs



TYPICAL FIRST FLUSH ASSEMBLY



Definitions of standard parts to a rain catchment system:

Gutter – catchment of water from the roof and is the conveyance to the down spout.

Down Spout – pipe extending from roof gutter.

Fill pipe or horizontal conveyance pipe – is the pipe that carries water from the roof into the tank.

Leaf Deflector – keeps large leaves and debris out of the rainwater collection system. Code requires to have one installed before the inlet into the tank, and it must have a 100 micron mesh to prevent insects from entering the rain catchment system.

First Flush – diversion system works as a pretreatment to collect debris from roof. Not required by code.

Rain Water Tank – storage tank, cistern.

Tank lid – typically located at the very top of the tank.

Distribution Valve – a ball or gate valve installed at the distribution tank adapter near the bottom of the outside of the tank. Its purpose is to keep water from running out of the tank.

Distribution pipe – connects to the distribution valve, and leads water away from the tank typically to the irrigation point of use.

Distribution filter – an inline filter with 100 micron mesh that prevents drip irrigation from clogs.

Hose Bib – a small valve that allows you to hook a garden hose or other device to convey water out of the tank.

Nonpotable water – water that does not conform to federal and state treatment standards for human consumption but is safe to use for irrigation, laundry and toilet flushing.

Overflow pipe – is the pipe that conveys any excess water out of the tank. Located towards the top of the tank, 3” below the inlet to the tank. The overflow pipe ends with a Hi-Flow Flap Valve that has a 100-micron mesh to prevent insects from entering the rain catchment system.

Rainwater catchment is defined as the capture, conveyance, and storage of rainwater from the roofs of structures (i.e. buildings, sheds, water tanks).

Water Gauge – if installed, an exterior device that shows the level of captured water in the tank.

Before the first rain and on an annual basis:

- Clean gutters of leaves and debris.
- Clean leaf deflector of any leaves and or debris. Check periodically during storms.
- Visually check all pipe fittings and piping for any cracks or leaks. Repair as needed.
- If installed, open and release water and debris from the first flush system. Clean cap and threads before reinstalling. Make sure the lid is back on straight and tight.

- **Never enter a tank or confined space as injury or death may occur!**
- Check for debris on tank lid screen and clean by removing the tank lid or vacuuming off the screen.
- Open tank lid and look inside of tank for algae or scum accumulated at bottom of the tank where it could prevent water flowing through the distribution valve and pipe system. If algae has accumulated, clean using a long handle brush with soapy water, never use bleach. Do this when there is minimal water in the tank. Using a spray nozzle on a hose will help to clean the sides. Detach the distribution flexible hose line from the piping system. Open the distribution valve to release the dirty water. Reconnect the flex line with the distribution piping. Replace tank lid and secure tightly.
- If installed, clean filter in the distribution system. Remove screen and gently brush under flowing water.
- Check the hose bibb for leaks when opening and closing. Replace washers if needed and or tighten bonnet nut at handle.
- Check over flow flap at end of overflow pipe making sure that it can move easily.
- Clear debris near overflow drainage area. Add more rock if necessary to prevent erosion.
- If installed, check that the water gauge moves freely when pressed up or down. Repair if needed.

If you have further questions, please contact Stefan@conservationworksnc.org

Keeping up with routine maintenance will help to ensure the longevity of your rain catchment system.



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