High Capacity Solar Still

By: Uplandhillfarm

Looking for an easy way to create fresh water without wasting firewood boiling water or using a ceramic water filter?

There are several sizes of heavy black plastic water tanks that will make an excellent solar still. We have two 30 gallon plastic tanks on our farm that can be quickly converted into solar stills. To improve the efficiency of the unit, we place it on the blacktop driveway for added heat.

We spent $30 on all the materials for each solar still. The largest expense was the cost of the black plastic water tank at $19.

Items needed:

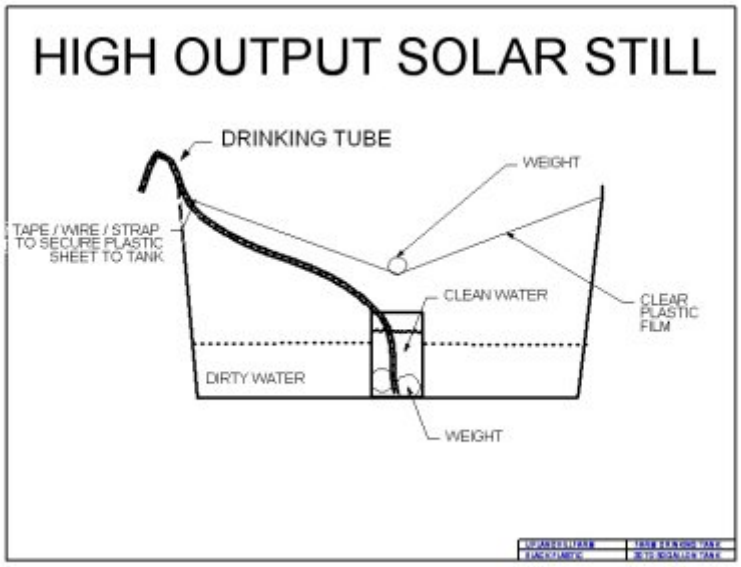
- Black watering tank-looks like a wide oversized bucket, sizes up to fifty gallons at most farm stores
- 3 plus feet of clean drinking tubing
- Clear plastic sheeting to cover the opening of the tank
- Wire or web strap to secure the plastic sheet around the top of the tank
- 2 ½ or 5 gallon bucket to collect the clean water
- Clean smooth rocks or other weights to hold down the bucket.
- Smooth rock on the top and center of the plastic sheeting to create a drip point into the bucket for fresh water

The drinking tube, clean water bucket, bucket weights and the plastic sheeting should be clean before assembling the unit.

When refilling the raw or dirty water into the unit, care is needed to prevent contamination of the clean parts of the system.

Care should be taken to keep the upper lip of the tank clean to prevent contamination of the condensation droplets on the clear plastic film or sheeting.

Assemble the unit based on the information in the diagram



Any combination of dirty water, urine, fresh cut plants, moist soil or other wet media can be placed in the solar still to extract the fresh water. Any material that has been contaminated with chemicals should not be placed in the solar still because it can contaminate the fresh water area.