RAINWATER HARVEST
STORMWATER MANAGEMENT

What is Rainwater Harvest?

Rainwater harvest is the process of capturing stormwater runoff from a roof and redirecting the stormwater into a storage container via a pipe for later use.

Benefits of Rainwater Harvest

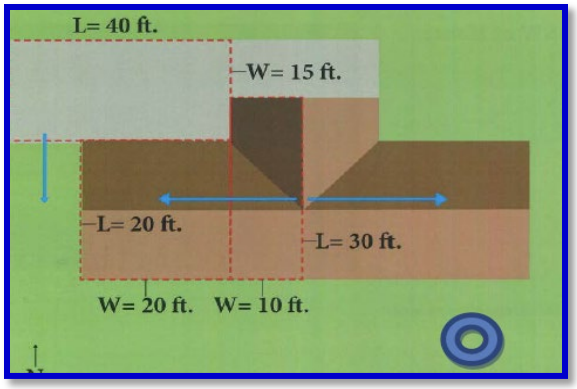
There are many benefits to rainwater harvest. Installing a rainwater harvest system can avoid erosion, deter pollution, improve stormwater quality, reduce the quantity of stormwater runoff, provide supplemental landscaping/garden irrigation, livestock watering, supplemental water storage during dry months and fire danger, and water bill savings.

Installation Steps

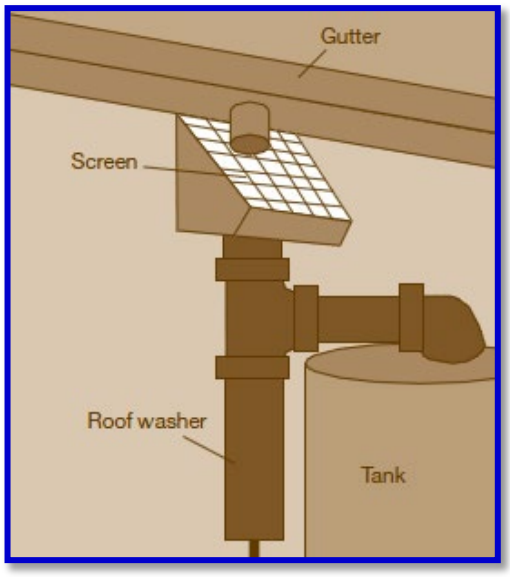
1. **Determine property needs**
   Observe site, current features, current water usage and needs, current drainage patterns and possible issues.

2. **Determine location of rain harvest system.** Pick a flat, level location alongside the building you will be collecting roof runoff from. If the land is more sloped, a concrete pad or other materials to level the ground may be necessary.

3. **Determine sizing of rain harvest system**. Calculate total impervious surfaces (roof, driveway, etc.). Multiply this value by the average annual rainfall in your area and the evapotranspiration (ET) constant to calculate the total rainfall captured per year, aka the maximum storage capacity.



4. **Plan your rain harvest system**
   Determine route of rainwater harvest system, based on gutter placement, elevation (need level ground) and storm drain location (for overflow).
5. **Determine overflow route** to ensure your property is equipped for a rainwater harvest system. Examples include a bioswale, rain garden, or piping to a storm drain.
6. **Construct your system**
   Refer to the materials list below. Materials needed depends on the system setup and needs.
7. **Maintain your Rainwater Harvest System**

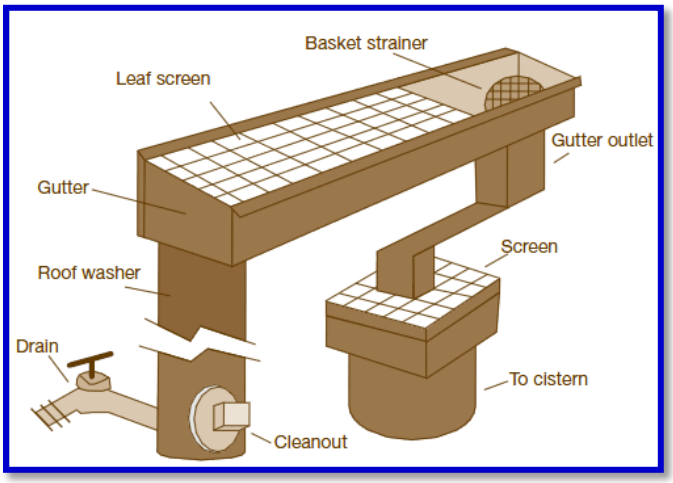


Example: 20 ft x 20 ft = 400 sq ft, 10 ft x 30 ft = 300 sq ft
Total Surface = 700 sq ft
Average Rain = 18 in/year
ET Constant = 0.46
700 sq ft x 18 in x 0.46 = 5,796 gallons/year

Maintenance

Check system is functioning properly:

- Check for leaks and make sure all parts are securely fastened, and that screen(s) are in place.
- Clean gutters at least twice a year
- Clear downspout elbows, rain barrel screening, and overflow to prevent clogging
- Make sure gutters are level and tilted to direct water to downspouts
- Ensure overflow system is working correctly



Materials List

- ☐ **Rain Barrel (s):** Size depends on roof size and property needs.
- ☐ **Base (if applicable):** Stand, cinder blocks, concrete slab needed if rain barrel location isn't level, such as on a slope.
- ☐ **Gutter** (K style recommended)
- ☐ **Overflow:** Adapter, drain, overflow hose or corrugated plastic piping
- ☐ **Downspout**
- ☐ **PVC Piping:** Elbow and connectors, overflow pipe fittings, adapters, bushing
- ☐ Clincher strap
- ☐ **Bulkhead fittings**
- ☐ **Rubber Washer**
- ☐ **Hose, Spigot, Clamp**
- ☐ **Filter/leaf screens, basket diverter**
- ☐ **First flush diverter**
- ☐ **Float ball**
- ☐ **Gutter outlet**
- ☐ **Roof washer**
- ☐ **Cleanout**
- ☐ **Reducer**
- ☐ **Trap adapter**
- ☐ **Spigots**
- ☐ **Plugs for drain holes**
- ☐ **Pumps**
- ☐ **Tank pad**
- ☐ **Straps/bolds** to stabilize tank
- ☐ **Valves**

Installation Tools List

- ☐ Drill
- ☐ Drill bit
- ☐ Hole Saw/hole saw bit
- ☐ File or Knife
- ☐ Rubber Mallet
- ☐ Calking gun
- ☐ Pliers
- ☐ Wrench
- ☐ Scraper or a Knife
- ☐ Teflon Tape
- ☐ Scissors
- ☐ Pencil
- ☐ Sheet metal screws (downspout)

Further Reading

- **ARCSA Rainwater Harvesting Manual**
- **Oregon Smart Guide**
- **Rain Barrel Guide – City of Ashland**

Jackson Soil & Water Conservation District
89 Alder Street, Central Point, OR 97502
Phone: 541-423-6159 Website: jswcd.org