EARTHCRAFT LANDSCAPE DESIGN
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Rainwater Harvesting Seminar

This is a brief overview of Rainwater Harvesting (RWH). If you have consulting questions, please contact our office to schedule an appointment.

Rainwater Harvesting

1. **Capture**
2. **Store**
3. **Filter**
4. **Pump** - (use for irrigation and/or fire protection)

Amount of Potential Rainwater Capture

Roof size	Amount of Rain	Potential Capture
1,000 sq. ft.	24”	15,000 gallons
“	36”	22,750 gallons
2,000 sq. ft.	24”	30,000 gallons
“	36”	45,000 gallons
3,000 sq. ft.	24”	45,000 gallons
“	36”	67,500 gallons

Acceptable roof materials are metal, concrete, tile and asphalt shingles. Treated wood shingles and flat tar and gravel roofs are not recommended.

Storage of Rainwater

1. Above ground storage – tanks and rain barrels.
2. Below ground storage – geotech grids.

Filtration – Before storage tank

Note: It is always best to use two filtration systems when installing RWH storage tanks for both above and below ground systems.

1. Gutter – wedge.
2. Pre-filter –Frogmouth, Leaf Eater.

Pump

1. Typically required and may also need pressure tank.
2. **Grundfos** pump recommended (contains pressure tank), quiet & easy to use; 30 – 50 psi; self-priming.
3. Rain barrels may use a submersible pump.

Filtration – After storage tank

1. 150 mesh filter prior to irrigation.

2. Valve to in-line drip filter (before emitters or sprayers).

Rain Barrels
Filtration built into top cap.
Minor additional filtration may be needed.
Recommend use of garden hose, because of wide diameter it will not get clogged.
If stored rainwater is to be used for drip irrigation recommend post-filter such as 150-mesh filter.

Water Pressure
To obtain 20 psi (typical minimum needed for drip irrigation) there needs to be a 50-foot elevation difference between water storage device and outflow. Since this typically is not the case, a pump is needed. A rain barrel can be placed a higher level or on a deck to increase water pressure.

Overflow
When water storage tank becomes full, excess water needs to escape via an overflow pipe. Excess water can be channeled into existing drainage system or captured in retention basin or French drain.

First Flush Valves
Let first rain wash roof debris and dirt without capturing any rainwater.
Two ball valves are typically utilized.

Rebate Schedule
Contact your local water company for rebate information. If a rebate program is not available, ask for one.

Rainwater Testing
Recommend testing harvested water by American Plumber or Soil Control Lab in Watsonville. **Remember rainwater is for non-potable use.**

RWH Resources

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*Available for on-site consultations, RWH plan and landscape design. Consultation fee may be applied to design.

Website: www.HarvestH2O.com

Books: Rainwater Collection for the Mechanically Challenged, by Suzy Banks with Richard Heinichen, 2004.