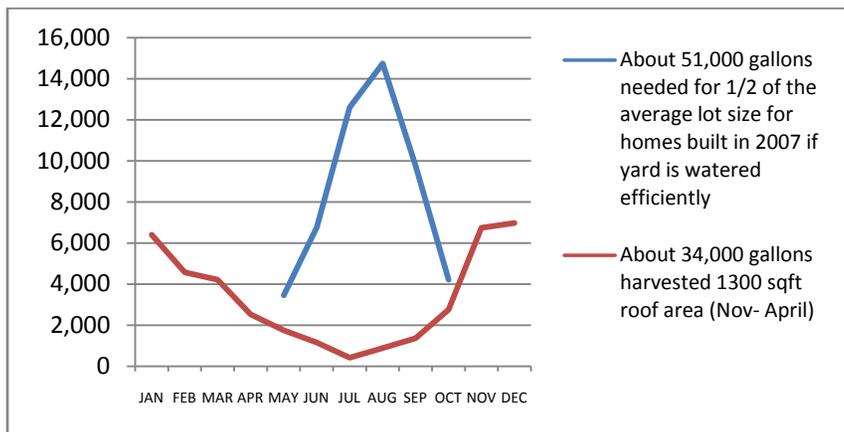


## Make the most of your rainwater harvesting system

Western Oregon is so rainy that many residents view rainwater harvesting as a great opportunity to use a readily available resource.

The graph below shows part of the challenge of realizing this opportunity; virtually all of our rain falls when it is not needed for landscape watering. In addition, even if you have a very large rainwater storage tank, it is likely you will need to supplement your landscape watering or toilet flushing with municipal water.



## Refill your rainwater harvesting system safely

Many rainwater harvesters simply use a hose connection at the base of the storage tank to water their plants and move the hose to the home spigot when the storage tank is empty. Some may have a drip watering system or toilet flushing connected to the storage tank and may wish to refill the tank for uninterrupted use. When refilling the storage tank, be sure that the flowing hose end does not touch the water in the tank.

The rainwater storage tank can also be built with an automatic refill float valve so that water is always available when needed. If you choose an automatic refill, consider also installing a timer so that the supplemental municipal water does not displace possible rainwater refill of the tank.

## Rainwater Harvesting at the Water Wise Demonstration Garden

The rainwater harvesting system at the Alton Baker Park Water Wise Demonstration Garden features:

- 2,500 gallon rainwater storage tank sized to apply 19-inches (600 gallons) of water to the 50 square foot planted area during each watering season;
- The tank is tall enough to allow for a gravity-fed watering system;
- Connected to a drip watering system for most efficient water application;
- Supplemental municipal water is protected by a testable backflow assembly (not a hose fill);
- Automatic refill float valve on a timer set to fill between 9:00 p.m. and 3:00 a.m. which allows an opportunity for rain to refill the storage tank;
- Refill is set at a low flow of 4 gallons per minute so that the midnight noise of refill is minimal.

Once the system is verified to be working as designed, there are plans to expand use of the harvested rainwater to maximize use of the 2,500 gallons stored. The watered area in the Demonstration Garden can be expanded to 2,000 square feet because 2,500 gallons can water about 2,000 square feet to a depth of 2-inches.

During the winter, the overflow for the rainwater storage tank flows through a bubbling water feature and into a rain garden. This design provides visual interest on a rainy day, and passive stormwater treatment in the rain garden before recharging the groundwater.

## Considerations for rainwater harvesting design

You might consider designing a rainwater harvesting system in the Eugene-Springfield area similar to the system at the Alton Baker Park Water Wise Demonstration Garden that includes these features:

- Calculate your rainwater storage tank to be sized to apply at least two inches to the entire watered area. This size of system would allow for one maximum watering day before refill.
- If the watering system needs more pressure that can be created by elevating the water column, consider using a small solar powered pump.
- Consider connected to a drip watering system for most efficient water application;
- If supplemental municipal water is used to refill the storage tank, assure that it is protected from backflow by an air gap or appropriate testable backflow assembly (not a hose fill).
- An automatic refill float valve on a timer set to fill between 9:00 p.m. and 3:00 a.m. will allow an opportunity for rain to refill the storage tank;
- Consider setting a refill at a low flow of 3 - 6 gallons per minute so that the midnight noise of refill is minimal.

## Resources for rainwater harvesting design

Contact City of Eugene Public Works and Permit Information Staff at the Permit and Information Center (PIC) to get help:

- In person: 99 W 10th Ave. (Atrium Building) from 9:00 a.m. to 5:00 p.m. Mon – Fri
- Voice-mail: (541) 682-8400 (Public Works) or (541) 682-5505 (Permit Information)
- E-mail: [cwepic@ci.eugene.or.us](mailto:cwepic@ci.eugene.or.us)
- Web: [www.eugene-or.gov/stormwater](http://www.eugene-or.gov/stormwater)

A guide for rainwater harvesting is posted online at:  
[www.cbs.state.or.us/external/bcd/pdf/3660.pdf](http://www.cbs.state.or.us/external/bcd/pdf/3660.pdf)

# Water Wise Landscape Demonstration Garden

## Rainwater Harvesting

### Alton Baker Park Eugene, Oregon

