

Rainwater Harvesting Systems

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With an average rainfall of 32" an average-sized roof can save over \$20,000 gallons annually.

Potentially halves potable water costs.

Immunity from city water rationing.

Healthier, more productive plants.

Addresses stormwater problems at the same time.

Makes a rainy day really satisfying!

Why collect rainwater?

“But it’s not raining?” (especially during drought)

“Doesn’t the water go ‘bad’?”

“I already have a rain barrel.”

“The drought won’t last forever.”

“I’m going to drill a well instead.”

Common misperceptions

System anatomy

{ Follow the drop!



The roof



Gutters and leaf screens

First flush/
roof washer





Underground/
downspouts



Attached
to house



Overhead

Conveyance

From gutter to tank



Plastic
can also be underground

Storage tank



Metal

Formed



Storage tank





Tank pad



Pump (pressurized vs. gravity fed)



Municipal backup

City of Austin's rebate program

Rainwater equipment exempt from sales and property taxes

Costs generally \$3-5 per gallon, depending on amount of gutters and irrigation

At current water rates, slow return

Incentive, investment and return



Irrigation applications

Water so carefully collected shouldn't be subsequently wasted: drip!

Rainwater systems can be connected to existing irrigation systems with modifications.

Can also be used for fountains, ponds, pools, etc.
Can also drain pool to tank.

Movement toward allowing potable use of rainwater in city.

Theory of highest, best use: towards greywater.

Irrigation applications

Permitting:

- Over 5,000 gallons of storage requires a building permit
- Heritage tree protection often an issue in city
- Also involves electrical and plumbing permits

Backflow prevention: RPZs and expansion tanks

Annual CSI required

City of Austin regulations

Questions?