Rainwater Harvesting and Water Reuse

Water Conservation: half-empty or half-full?

Regional Webinar Series

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Water Conservation: Half Full or Half Empty?

American Rainwater Catchment Systems Association - www.arcsa.org
501(c)(3) nonprofit

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Is the glass half empty or half full?

To lighten the moment…

this question could be finally answered

if the glass were half as large
The mission of ARCSA

To promote sustainable rainwater harvesting practices to help solve potable, nonpotable, stormwater and energy challenges throughout the world
Rainwater code, legislative and policy status

- 14 States have or propose pro-rainwater harvesting (RWH) legislation: AZ, CA, CO, FL, GA, HI, IL, NM, NC, OH, OR, TX, UT, VA, WA
  See ARCSA website - www.arcsa.org - for details
- 34 states are relatively neutral and allow RWH in some form
- Only two states present obstacles to RWH - Colorado & Washington
- IAPMO Green, ICC-IGCC - Potable & Nonpotable RWH Codes ready for jurisdictional adoption
- NSF - Standards for Potable & Nonpotable Rainwater Harvesting
- ASPE - Co-sponsor with ARCSA - Design & Construction manual
Conservation & Efficiency First

• Conservation - change habit patterns
• Efficiency - same habits with less waste
• It makes little sense to invest in RWH to augment supply if conservation and efficiency opportunities have not been fully exploited.
• If one were driving down the road and found that their parking brake was on, the first solution would not be to buy a bigger engine.
Water = Energy

California: 18% of energy budget to deliver & treat water
Florida: 80 million gallons of water per day needed for planned nuclear power

*It takes massive quantities of energy to treat and move water.*

*It takes massive quantities of water to produce and distribute energy.*

Conserving either conserves both
Florida’s Septic Conversion Rule

- Florida Admin Code 64E-6.0185 “…a septic tank serving a single family residence may, at the owner’s discretion, be converted into a cistern…”
- Three things to be particularly attentive to: Bugs, Buoyancy & Overflow

Fran Wagner - pioneer - will be honored by FL Legislature
Florida DOH inspecting sanitized tank
Florida Department Of Health
potable water statement

“…The Bureau of Water Programs endorses the use of residential rainwater cisterns for non-potable or potable water uses in residences where they are properly installed and maintained…”
Rain Barrels to Reservoirs...

65-Gallon Moby
Rain Water Solutions

250-Gallon to 4 Million-Gallon, modular, NSF Annex G-certified potable tank
Fiber Technology Corporation
Kilauea Lodge, Volcano Village, Hawaii
Sustainable rainwater harvesting diminishes the stormwater impact of rain events, harvests a wonderful commodity for later use, decreases the water/energy footprint, displaces the need for an equal amount of highly treated potable utility water and then further diminishes stormwater impact by slowly infiltrating any wasted overflow.
Energy Efficient practices example

Gravity feed for irrigation systems
Some low pressure drip emitters, though advertised to require 25 psi, will function admirably with 4 psi or less, which equates to 10 feet of head pressure. Supply tank can be refilled by solar pump.
ARCSA’s biggest concern is…

…poorly designed, installed, or maintained rainwater harvesting systems
ARCSA Educational Programs

- 100-Level Introductory
- 200-Level Accreditation Workshops
- 300-Level presentations
- 300-Level Design & Construction Workshops
Resources

- [www.arcsa.org](http://www.arcsa.org) - free public domain rainwater harvesting manuals: TX, VA, GA, FL, HI, Ontario

- ARCSA website - “Resources & Documents” - many free publications and hyperlinks to rainwater information around the world
Upcoming Programs

• 100, 200 & 300 Design & Construction Athens Georgia May 23-27
• 200-Level Accreditation Workshop Daytona Beach - dates to be announced
• Check www.arcsa.org for latest schedule
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