RAINWATER HARVESTING SYSTEMS

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Presented by Sasha Earl, P.E., President of Blue Gold Engineering

1. Why collect rainwater?

- With an average rainfall of 32" an average-sized roof can save over 20k 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!

2. Common misperceptions

- "But it's not raining..?" (especially during drought)
- "Doesn't it go 'bad'?"
- "I already have a rain barrel."
- "The drought won't last forever."
- "I'm going to drill a well instead."

3. Anatomy of a rainwater harvesting system: follow the drop

- The roof: sizing the system
- Gutters and leaf screens
- First flush? Or roof washer?
- Conveyance: underground, under eaves or overhead
- Tank, doesn't have to be metal
- Tank pad
- Pump, pressurized versus gravity-fed
- Municipal backup option

4. Incentive, investment and return

- City of Austin offers a generous rebate, up to 50% up to $5k
- Rainwater equipment exempt from sales and property taxes
- Generally $3-5 per gallon (before rebate)
- At current water rates, slow return

5. How this applies to irrigation

- Water so carefully collected shouldn't be subsequently wasted: drip!
- Can be connected to existing irrigation systems with modifications
- Can also be used for fountains, ponds, pools, etc.
- Movement toward allowing potable use in city
- Theory of highest, best use, towards greywater

6. Working with City of Austin Regulations

- Permitting
  + Over 5k gallons of storage requires building permit
  + Heritage tree protection often an issue in city (tree permit)
  + Also involves electrical and plumbing permits
- Backflow prevention: RPZs and expansion tanks
- Annual CSI inspection required

7. Questions?

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