

What's Next in Water Conservation?

**What else can builders and
homeowners do to conserve water in
the built environment?**

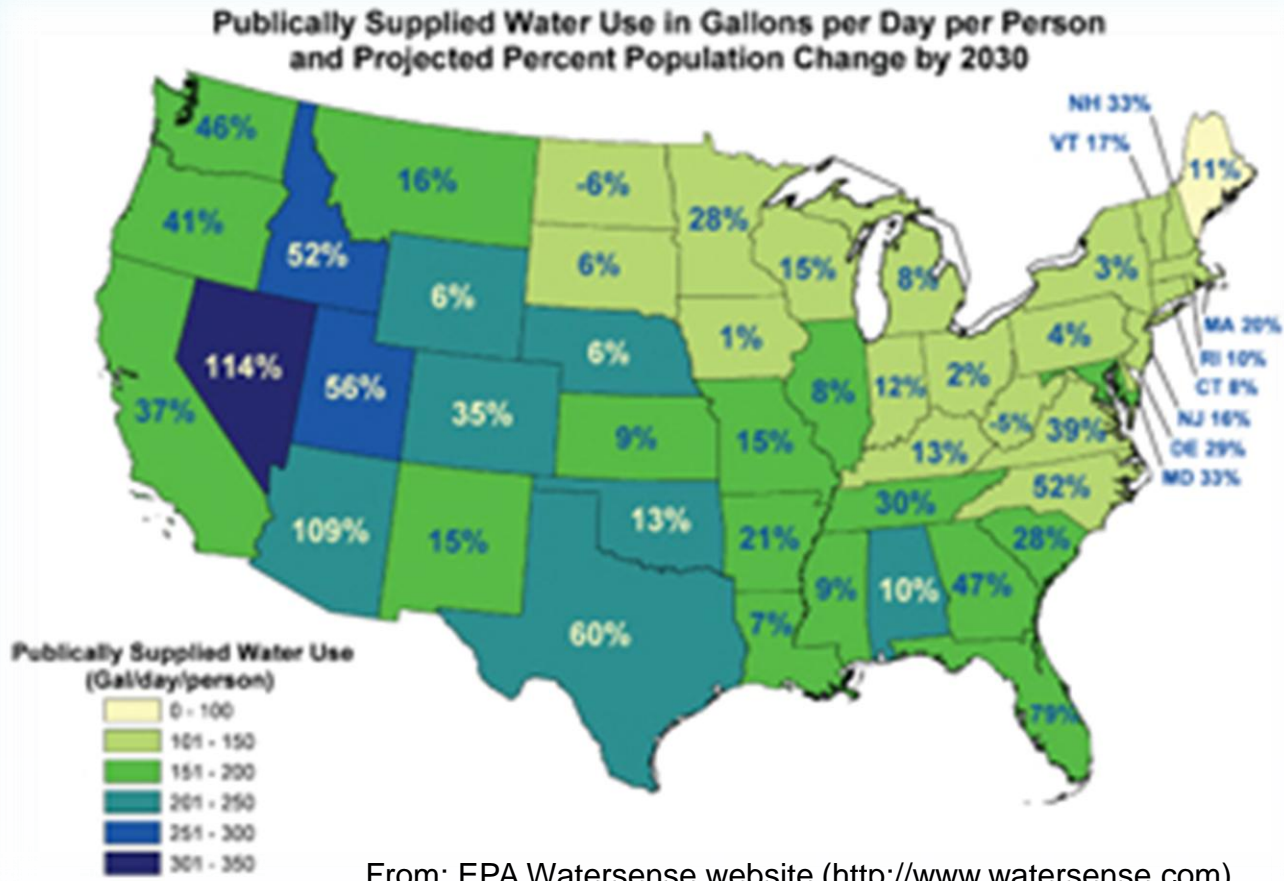


Water

- **It's Scarce. Don't believe me?**
 - Only 1 percent of Earth's water is available for human use.
 - Americans consume an average of 100 gallons a day per person (that's tripled since 1950).
 - A recent government survey showed at least 36 states are anticipating local, regional, or statewide water shortages by 2013.

From: EPA Watersense website (<http://www.watersense.com>)

Let me draw you a picture



Water...

- **It's Expensive.** Don't believe me?
 - Over the past five years, municipal water rates have increased by an average of 27 percent in the United States, 32 percent in the United Kingdom, 45 percent in Australia, 50 percent in South Africa, and 58 percent in Canada.



So what's new...

- **I know, I know.** But now what?
 - Rainwater Harvesting
 - Greywater Re-use
 - Rainwater/Greywater Hybrid
 - Waste-water filtration & Re-use
 - “No Water” fixtures



Rainwater Harvesting

- **New Jersey gets 45 inches of rain per year (avg)**
 - A 2,000 square foot roof receives 56,000 gallons of water each year.
 - In many communities this water ends up in the sewer system, putting extra (and unnecessary) stress on the treatment plants.
 - By capturing rainwater, and using it for non-potable needs we would reduce our consumption of public water by one-third.



Rainwater Harvesting



Rainwater Harvesting



Rainwater Harvesting



Greywater Re-Use

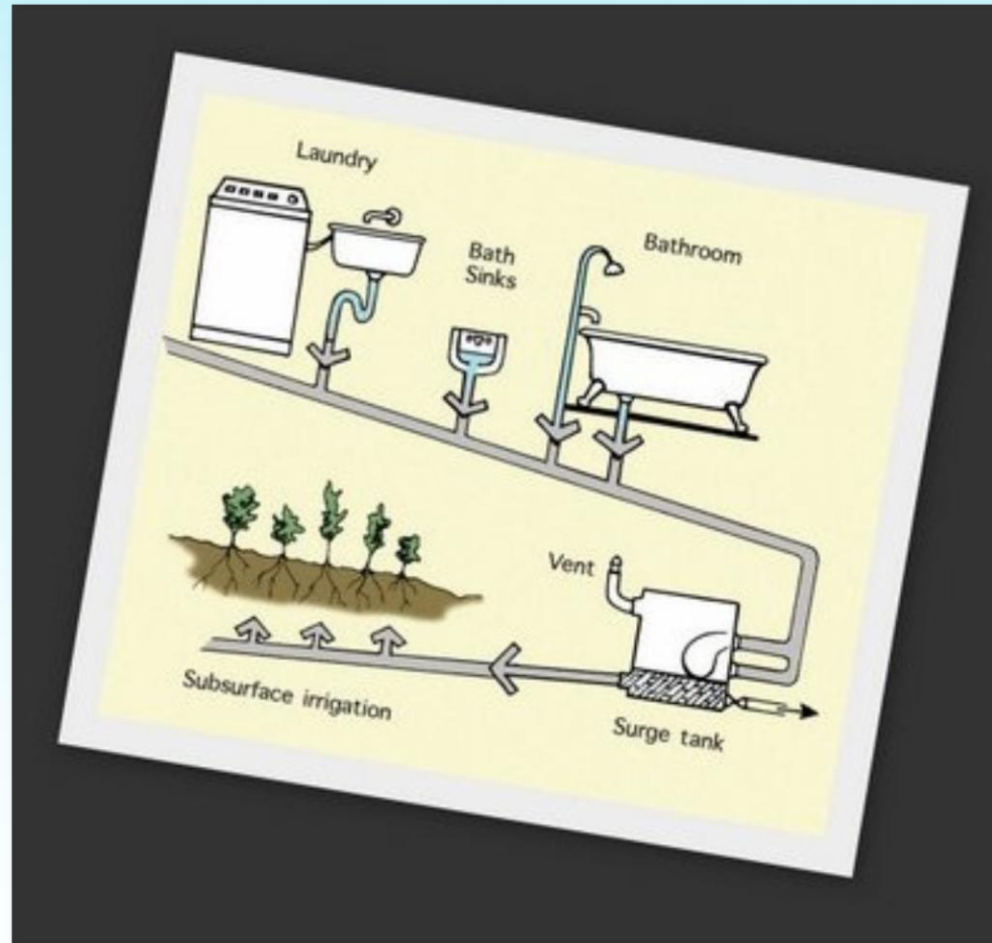
- **51% of our water consumption is used for toilets, laundry and landscape irrigation**
 - That's about 70,000 gallons a year!
 - Right now we use **drinking water** for these functions.
 - **Greywater** is wastewater generated from domestic activities like dish washing, laundry and bathing.
 - Filtered greywater can be re-used for these non-potable functions.
 - Even if we only reused greywater for flushing toilets we could save 30% of our annual consumption.



Greywater Re-Use



Greywater Re-Use



Greywater Re-Use



Greywater Re-Use

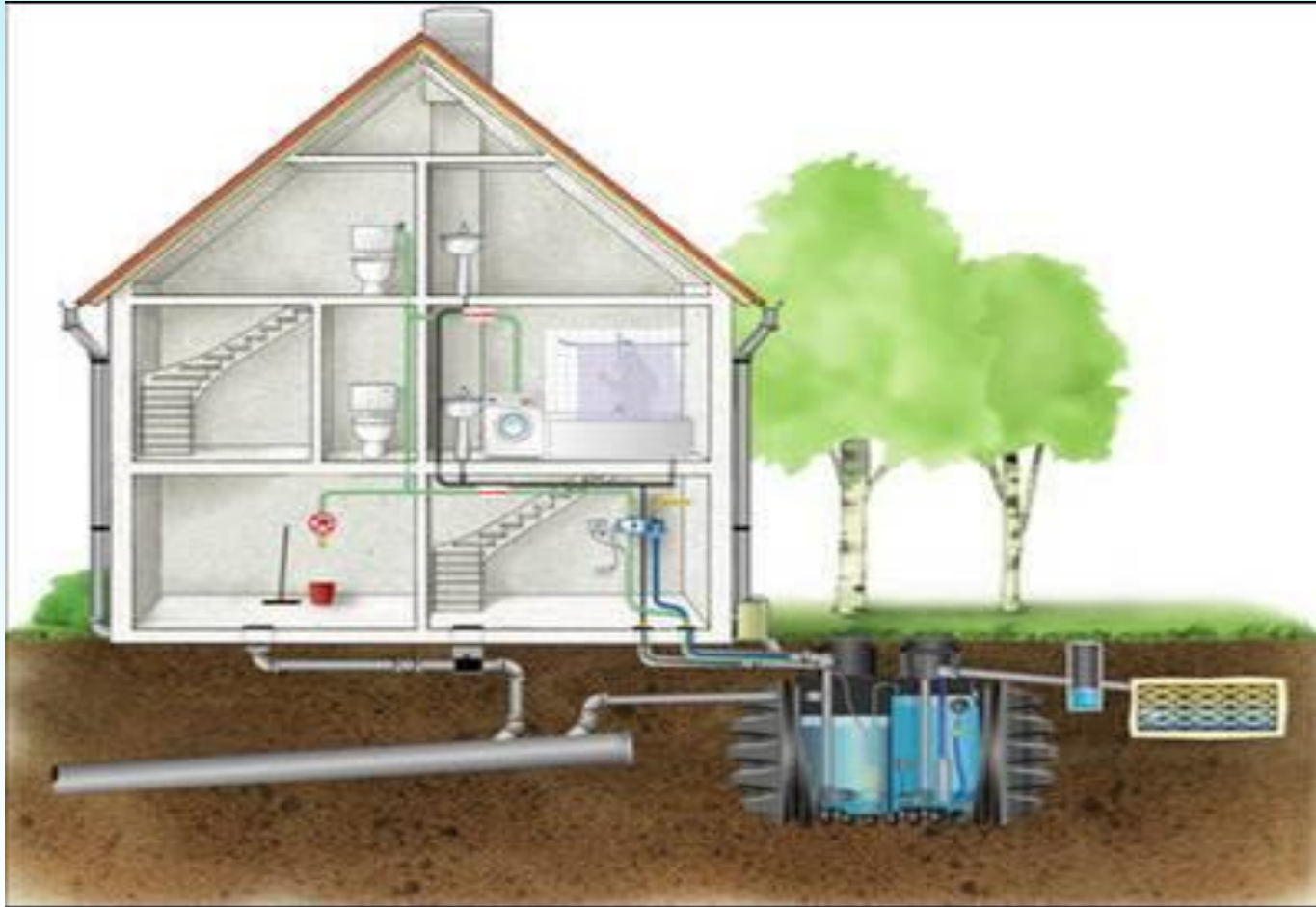


Rainwater/Greywater Hybrid

- **The two systems can be used together to save nearly 70% of a family's water**
 - Harvested rainwater can be utilized in non-potable applications: bathing, laundry and dishwashing
 - And this water can be re-used as greywater for laundry and toilet flushing
 - A family could reduce their average annual consumption from 140,000 to 42,000 gallons.
 - Not to mention the strain relief and energy savings to the water treatment facilities on both ends of the pipe.



Rainwater/Greywater Hybrid



Wastewater Reclamation

- **The earth has been doing a great job processing wastewater for eons.**
 - Wastewater can be captured, slowly filtered and fixed, and released as a clean resource for landscaping or into the groundwater.
 - This places less strain on the downstream waste treatment facilities.
 - Utilizes otherwise wasted water for landscaping, or to replenish wells.



Wastewater Reclamation



Wastewater Reclamation



Wastewater Reclamation



No Water at All

- **And then there were none.**
 - Composting toilets use no water, can have almost no odor, and produce a nutrient rich soil.
 - Waterless urinals actually harbor less bacteria than water-using urinals.
 - Xeriscaping utilizes only plants and elements that can survive without additional watering.



Waterless Urinal



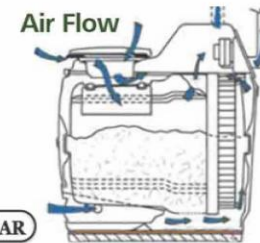
Composting Toilet

Composting Toilet by Sun Mar



Why Composting Toilets?

- Save \$1,400 vs. Septic!
- Save over 350,000g of water!
- No Leach Field Backup
- Install in 1 day vs weeks
- Re-use compost in the garden
- Only Sun-Mar self-contained units are listed for residential and cottage use by NSF, whose Standard #41 is the toughest composting performance standard in the world.



EMR-INC.COM

TOTALTEMPS.ORG

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Xeriscaping



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