

Water Wise Home
Great Lakes Energy Fair 2009



Current plumbing standards (EPAAct 1992)

- Toilets 1.6 gpf (1960s 5.5 gpf, 1980s 3.5 gpf)
- Urinals 1.0 gpf
- Showerheads 2.5 gpm @ 80psi
- Lavatory Faucets 2.5 gpm @ 80 psi
- Kitchen Faucets 2.5 gpm @ 80 psi



WaterSense = 20% or more efficient

Indoor Water Conservation	Recommendations
<p>Toilets</p> <ul style="list-style-type: none"> • Check for Leaks (food coloring) • Toilet Tank Banks • Toilet Fill Cycle Diverters • Adjustable Flapper • Toilet Dams • Replace with Low-Flow Fixture 	<p>WaterSense High-efficiency toilet 1.1 (0.8 to 1.6 GPF) to 1.28 GPF</p>
<p>Showerheads</p> <ul style="list-style-type: none"> • Save water AND energy • Older showerheads use 5 – 8 gpm • Bad water pressure feels stronger 	<p>1.5 GPM showerhead</p> <p>Off the grid? Ultra-low flow = 0.5 gpm</p>
<p>Faucets</p> <ul style="list-style-type: none"> • Fix leaks first! • Retrofit faucets w/ aerators • Inexpensive / easy install 	<p>Many sizes available 0.5, 1.0, 1.5 2.0 GPM</p>
<p>Clothes and Dish Washers</p> <ul style="list-style-type: none"> • Clothes: 27 gal per load vs 56 gal • Dishes 7.0 gal per load vs 14 gal 	<p>Go Higher Efficiency!</p> <p>Try to run when full</p> <p>Scrape off food, but no pre-rinsing</p>

Graywater

Filtering non-toilet, non-kitchen sink water for reuse in toilets or landscape watering.

Outdoor Water Conservation

Landscaping

- Plan practical not aesthetic lawns
- Use mulch

Recommendations

Low-water use plants

Plant natives with deep root systems

Efficient Irrigation

- Water grass during dry spells only
- Early morning / late afternoon
- Drip irrigation / soaker gets water where needed the most – the roots!

Plant drought-hardy grasses

Run drip irrigation for vegetables

Rainwater Harvesting – Rain Barrels

- Rain barrels for irrigation
- Soft water better for plants
- Plan for overflow
- Great conversation starter!

Calculate flow:

1000 s.f. roof x 1” rain = 65 gal

Reconnect downspout in winter and turn barrels upside down

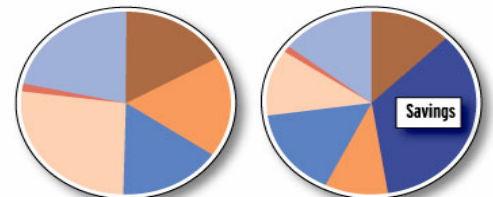
Rainwater Harvesting – Domestic use

- DIY systems are out there
- Contamination big concern
- UV light / other treatment critical

PER CAPITA WATER CONSUMPTION

It's estimated that each American uses about 69.3 gallons of water a day in the typical single-family home. By installing water-efficient fixtures and checking for leaks, individual use can be reduced by about 39 percent. Here's how it breaks down:

TYPICAL HOUSEHOLD WATER-EFFICIENT HOME



	Gallons	Percent	Gallons	Percent
Shower	11.6	16.7	8.8	12.7
Clothes washing	15	21.6	10	14.4
Dishwashers	1	1.4	0.7	1.0
Toilets	18.5	26.7	5.2	7.5
Faucets	10.9	15.7	10.8	15.6
Other	12.3	17.7	6.8	9.8
Savings	0	0.0	27	39.0
TOTALS	69.3	100	42.3	100

Source: Handbook of Water Use and Conservation by Amy Vickers

JUDSON DRENNAN / The News & Observer

Water Wise Resources

WaterSense www.epa.gov/watersense

Alliance for Water Efficiency www.a4we.org

American Water Works Association www.awwa.org