

LUNCH & LEARN – SAVE ENERGY & WATER AT HOME NOTES

Water Use – Let’s Break it Down

A big take home message is that for most of us, more than half of our total water use is for outdoor purposes. Here is an infographic that shows that the typical person uses 120 gallons of water per day, with about 55 gallons being used indoors and 65 gallons being used outdoors.

How to Read Your Water Bill

If you want to know how your daily water use compares to this average, you can take your water bill (which is in K or 1,000 gallons) and divide it by the number of people and days in the month.

Also, keep in mind that your water bill is showing you your water usage in the preceding month. So, your September water bill is showing your water usage in August.

In the example shown. You take 11,000 gallons divided by the number of people in the household divided by the days in the month, to get the average daily water use of 122 gallons per person.

How to Find Your Water Meter

- The water meter is located near the street
- Look for a rectangular lid
- Open by a small hole on one side
- Look for critters in or around the meter box

How to Read Your Water Meter

- If the small triangle is moving, water is moving through the meter. It could be a leak or some other water use that you’re not aware of. So, if you’re checking your water meter for leaks, make sure that you’re not using water indoors or outdoors.

Kitchen

- Purchase an ENERGY STAR model to save water and energy.
- Run full loads of dishes in the dishwasher rather than washing dishes by hand. An ENERGY STAR rated dishwasher uses 3 gallons of water per load vs. hand-washing, which can use 27 gallons of water.
- Run your garbage disposal sparingly and try composting fruits and vegetable peelings.
- Don’t pour fats, oils, and grease down the drain. They can cause sewer blockages.
- Check the faucet, dishwasher, and ice-maker for leaks.

Laundry Room

- When shopping for a new washing machine, purchase an ENERGY STAR and WaterSense model to save energy and water. Top-load high-efficiency machines use 12 to 17 gallons vs. a standard top-load washer that uses 30 to 45 gallons per load.
- Run full loads of laundry.
- Wash clothes in cold water as much as possible to save energy from not having to heat the water.

Bathroom – Faucets & Showerheads

- When shopping for a new showerhead, purchase a WaterSense model to save energy and water. The standard max. flow rate for shower heads is 2.5 gallons per minute.

Bathroom – Toilets

- Here are the steps on how to check your toilet for leaks:
 - Remove the tank lid and any in-tank toilet cleaners.
 - Drop a couple of drops of food coloring in the toilet tank.
 - Wait 15-minutes, do not use the toilet. If the dye color appears in the bowl, you have a leak.
- If you have a leak, check:
 - Overflow tube: water should be lower than a half-inch from the top of the tube.
 - Lift chain: it should not be catching.
 - Flapper: ensure it is seating properly. Also check for corrosion and clean this area. It is recommended that flappers be replaced every 3 to 5 years because of warping and leaking.

Water Filters

- Reverse osmosis systems can use 2-9 gallons of water for every one gallon of purified water produced. That's a lot of water down the drain.
- The most cost effective and efficient means of filtration are carbon filters installed at the faucet, refrigerator, or pitcher. Filters must be changed frequently.

Pool/Spa

Here are some tips to keep the splash in your pool:

- Use a pool cover to reduce evaporation. A pool can lose its entire volume of water in a year due to evaporation.
- No not overfill
- Check fill valves
- Properly maintain chemicals
- Use filter backwash water for Bermuda grass and other salt-tolerant plants like oleander
- Monitor backwash
- Use pool companies that can make repairs without draining the pool

Landscape

Let's briefly review the 7 Principles of Xeriscape. Xeric is the Greek word for dry!

1. Good Landscape Planning and Design – create a plan that includes water and energy efficiency components, like shade trees.
2. Low-Water-Use Plants – choose desert-hardy species. Remember the importance of putting the right plant in the right place so that it doesn't become a maintenance issue or need to be removed.
3. Appropriate Turf Areas – xeriscape isn't anti-grass. It's about making the best use of grass and eliminating any problematic or non-functional grass.
4. Efficient Irrigation – this is so important. You can have xeriscape, but still overwater due to inefficient irrigation.
5. Soil Improvements – this is my favorite. Leave the leaves! I allow leaf litter to collect in my tree basins to decompose to build up the soil ecology. Healthier soil makes for healthier plants.
6. Use of Mulches – this can be organic, like wood chips, or inorganic, like decomposed granite. Mulch helps retain soil moisture.
7. Appropriate Maintenance – put down the shearers. I mean it. The more you prune, the more you are stressing plants, reducing flowering, and increasing their water demand.

Grass to Xeriscape Rebate

Glendale was one of the first cities in Arizona and the US to start offering a grass to xeriscape rebate. Up to \$750 for single-family residential customers and up to \$3,000/per fiscal year for non-residential customers (e.g. HOAs and businesses).

Landscape – Watering

- Learn how to use your irrigation timer. There are all sorts of YouTube videos on how to program your specific irrigation timer.
- Know what types of plants and how much water they need. For this, just remember 1-2-3 rule. Type of soil
- Match output to needs
- Adjust irrigation schedule seasonally and check system and do regular maintenance.

Tree Watering

It's super critical to give trees deep, but infrequent watering so that they establish a strong root system. There are tree watering stakes that you can purchase or you can even make your own by drilling holes in a section of PVC pipe. You install the stake in the ground, around the tree, and put water in the stake or PVC pipe.

A/C Condensate

Good for watering grass and trees.

Rainwater Harvesting

A one-inch rainfall over 1,000 sq. ft. roof can yield 500 gallons of water.

Resources

City of Glendale Water Services Department
Conservation and Sustainable Living Division
www.glendaleaz.com/waterconservation
623.930.3596

Water – Use It Wisely
www.wateruseitwisely.com

Landscape Plants for the Arizona Desert
<https://www.amwua.org/plants>

Xeriscape Design
<https://www.amwua.org/landscaping-with-style>

Landscape Watering by the numbers
<https://wateruseitwisely.com/wp-content/uploads/2013/07/Landscape-Watering-Guide.pdf>

Smart Home Water Guide
<https://www.smarthomewaterguide.org/>

EPA WaterSense
<https://www.epa.gov/watersense>

EPA ENERGY STAR
<https://www.energystar.gov/>