Daily Water Budget

Comparison of average daily, personal water use employing water conservation practices or fixtures vs. normal water use.

	ACTIVITY	FREQUENCY	CIRCUMSTANCES	WATER USED	TOTAL
BATHROOM	Toilet	4 flushes/day	• Ultra-low flush • Conventional *gpf: gallons per flush*	1.6 gpf 3.5–7 gpf	6 gal.* 14–28 gal.
	Shower	Once/day for 5 minutes	• Low-flow • Conventional	2.5 gal/min 3–8 gal/min	12 gal.* 15–40 gal.
	Bath	Once/day	• Tub 1/4 to 1/3 full • Full tub	9–12 gal. 36 gal.	9–12 gal. 36 gal.
	Shaving	Once/day	• 1 full basin • Open tap	1 gal. 5–10 gal.	1 gal.* 5–10 gal.
	Brushing teeth	Twice/day	• Brush & rinse • Open tap	1/4 – 1/2 gal. 2–5 gal.	1/2 –1 gal* 4–10 gal.
	Washing hands	Twice/day	• 1 full basin • Open tap	1 gal. 2 gal.	2 gal.* 4 gal.
KITCHEN	Cooking [1]	Washing produce	• 1 full kitchen basin • Open tap	1–2 gal. 5–10 gal.	1–2 gal.* 5–10 gal.
	Automatic dishwasher	Once/day Full Load	• Short cycle • Standard cycle	8–13 gal. 10–15 gal.	8–13 gal. 10–15 gal.
	Manual dishwashing	Once/day	• Full basin wash & rinse • Open tap	5 gal. 30 gal.	5 gal.* 30 gal.
	Laundry [2]	1/3 load/day	• Portion of full load	30–50 gal. (full)	10–15 gal.
OUTDOORS	Lawn Trees & shrubs	Watering requirements vary with plant species, type of turf, season, region and soil type. Consult your local nursery or county horticulture agent.			
	Car washing	Twice/month	• 5 full 2-gal. buckets • Hose with shut-off nozzle	20 gal/month 100 gal/ month	1/3 gal. 3.5 gal.

Leaks: Waste Water, Cost Money

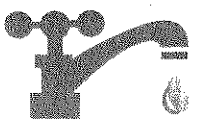
Leaks: through an opening

pressure 60 lbs.

size		gallons per
1/4"	●	400,000
3/16"	●	225,000
1/8"	●	100,000
1/16"	●	25,000
1/32"	●	6,300

Leaks: drops

60 drops per minute = 192 gallons per month

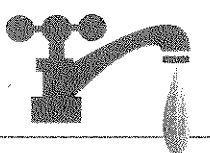


90 drops per minute = 310 gallons per month

120 drops 429 gallor

Leaks: smooth streams

3" stream =



6" stream =

9" stream

Leaks

Leaks should be fixed immediately since they can quickly develop into a serious break. Temporary repairs are only temporary, and wrapping the pipe usually fails. If you find a fixture that is leaking, turn off the shutoff valve for that device. Then locate the leak. Try to tighten any fittings that leak. A quarter or half turn with a wrench might do the trick. Be careful not to over-tighten fittings. Another possible cause is that the pipes are undersized and the water velocity is too high.

Leaky Supply Tubing

When the line, or tubing, that supplies water to a faucet or toilet leaks, it's best to go ahead and replace the tubing.

> Note: *Make sure to get the right size fittings for each end of the tubing.* The difference between one size/type and another is subtle. Take your old supply tube/fittings with you and ask a clerk to select a proper length replacement with compatible fittings.

Be prepared to replace the shutoff valve as well as the tubing. Old valves that no one has turned for years may spring a leak when suddenly turned. First, you'll have to shut off the main valve to your house. Then use a wrench or pliers to unscrew the old valve from the nipple in the wall. Place a bucket under the pipe and have someone turn the water on briefly to flush rust from the pipe. If the old nipple is damaged and recessed too far in the wall to get a pipe wrench on it, try an internal pipe wrench to save your plaster.

Buy a replacement valve with female thread to screw onto the nipple. Wrap the nipple with Teflon tape, and then screw on the new valve with an adjustable wrench. Be sure to point the valve outlet toward the fixture as you finish the last turn. Turn the main valve back on and test for leaks.

Hot Water-Leaks from Valves

If the water heater leaks from the drain valve, first tighten the valve. If that fails, you can install a brass hose cap with a hose washer inside. If you tighten the hose cap with pliers, it will stand up to typical water pressure. Check the current pressure with a water pressure gauge. If the reading is between 45 and 60 psi, the problem is probably the relief valve. Turn off water supply and the electricity or gas to the water heater. Partially drain the tank. If there is an overflow pipe, remove it. Unscrew the relief valve, and screw in a new one.

Low Pressure

Make sure all the valves are wide open. There could be blockage in the faucet or in the supply line to the hot water side. Turn off the hot water angle stop, then get a basin wrench and loosen the supply line where it meets the faucet. Then get a bucket and hold the supply line in it while turning on the angle stop. If you have good pressure there, then the blockage is in the faucet.

If you determine that it's in the faucet then: If it is the type that has a cartridge, change the cartridge. If it is the kind with stems, remove the hot water stem and check for particles or damage. If the faucet is the old washer style it will need to be disassembled, cleaned, oiled and rebuilt. If it's a newer style with cartridges or a ball valve, then the cartridge or ball and assorted seals will need to be replaced.

High Pressure

If your water pressure is high, installing a regulator and hot water expansion tank will allow excessive water pressure to expand back to the main water line when the pressure exceeds the incoming water pressure. These devices will help reduce wear and tear on pipes and the risk of a pipe or supply tube bursting.