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Conserving water is a great way to both save the environment and save some money. In the coming years, freshwater will become increasingly scarce globally. In fact, the UN recently declared a state of "global water bankruptcy," in which long-term water usage has surpassed water's ability to replenish [1]. Around 70% of the world's aquifers (underground water stores) are in decline, and 50% of the world's large lakes have lost water from human overuse [1]. Agriculture is one of the industries most affected, with over 170 million hectares of cropland in severe water stress [1]. To put this in perspective, the amount of land affected is larger than the countries of Italy, Germany, France and Spain combined.

New Jersey is not exempt from this global water shortage – in fact, the entire state is currently in a condition of drought warning (NJDEP| Drought Information | Drought Status and Conditions) with most regions experiencing emergency low levels of groundwater [2]. However, New Jersey only pulls about 23% of its water from these groundwater sources, while pulling 77% of water from surface sources, including rivers and streams [4]. Unfortunately, in 5 out of 6 regions, stream flows are also in emergency low levels [2]. When surface and groundwater sources are low, NJ can pull on reservoirs located in both New Jersey and Delaware to compensate for this loss. The Delaware reservoirs are at normal levels, but the NJ reservoirs are currently only 50% full, which is 35 points less than how full they should be at this time of year [2]. These poor water conditions have led to the ongoing state of drought, causing water conservation to become more important.

Although water conservation is necessary in these drought conditions, saving water year-round can also save money. The USEPA states that the average family spends over $1000 on water each year [3]. Water usage varies by family, but washing dishes and showering constitute a significant portion of indoor water use. A standard showerhead uses 2.5 gallons of water/minute [3] and with a shower of 8 minutes, this adds up to 20 gallons of water used. For a family of 4, this can multiply to 80 gallons of water per day! But by installing water efficient showerheads, showers could take only 2 gallons of water/minute, decreasing water consumption by 20% [3].

Washing dishes also takes a significant amount of water, as running the faucet for 10 minutes uses 20 gallons of water. However, using the dishwasher instead of washing dishes by hand can decrease water consumption to only 5 gallons/load or less, depending on the model of dishwasher [3]. In general, by installing water efficient appliances, families could decrease water usage by 20% and save around $380/year [3].

Besides installing new appliances, what can you do to reduce water usage? The NJ DEP recommends these additional actions in the winter [2]:

- Only run the dishwasher and washing machine when they are full.

- Compost your vegetable food waste instead of using the garbage disposal.
- Plan to buy native plants for spring gardening.
- When buying grass, choose drought-tolerant grasses such as fine-leaf fescues.
- Keep outdoor pools/jacuzzis covered to avoid evaporation.
- Insulate exposed outdoor pipes and hose bibs.
- Check for leaky pipes after any thaws.
- Learn the locations of your home's water valves to be able to cut off water during emergencies like a burst pipe.

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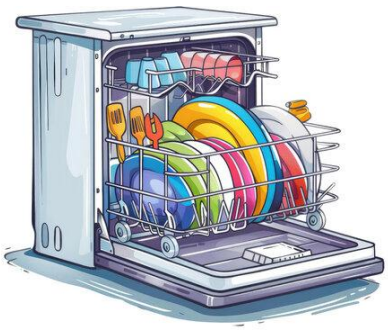
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