

Manheim Borough Authority

Why Conserve?

Water conservation has become an essential practice in all regions, even in areas where water seems abundant.

In addition to saving money on your utility bill, water conservation helps prevent water pollution in nearby lakes, rivers and local watersheds. Water conservation is the most cost-effective and environmentally sound way to reduce our demand for water. This stretches our supplies farther, and protects places like Manheim Borough, and Lancaster County. Using less water also puts less pressure on our water treatment and sewage treatment facilities.

Overloading municipal sewer systems can also cause untreated sewage to flow to lakes and rivers. The smaller the amount of water flowing through these systems, the lower the likelihood of pollution. In some communities, costly sewage system expansion has been avoided by communitywide household water conservation.

The Water and Energy Connection

Saving water also saves energy. 16% of the operations cost of the Manheim Borough Authority is energy costs used is for pumping and treating water and wastewater. And for your personal energy bill, using less hot water saves on water heating. On the flip side, saving energy and using alternative energy saves water--electricity production from fossil fuels and nuclear energy is responsible for 39% of all freshwater withdrawals in the nation.

What can I do to Conserve ?

There are many effective ways to conserve water in and around your home. Look through this list for ways that will work for you. Indoor savings are based on a family of two adults and one child.

Check and Repair Leaks

1. Use your water meter to check for hidden water leaks

Read the house water meter before and after a two-hour period when no water is being used. If the meter does not read exactly the same, there is a leak.

2. Check faucets and pipes for leaks

A small drip from a worn faucet washer can waste 20 gallons of water per day. Larger leaks can waste hundreds of gallons.

3. Check for leaks in pipes, hoses, faucets and couplings

Leaks outside the house may not seem as bad since they're not as visible. But they can be just as wasteful as leaks indoors. Check frequently to keep them drip-free. Use hose washers at spigots and hose connections to eliminate leaks.

Water Conservation Appliances

Water Saving appliances like: dishwashers, washing machines, and water softeners. Is an important part of water saving.

1. You can replace older standard washing machines with High Efficient washing machines that use less water soap and spin dry the clothes. This can help with the electric used to dry clothes. Also plan your loads to maximize washer efficiency and water conservation.
2. High-Efficient dishwashers are also available using jet technology for water saving. Fill dishwasher full before running cycles.
3. Water softener and iron filter recharge uses a large amount of production water and adds a large volume of water to the sanitary sewer system - typically 30 to 80 gallons per cycle. Recommended Water softeners are metered or on demand water softeners. These softeners only flush when water consumption is used to a specific amount, unlike timed water softeners.
 - Timer Regenerated - These softeners regenerate based on a time clock. In most cases the timer would set for once every couple of days and no matter how much water you use, the softener will regenerate and use about 8 pounds of salt and 30 to 80 gallons of water each time it regenerated. Although a timer system is a little cheaper to purchase the salt and water usage is the highest of these softener types.
 - Meter Regenerated - These softeners regenerate by keeping track of how much water you actually use. A big advantage that meter based systems have is that if you should go out of town or have guest come and go, your softener adjusts itself to regenerate sooner for guests or later if you travel or use less water. By only regenerating when it needs to, this softener is very efficient in its usage of salt pellets and water. These types of system are the most popular

Water Conservation in the Bathroom

1. Water Saving toilets, shower heads and sink aerators. Is an important part of water saving fixtures. You can replace older standard toilets that used 5.0 -7.0 gallons per flush, and older water saver toilets that uses 3.0 gallons per flush to a High efficient 1.6 gallon or less flushing toilets. Shower heads can be replaced with 1.5-2.0 gallon per minute water saver shower heads. Sink aerators can be replaced with new 1.0-1.5 gallon per minute water saver aerators.
2. If you're taking a shower, don't waste cold water while waiting for hot water to reach the shower head. Catch that water in a container to use on your outside plants or to flush your toilet. Saves 200 to 300 gallons a month.
3. Check toilet for leaks. Put dye tablets or food coloring into the tank. If color appears in the bowl without flushing, there's a leak that should be repaired. Saves 400 gallons a month.
4. Turn off the water while brushing your teeth. Saves three gallons each day.
5. Turn off the water while shaving. Fill the bottom of the sink with a few inches of water to rinse your razor. Saves three gallons each day.
6. Take shorter showers. One way to cut down on water use is to turn off the shower after soaping up, then turn it back on to rinse. A four-minute shower uses approximately 20 to 40 gallons of water.
7. Don't use the toilet as an ashtray or wastebasket. Every time you flush a cigarette butt, facial tissue or other small bit of trash, five to seven gallons of water is wasted.

Water Conservation in the Kitchen

1. If you wash dishes by hand--and that's the best way--don't leave the water running for rinsing. If you have two sinks, fill one with rinse water. If you only have one sink, use a spray device or short blasts instead of letting the water run. Saves 200 to 500 gallons a month.
2. When washing dishes by hand, use the least amount of detergent possible. This minimizes rinse water needed. Saves 50 to 150 gallons a month.
3. Keep a bottle of drinking water in the refrigerator. This beats the wasteful habit of running tap water to cool it for drinking. Saves 200 to 300 gallons a month.
4. Don't defrost frozen foods with running water. Either plan ahead by placing frozen items in the refrigerator overnight or defrost them in the microwave. Saves 50 to 150 gallons a month.
5. Don't let the faucet run while you clean vegetables. Rinse them in a filled sink or pan. Saves 150 to 250 gallons a month.
6. Use the garbage disposal less and the garbage more (even better--compost!). Saves 50 to 150 gallons a month.

Water Conservation Outside

1. Put a layer of mulch around trees and plants. Chunks of bark, peat moss or gravel slows down evaporation. Saves 750 to 1,500 gallons a month.
2. If you have a pool, use a pool cover to cut down on evaporation. It will also keep your pool cleaner and reduce the need to add chemicals. Saves 1,000 gallons a month.
3. Water during the cool parts of the day. Early morning is better than dusk since it helps prevent the growth of fungus. Saves 300 gallons.
4. Don't water the lawn on windy days. There's too much evaporation. Can waste up to 300 gallons in one watering.
5. Cut down watering on cool and overcast days and don't water in the rain. Adjust or deactivate automatic sprinklers. Can save up to 300 gallons each time.
6. Set lawn mower blades one notch higher. Longer grass means less evaporation. Saves 500 to 1,500 gallons each month.
7. Have an evaporative air conditioner? Direct the water drain line to a flower bed, tree base, or lawn.
8. Tell your children not to play with the garden hose. Saves 10 gallons a minute.
9. If you allow your children to play in the sprinklers, make sure it's only when you're watering the yard--if it's not too cool at that time of day.
10. Rain Barrels or rain catch systems. Use natural rainwater for yard and garden, and lower your water bill.

10. Xeriscape--replace your lawn and high-water-using trees and plants with less thirsty ones. But do this only in wet years. Even drought resistant plantings take extra water to get them going. That'll save 750 to 1,500 gallons a month.

11. When taking your car to a car wash--a good idea for saving water--be sure it's one of the many that recycles its wash water.

12. Use a broom, not a hose, to clean driveways and sidewalks

13. Dispose of hazardous materials properly! One quart of oil can contaminate 250,000 gallons of water, effectively eliminating that much water from our water supply. Contact Manheim Borough or Lancaster County Solid Waste Management for proper waste disposal options. And don't flush prescription medications!

Water conservation comes naturally when everyone in the family is aware of its importance, and parents take the time to teach children some of the simple water-saving methods around the home which can make a big difference.

While Shopping

(Information below from *Last Oasis*, by Sandra Postel, and *California Water Facts*, by the Water Education Foundation)

Water is an essential ingredient in most manufacturing operations. Especially for those 1 billion of us in the high-consumption class, cutting down on our purchases of material things--from clothes and shoes to paper and appliances--**conserves and protects water supplies as effectively as installing a low-flush toilet does.** As with so many natural resources, as long as prices in the marketplace fail to reflect full social and ecological costs, voluntary changes in consumption patterns will play an important role in the quest for sustainability.

- We rarely think about water when we see an automobile, for example, but producing a typical U.S. car requires more than 50 times its weight in water (39,090 gallons)! Choosing a fuel-efficient model will help--it takes 44 gallons of water to refine one gallon of crude oil and 1,700 gallons of water to produce a gallon of ethanol.
- A kilogram (2.2 lbs) of hamburger or steak produced by a typical California beef cattle operation, for instance, uses some 20,500 liters (5,400 gal.) of water.
- Producing 1 lb of bread requires 500 gallons of water.
- Producing 1 serving (8 oz.) of chicken requires 330 gallons of water.
- Growing one cotton T-shirt requires 256 gallons of water (source: *The King of California*, by Arax and Wartzman)
- Producing 1 egg requires over 100 gallons of water.
- Producing 1 serving (8 fl. oz.) of milk requires 48 gallons of water.

- Producing 1 serving (2 oz.) of pasta requires 36 gallons of water.
- Producing 1 serving (4.6 oz.) of oranges requires 14 gallons of water.
- Producing 1 serving (4.3 oz.) of tomatoes requires 8 gallons of water.
- Producing a typical American Thanksgiving dinner for six people requires over 30,000 gallons of water