WASHINGTON TOWNSHIP

WATER

CONSERVATION GUIDE



printed on recycled paper

WHY CONSERVE WATER?

Limited Resource
Less than 1% of all the water on earth is drinkable; the rest is too salty, frozen in glaciers, or too inaccessible for use.

Nonrenewable
Water is nonrenewable, we have all the water we will ever have and we must reuse what we have again and again.

Growing Population
Our growing population increases demand on our water supply.

Cost
Efficient water use saves money; using less costs less.

Protect the Environment
Conserving water helps protect the environment by assuring there is adequate water for nature's needs as well as human needs, and helps to ensure future supplies are adequate.

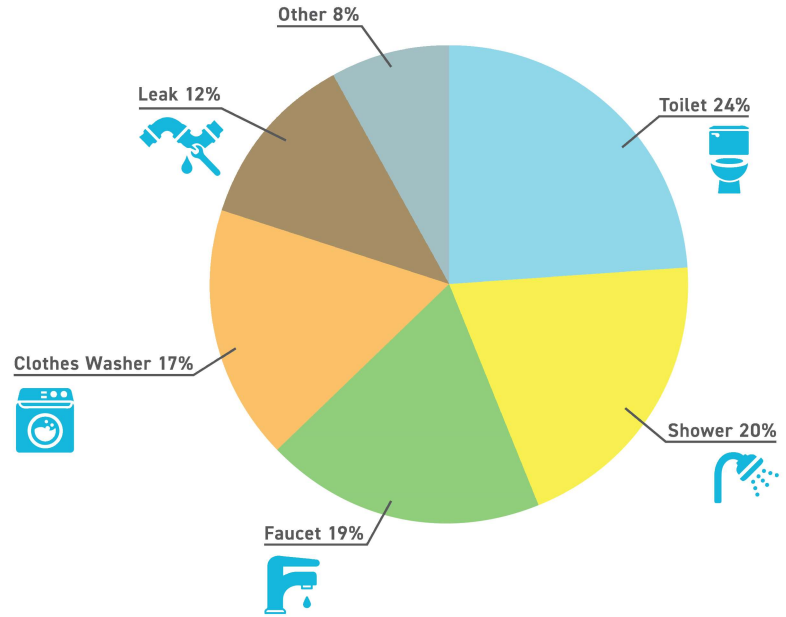
This water conservation guide offers water conservation tips and suggestions for everyone, and includes water use restrictions for WTMUA customers.

WHERE DOES OUR WATER COME FROM?

The water supply for all businesses and homes in Washington Township, like that of more than 40% of the nation's population, comes from ground water. Whether connected to the public water system managed by the Washington Township Municipal Utilities Authority (WTMUA), or a private well, our drinking water comes from underground aquifers where water is stored among particles of sand, gravel, and rocks. The same ground water is used for irrigation of our lawns and farms, for fighting fires, and for supplying many of the water needs of our businesses and industries. We all share this wonderful hidden resource!

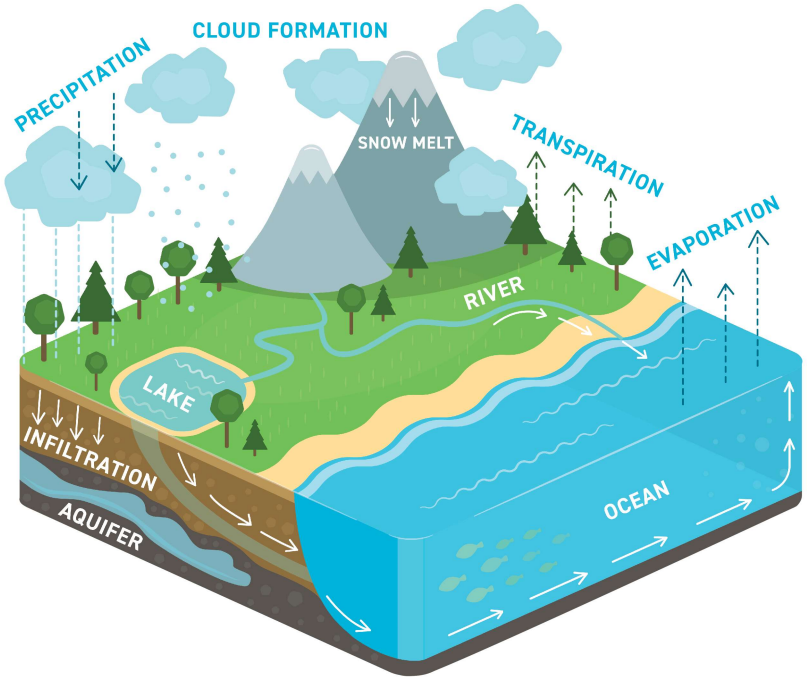
HOW DO WE USE WATER?

The average indoor daily water use in the US is about 88 gallons per person per day. That can increase by 30% to 50% when outdoor water use is considered, especially during warmer times of the year. While there have been significant reductions in domestic water use in the last 20 years, there is still much more we can do to save water, indoors and outdoors, all year round.



THE WATER CYCLE

In the water cycle, water is endlessly recycled. Energy from the sun causes water to evaporate from the oceans, lakes, ponds, pools, soil, and other surfaces. Transpiration is evaporation from the leaves of plants that allows the plants to draw nutrients up from the soil. Water vapor condenses in the atmosphere where it forms clouds. Gravity causes the water to fall back to the earth as precipitation: rain, sleet, or snow.



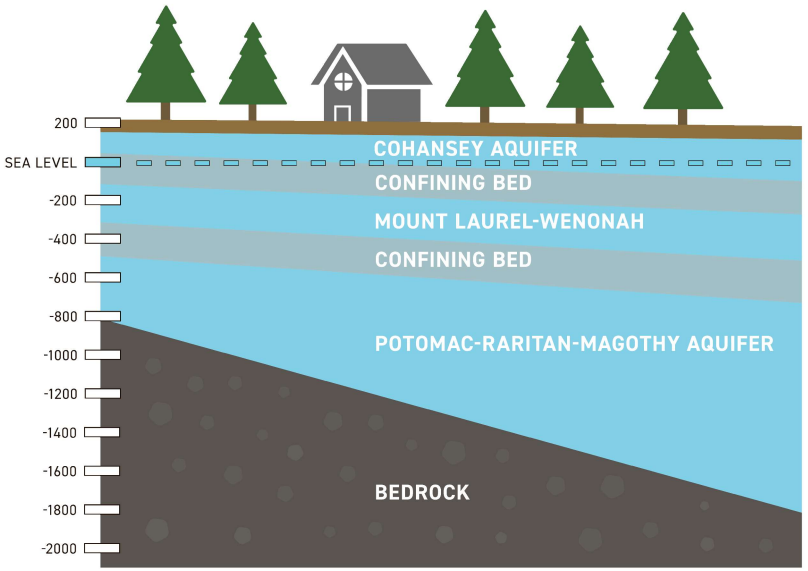
Water from rain moves into the soil where some of it is absorbed by plants, while the rest of it moves down to the water table, an area underground saturated by water. Some precipitation runs off paved areas and other land surfaces, washing pollutants from the ground into storm drains or sewers and eventually into streams, rivers, and lakes. Some of this runoff will also move down through the soil to the water table. As the water moves down through the ground it is filtered and cleaned. The water collects in natural underground storage areas, or aquifers; there water is stored in porous areas between sand, gravel, and rock.

AQUIFERS

There are three major aquifers underlying Washington Township. The deepest is the Potomac-Raritan-Magothy (Raritan). Above it is the Mt. Laurel-Wenonah. Nearest to the surface is the Cohansey. Beds of denser material, or confining layers, separate the aquifers and prevent water from moving between them.

The WTMUA operates wells that draw from all three aquifers, but mostly from the Raritan. The Raritan is the most productive aquifer, but it has been relied upon by many of south Jersey communities, industries and farms, and it is stressed because water has been removed from this aquifer faster than it can be recharged by precipitation. The Raritan is losing water at a dangerous rate and is vulnerable to salt water intrusion and other kinds of pollution. On the other hand, pumping too much water from the Cohansey (the nearest aquifer to the land surface) can impact water levels in streams and lakes.

To help protect these aquifers for the future, we must practice conservation.



INDOOR WATER SAVING TIPS

In the Bathroom

Where half or more of our water use occurs!

- Turn off the tap while brushing your teeth or shaving.
- Take showers to use much less water than baths, but
- Try to keep your shower less than 5 minutes long.
- Install a low-flow showerhead, and a low-flow toilet.
- Fix running toilets.

Laundry Room

Be clean and green!

- Wash only full loads of laundry.
- Use appropriate water level or load size selector on the washing machine.
- When it's time to replace, upgrade to a high-efficiency clothes washer.

In the Kitchen

Recipes for saving water and money!

- Plug up the sink or use a basin if washing dishes by hand.
- Use a dishwasher, but run it only when it's full.
- Use a faucet aerator and low flow faucet.
- When it's time to replace, upgrade to a high-efficiency dishwasher.

EVERYTHING IS CONNECTED

Heating water for showering, bathing, cooking and cleaning uses energy. Homes with electric water heaters can spend one-fourth of their electric bill just to heat water! Letting your faucet run for 5 minutes uses about as much energy as letting a 60-watt light bulb run for 14 hours. Consider that it takes energy to pump, treat and deliver water to our homes and businesses each day. Conserving water conserves energy, too!

FIND AND FIX LEAKS

In the average household, leaks can account for more than 10,000 gallons of water wasted in a year. Fixing easily corrected leaks can save homeowners 10% of their water bill!

- Check your water usage during a colder month; if a family of four uses more than 12,000 gallons, there are serious leaks.
- Check your water meter before and after a two-hour period when no water is being used. If the meter reading changes at all, you probably have a leak.
- Identify toilet leaks by placing a drop of food coloring in the tank. If any color shows up in the bowl after 10 minutes, you have a leak.
- Examine faucet gaskets and pipe fittings for any water on the outside of the pipe to check for surface leaks.



SOURCE	LEAK	WATER WASTE
Toilet	Constantly running	>73,000 gals/year
Faucet	One drip/second	>3000 gals/year
Showerhead	10 drips/minute	>500 gals/year
Irrigation system	1/32" hole	6,300 gals/month

OUTDOOR WATER SAVING TIPS

- Water lawns and gardens in the evening or early in the morning to reduce evaporation.
- Check your irrigation system for leaks at the start of the growing season. Adjust garden sprinklers to prevent overspray onto sidewalks and runoff.
- Upgrade to a "smart irrigation controller" that automatically adjusts watering times for hotter weather and shuts down when it rains.
- Add 2" to 3" of mulch around trees and plants to reduce evaporation.
- Install a water-efficient drip irrigation system for trees, shrubs, and flowers.
- At the end of the growing season, turn off lawn and garden sprinkler systems.
- Use a broom to clean driveways, sidewalks, and steps, rather than using a hose.
- If you have a pool, purchase a water-saving filter.
- Install covers on pools and spas to reduce evaporation.
- Keep hose from running when washing your car.
- Patronize commercial car wash businesses that recycle their water.
- Harvest roof-top runoff in a rain barrel, and use the stored water later for flowers and landscaping.



LANDSCAPE TIPS

- Use native plants that need less water.
- Group plants together based on water needs.
- Water the root zone of plants, instead of the foliage.
- Water deeply and less frequently to encourage a deeper, healthier root system.
- Cut back on lawn areas and increase the size of areas that need less water. Plant ground cover to create green areas and reduce water needs.
- Add organic matter to the soil to improve water and nutrient holding capacity.

DROUGHT TOLERANT PLANTS*

Most of these plants are native to New Jersey!

Trees

American Hornbeam
Black Oak
Blackjack Oak
Chestnut Oak
Eastern Red Cedar
Eastern Redbud
Fragrant Sumac
Hackberry
Honeylocust
Northern Red Oak
Sassafras
Scarlet Oak
Shagbark Hickory
Shortleaf Pine
Staghorn Sumac
Virginia Pine
Washington Hawthorn
White Ash
White Oak

Shrubs

Arrowwood Viburnum
Bayberry
Bearberry
Blackhaw Viburnum
Bush Cinquefoil
New Jersey Tea
Lowbush Blueberry
Mapleleaf Viburnum
Pasture Rose
St. John's Wort
Witchhazel

*From Landscaping for Water Conservation, 2012, by Salvatore S. Mangiafico, Christopher C. Obropta, Elaine Rossi-Griffin and Caitrin Higgins, Bulletin E341, Rutgers NJAES Cooperative Extension. This publication contains additional information on drought-tolerant perennial plants and grasses.

LOOK FOR THE WATERSENSE LABEL

The WaterSense label indicates that a product or service is water efficient. WaterSense labeled products and services are certified to use at least 20% less water, save energy and perform as well as or better than regular models. You can find a variety of products, including toilets, faucets, showerheads, even irrigation controllers, that qualify for the WaterSense label.

look for WaterSense Meets EPA Criteria

WaterSense partners with manufacturers, retailers, distributors, homebuilders, irrigation professionals, and utilities to encourage innovation in manufacturing, conserve water, and reduce water and wastewater infrastructure costs.

Find out more about WaterSense labeled products that can help your wallet and the environment at www.epa.gov/watersense

LAWN CARE

- Lawns should be watered about every 4 days.
- Generally, lawns need about one inch of water each week, although the amount of rainfall during a four-day interval will change the amount of water needed. Sandy soils may need more water
- Abnormal cloudiness or hot winds will also cause variations from the average.
- Choose drought-tolerant grass varieties, such as fine leaf fescues.
- Raise your lawn-mower blade to at least three inches to promote deeper grass roots which hold water better.
- Don't over-fertilize lawns, which causes them to need more water to survive.

Test the "rainfall" delivered by your sprinklers to determine how much to water your lawn:

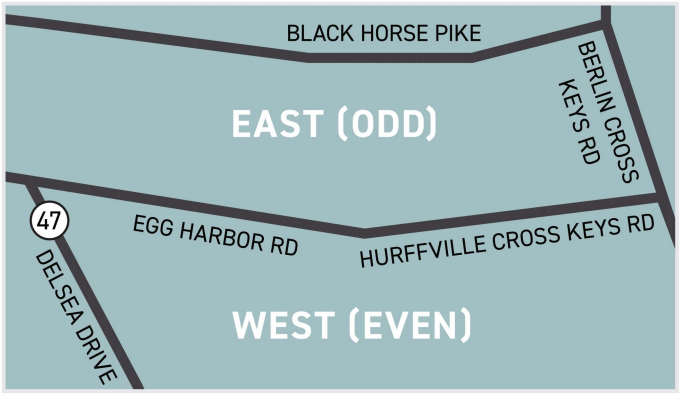
- Place small containers (like tuna cans) at various locations on your lawn.
- Turn on your sprinkler for 15 minutes.
- Turn off the sprinkler, then measure the depth of water in the can with a ruler, and average the measurements.
- Use the guide below to determine the amount of time to water.

Homeowner Lawn Watering Guide

DAILY WATERING BY SEASON:	1/8"	1/4"	3/8"	1/2"	3/8"	3/4"	7/8"	1"
	TIME IN MINUTES TO WATER EVERY 4 DAYS							
SPRING May - June	77	44	29	23	19	17	15	13
SUMMER July - August	101	53	37	29	24	23	19	17
FALL September	53	29	21	17	15	13	12	11

WATER USE RESTRICTIONS

From May 1 through September 15, non-essential outdoor water use (sprinkling lawns, washing cars, filling pools) by residential and commercial customers is prohibited between 11:00 am and 6:00 pm. Non-essential outdoor use of water may occur before 11:00 am and from 6:00 pm until midnight, on an odd/even calendar basis, as shown by the map below.



You may use water on ODD NUMBERED calendar days before 11:00 am and from 6:00 pm to midnight if your property is located to the EAST SIDE of Egg Harbor Road.

You may use water on EVEN NUMBERED calendar days before 11:00 am and from 6:00 pm to midnight if your property is located on the WEST SIDE of Egg Harbor Road.

The New Jersey Department of Environmental Protection closely monitors water supply conditions throughout the state. In the event that conditions warrant, a drought watch, drought warning, or drought emergency may be declared. Additional voluntary and/or mandatory measures may be put in place. See www.njdrought.org.

REFERENCES

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United States Environmental Protection Agency, WaterSense Program: https://www.epa.gov/watersense

Water Research Foundation, Residential End Uses of Water, Version 2, Executive Report, 2016.

Water Conservation Guide Prepared By

Washington Township
Municipal Utilities Authority

Washington Township
Environmental Commission

Sustainable
Washington Township
people • planet • prosperity

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