

Be Water Smart at Home

Tips to Improve Water Quality & Conserve Water

Sen. Amanda Cappelletti's Earth Day Event: Conservation & Connection



Brian Henderson (Flickr; CC BY-NC 2.0)



Gary Elrod (Flickr; CC BY-NC-ND 2.0)



Mont. Co. Planning Comm. (Flickr; CC BY-SA 2.0)

60 years
1961-2021



Delaware River Basin Commission
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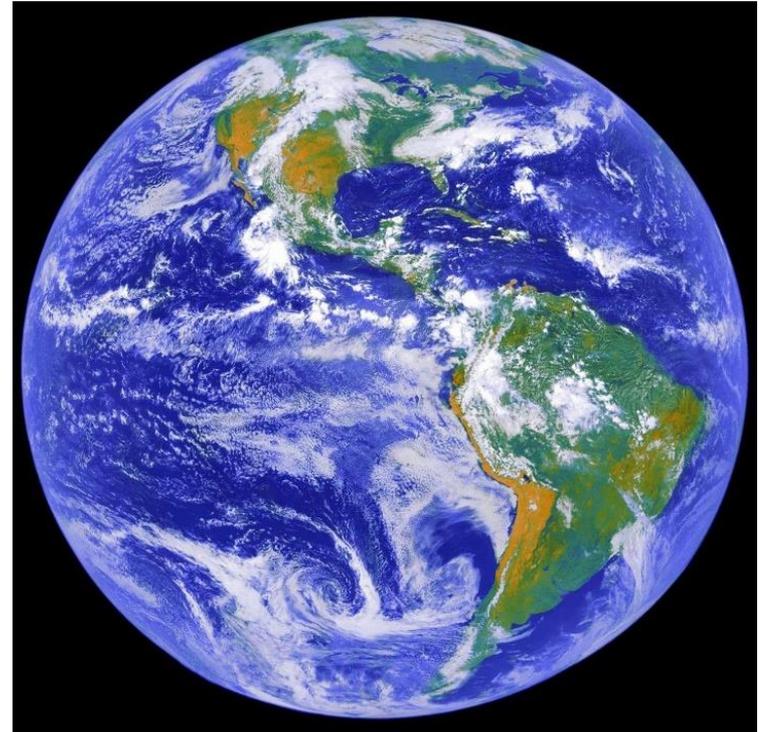
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Communications Specialist

April 21, 2021

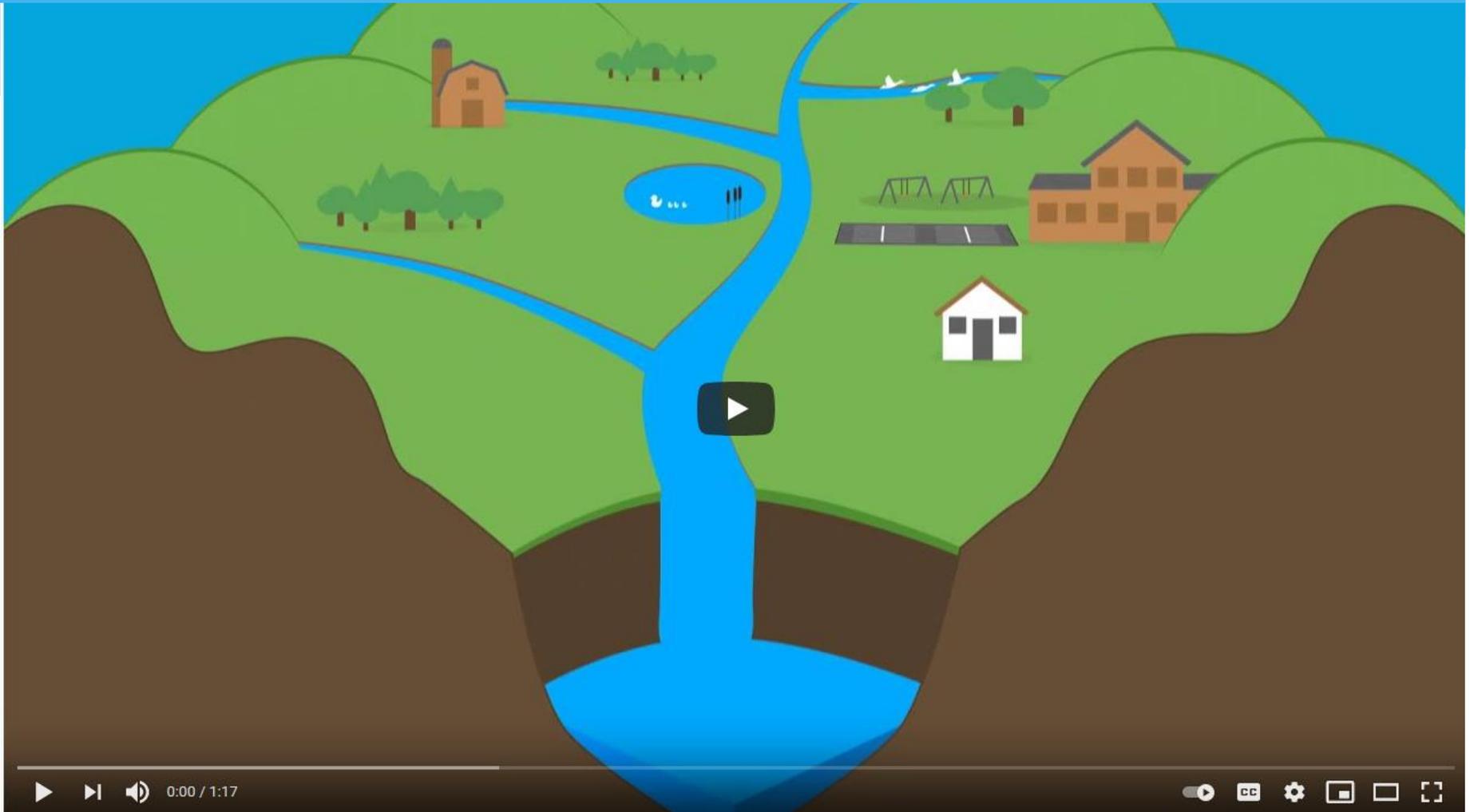
Water Fast Facts

- **71%** of the Earth is covered in water
- **97%** of all water on the earth is salt water, which is not suitable for drinking.
- **Only 3%** of water on Earth is fresh water; **of that, ~ 0.5% is available for drinking.**
- The **other 2.5%** is locked in ice caps & glaciers, the atmosphere, soil, underground or is too polluted for consumption.



<https://images.nasa.gov/details-0202795.html>

What is a Watershed?



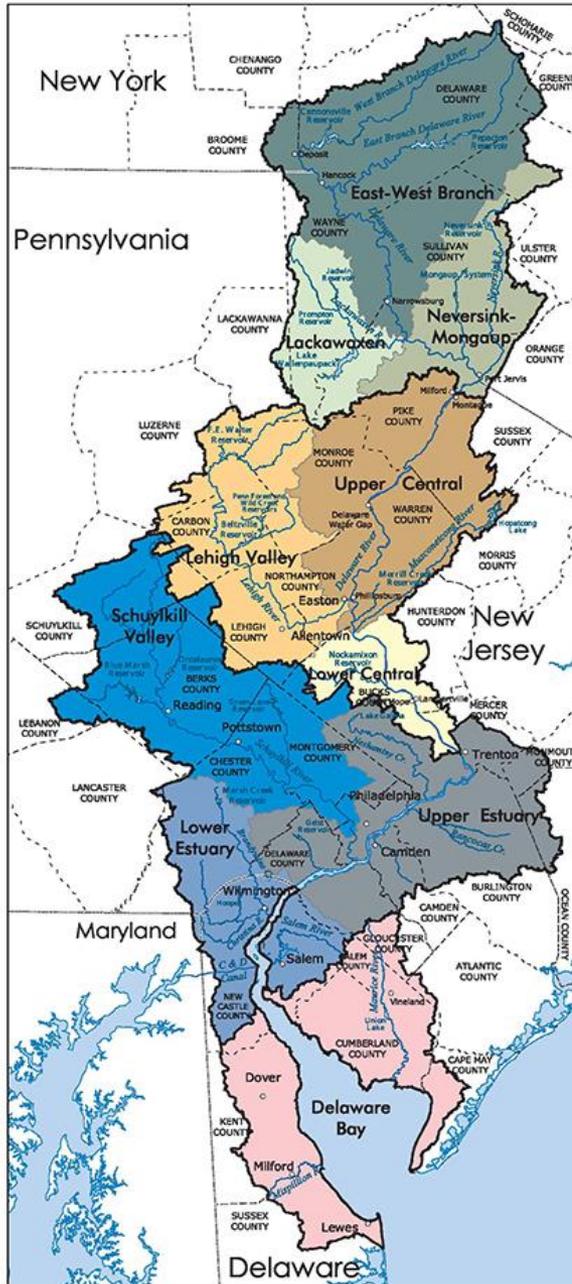
Video courtesy of caringforourwatersheds.com: <https://www.youtube.com/watch?v=QOrVotzBNto>

Watersheds of the Delaware River Basin

- UPPER REGION**
- East-West Branch Watersheds
 - Lackawaxen Watersheds
 - Neversink-Mongaup Watersheds
- CENTRAL REGION**
- Upper Central Watersheds
 - Lower Central Watersheds
 - Lehigh Valley
- LOWER REGION**
- Schuylkill Valley
 - Upper Estuary Watersheds
 - Lower Estuary Watersheds
- BAY REGION**
- Delaware Bay Watersheds



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Watersheds & Basins

A Basin is a large watershed, made up of smaller watersheds. Think of it like nesting dolls



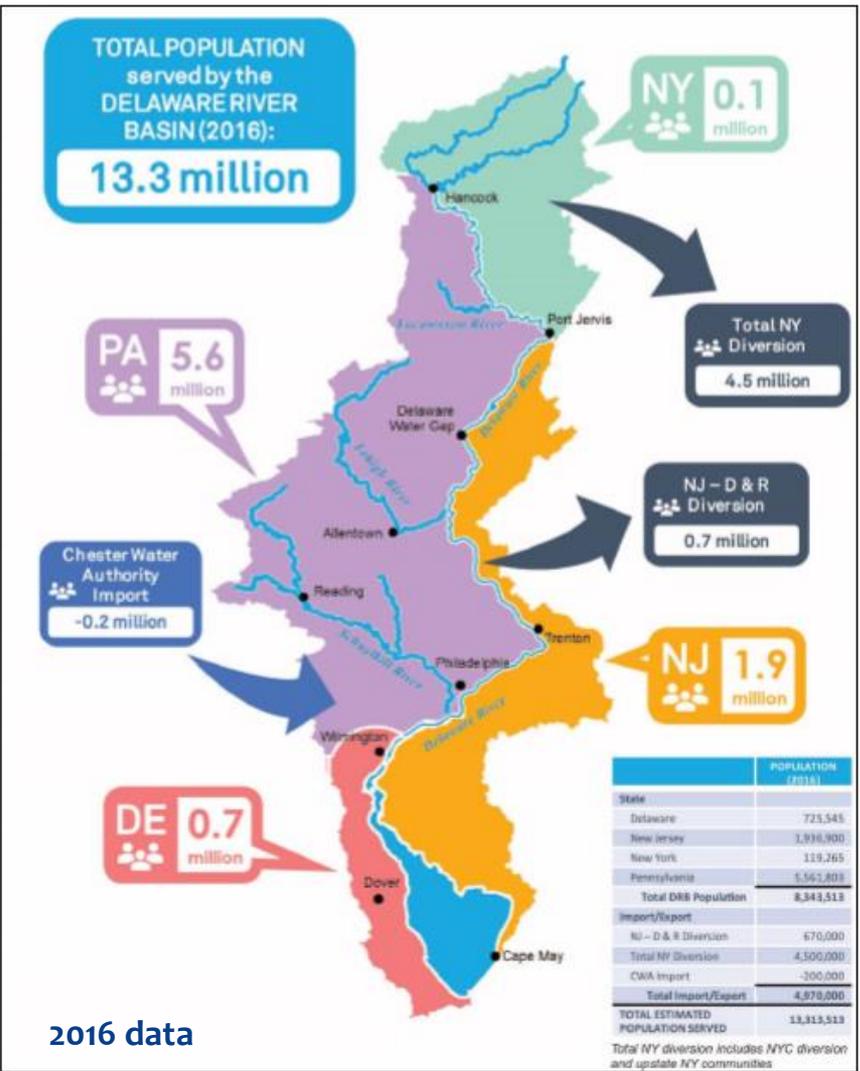
<https://www.theodmgroup.com>

The Delaware River



- 330 miles long
- Interstate boundary its entire length
- Longest, un-dammed U.S. river east of the Mississippi (dams are located on tributaries, not the main stem Delaware)
- Tidal to Trenton, N.J. (133 mi)
- Largest tributary: Schuylkill River

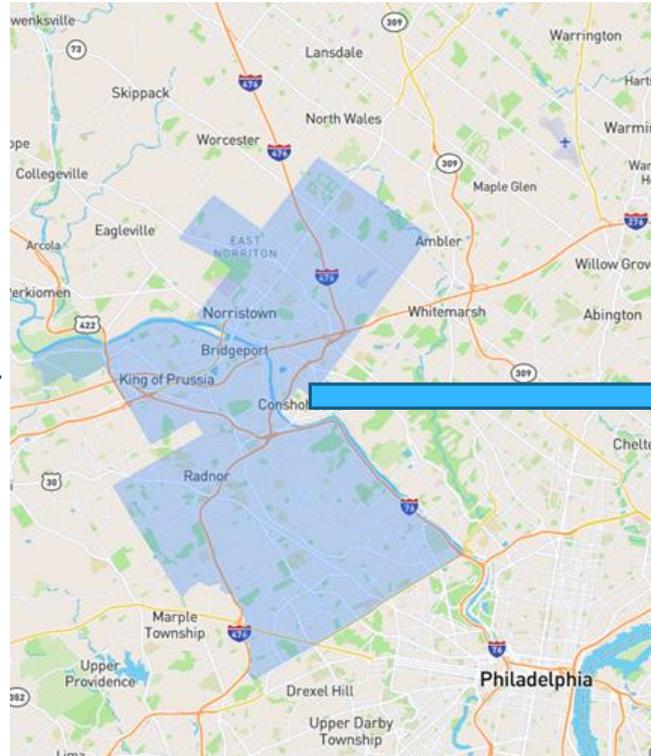
The Delaware River Basin



- ~13.3 million people (about 4% of the U.S. population) rely on its waters
- Drains 13,539 square miles of watershed in 4 states
- 6.4 billion gallons are withdrawn every day (2016 data)
- Major Exports: NYC (up to 800 MGD) and N.J. (up to 100 MGD)
- Generates \$25 billion in annual economic activity

Sen. Cappelletti's District 17

- **Counties:** Montgomery & Delaware (parts)
- **Municipalities:** 11
- **Population:** ~250,000
- **Major cities:** Norristown, KOP, Radnor, Gladwyne & Haverford
- **Major Waterways:** Schuylkill River, Mill Creek & Stony Creek
- **Major Parks:** Valley Forge, Riverfront Park, Norristown Farm Park, Mill Creek Valley Park & Rolling Hill Park*
*(*one of Philly Mag's 6 peaceful hikes)*



Why Basin-Scale Water Mgmt?

Shared Resources = Shared Problems

Early-Mid 1900s:

- Severe pollution in the tidal Delaware River and its major tributaries
- Water supply shortages and disputes over the apportionment of the Basin's waters
- Serious flooding

EDITORIAL PAGE
PHILADELPHIA RECORD

The War in Outline :: America Speaks :: Travel SUNDAY, MARCH 14, 1937 Screen :: Snaps :: Music :: Art :: Radio :: Puzzles

WATER, WATER EVERYWHERE, BUT NOT A DROP FIT TO DRINK.



1937

Solution: Delaware River Basin Commission Formed 1961

- Delaware River Basin Compact:
Federal Law & State Law
- First of its kind (Federal-
Interstate Water Regulatory
Agency)
- 5 Equal Members
- Governors are the
Commissioners; USACE NAD
Commanding General is
Federal Commissioner
- Staff of Engineers, Scientists,
Planners



Ceremonial signing of the Delaware River Basin Compact, Nov. 2, 1961.

DRBC Functional Responsibilities

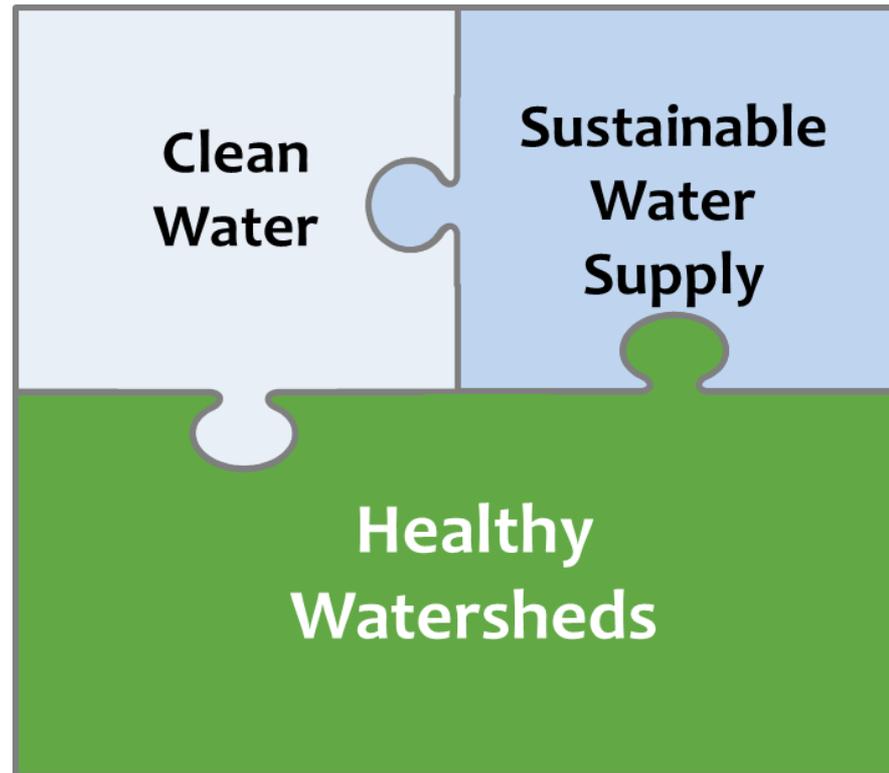
Manage, Protect & Improve the Basin's Water Resources

- Water Quality Protection & Improvement
- Drought Management
- Flood Loss Reduction
- Water Supply & Watershed Planning
- Regulatory Review (Permitting)
- Outreach/Education
- Recreation



DRBC Core Responsibilities

- **FLOW** - An adequate and sustainable supply of water.
- **QUALITY** - Clean and healthy water resources.





Being Water Smart: So Many Wins

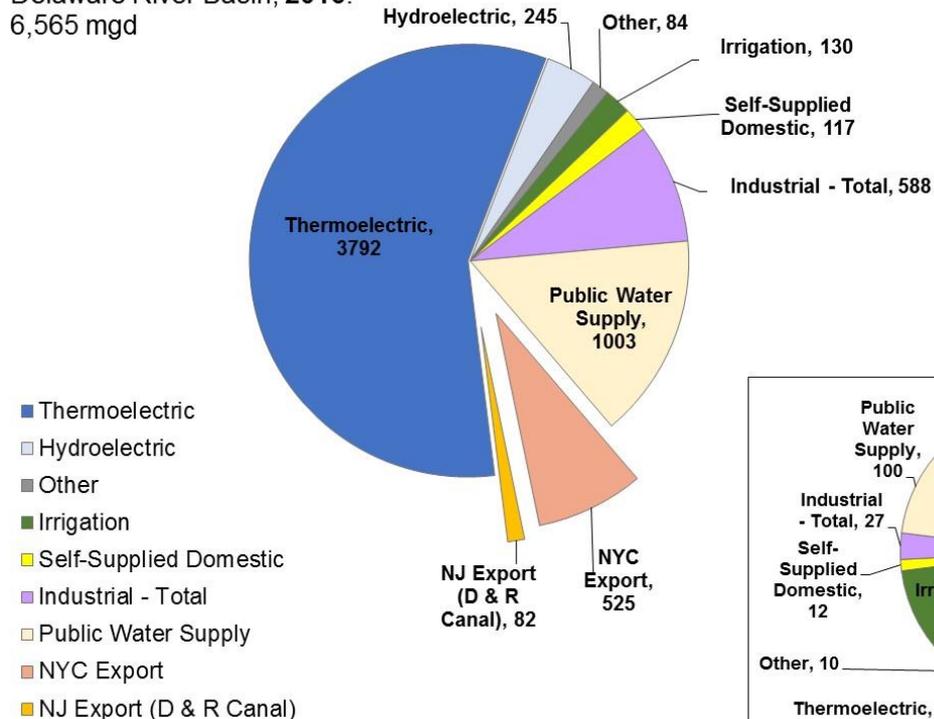


- **Preserves a Finite Resource:**
 - Using Less Water Conserves Our Freshwater Supplies: For People & For a Healthier Environment.
- **Reduces Pollution:**
 - Improved landscape practices (rain barrels, rain gardens, native plants) helps reduce runoff/non-point source pollution.
- **Saves Energy:**
 - Using less water reduces the amount of energy used in water & wastewater treatment.
- **Saves Money:**
 - Homes that use less water can yield substantial savings on water, sewer & energy bills.

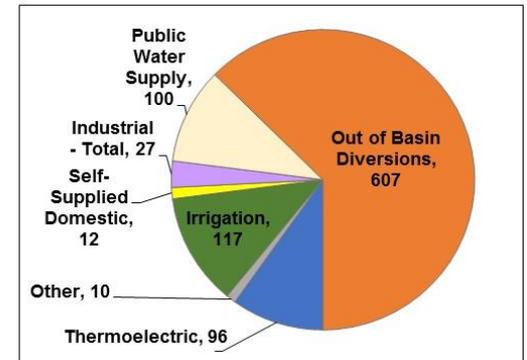
Conserving Energy Saves Water – Another Win!

The largest water use sector in the basin is power generation, so we all can help conserve our water supplies by reducing our energy usage.

Total Water Withdrawals
(ground and surface) from the Delaware River Basin, **2016**:
6,565 mgd



Consumptive Use and Major Basin Exports:
969 mgd



Water Smart in the Home: Kitchen/Laundry

■ Dishwasher & Laundry

Full loads only. Wash fleece less often to ↓ microplastics. Use cold water cycle & hang clothes to dry to save energy.

■ Compost Food Scraps

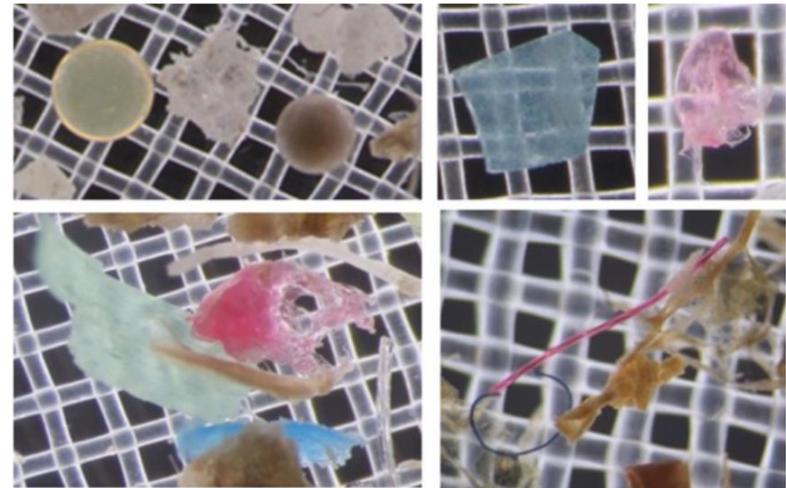
Don't use garbage disposal or throw away. Use on your gardens.

■ Drink Water From the Fridge

No need for bottled water at home or to run the tap for cold water. Keep cold, filtered water in the fridge.

■ Check for Leaks & Consider Efficient Appliances

If possible, replace with water-efficient or energy-saving appliances



As seen under the microscope: microplastics collected from the Delaware Bay by University of Delaware researchers. Photo courtesy of the University of Delaware.

Water Smart in the Home: Bathroom

- **Install Low Flow Toilets**
 - Check for "silent" leaks: Place food coloring in the tank & see if it leaks into the bowl.
- **Install Water Efficient Showerheads**
 - Shortening your shower by just 1 minute can save ~550 gallons/year
- **Turn OFF the Faucet When Not in Use**
 - Use aerators on faucets to reduce water use.
- **NEVER Flush Meds!**
 - Keep medications out of our rivers and streams. This is important for our drinking water & aquatic life.



Water Smart Outside the Home

Reduce Salt Usage

- Shovel First & Often
- Don't Overuse; Reuse if Possible
- Use the Correct Product for the Temps (Rock Salt near Freezing, Calcium Chloride if Colder)
- Look for "Friendlier" Options or Try Using Sand

Why?

- Excess Salt Runs Off Into Waterways
- Impacts Drinking Water
- Bad for Plants, Animals & Aquatic Life



Gene Wilburn (Flickr; CC BY-NC-ND 2.0)

Water Smart Outside the Home

Nothing but Rain down the Drain!

Do NOT litter or put anything down storm drains – they are all connected to waterways. If you wouldn't drink it...don't dump it!

Reconsider Car Washing & Pavement Cleaning

Wash less often, with less water & “greener soaps.” Or wash it at a car wash where they clean & recycle the water. Use a broom instead of a hose to clean off your driveway or sidewalk.



Water Smart in the Yard

Pick Up Your Pet's Poo

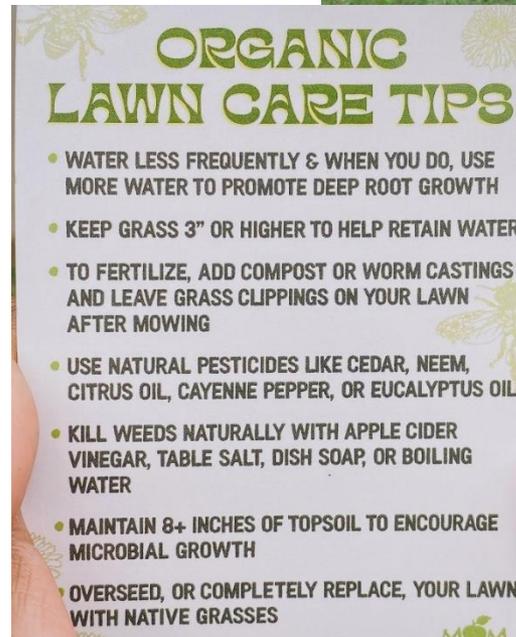
Adds bacteria & excess nutrients to stormwater runoff.

Use Less Lawn Chemicals

Consider more earth-friendly alternatives. Always follow the instructions; more ≠ better. Don't apply right before a rainstorm.

Mowing & Watering

Use a mulching lawnmower or recycle clippings. Keep blades sharp for healthy grass. Water in evening or early mornings to minimize evaporation. Recycle yard waste.



Mom's Organic Market

Water Smart in the Garden

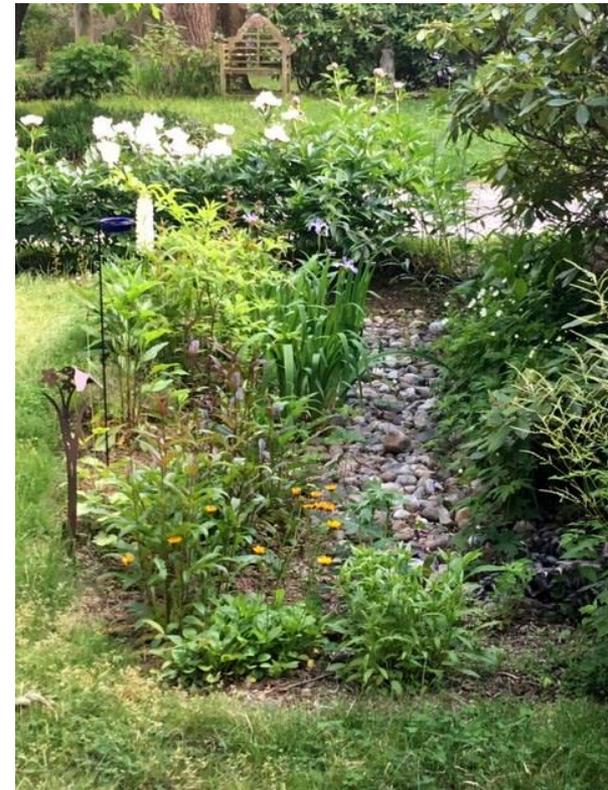


Use a Rain Barrel

Rain barrels catch & reuse water. Attach to a downspout or hook up to your air conditioner.

Install a Rain Garden

If you have wet areas on your property, a rain garden or a garden with moisture-loving native plants is a great way to absorb excess rainfall, reducing runoff and erosion.



Water Smart in the Garden

Use Native Plants & Those Adapted to Your Property's Conditions

Native plants are used to growing in your area, reducing fertilizer & watering needs. They also benefit wildlife. Also, plant according to your yard's sunny/shady/dry/wet spots.



Mulch Garden Beds

Mulching helps retain moisture, which means less watering. It also reduces soil erosion & the growth of weeds. As it breaks down, it is good for your soil.



More Garden Smarts



Don't Cut Your Gardens Back in the Fall

Consider leaving your plants go to seed in the fall and don't cut them back. The seedheads provide food for birds and the brush provides shelter for animals & insects during the colder months.

Consider Drip-Irrigation

Drip irrigation is a great way to water plants and gardens efficiently.

Out & About: Use Less Plastic

Use to Conserve Water & Reduce Plastic Waste:

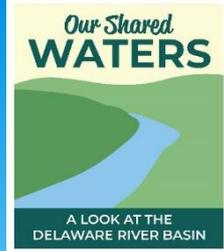
- Refillable Drink Container
- Reusable Bags
- Say “No Thanks” to the Straw & Plastic Utensils (or BYO)
- BYO Carryout Containers

Why?

- World-Wide, 91% of Plastic Made was NOT Recycled
- Since 2012, the U.S. only Recycles 9% (Europe 30%, China 25%)
- Prediction: by 2050, there will be MORE PLASTIC in the Ocean than Fish (Ton for Ton)



Out & About: Rate Your Waters



What is Rate Your Waters?

- Interactive Water Quality Site for the DRB
- Way to Share Information about Your Favorite Place to Hike, Fish or Paddle

How Does it Work?

- Visit a DRB Waterway, Take a Photo
- Rate on Scale 1-5: Clarity, Odor, Trash, Levels & Erosion
- Visit <https://rateyourwaters.org> & Upload Info
- See What Others are Saying & View Fun Facts

Welcome to Our Shared Waters Dashboard

Click Here – Rate YOUR Waters!

Explore the crowd-sourced water quality monitoring map for the Delaware River Basin.

The Basin is made up of 10 major watersheds.

Explore the 3D map or select below to zoom to that watershed:

- Delaware Bay
- Lower Estuary
- Upper Estuary
- Lower Central
- Schuylkill Valley
- Lehigh Valley
- Upper Central
- Lackawaxen
- Neversink-Mongaup
- East-West Branch

MAP KEY

Schuylkill River below Mont Clare Bridge
-75.5075, 40.1354

Water Quality Aug 26th 2020

Clarity	★ ★ ★ ★ ☆	Murky	Clear
Pretty clear after lots of flooding			
Odor	★ ★ ★ ☆ ☆	Bad	None
Trash	★ ★ ☆ ☆ ☆	Lots	Clean
Levels	★ ★ ★ ☆ ☆	Dried	High
Erosion	★ ★ ★ ☆ ☆	Bad	None

Get Involved: Community Events

Check with your County & Township!

- Recycling/Hazardous Materials Collection
- Drug Take-Back Days [APRIL 24]
- Community Events

Join your local Environmental Advisory Committee or participate in meetings

Mont. Co. Rain Barrel Sale:
<https://montgomerycomposter.sale.ecwid.com/>



Get Involved: Volunteer

- **Great American Cleanup of PA:**
Volunteer for an event or register yours, **March 1 – May 31, 2021**; <https://gacofpa.org/>
- **Saturday, April 24: Bridgeport Spring Cleanup Day; 10am-12pm; FB:**
[@BridgeportSustainability](#)
- **Pennsylvania Horticultural Society Tree Tenders Program:**
<https://phsonline.org/programs/tree-programs>
- **Join a Local Watershed Group:** listing available at <https://www.nj.gov/drbc/basin/watershed/>



Thank You!



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