Tips to Improve Water Quality & Conserve Water

Simple things we all can do to help keep the Delaware River Basin clean & its waters plentiful

Lower Makefield Township EAC
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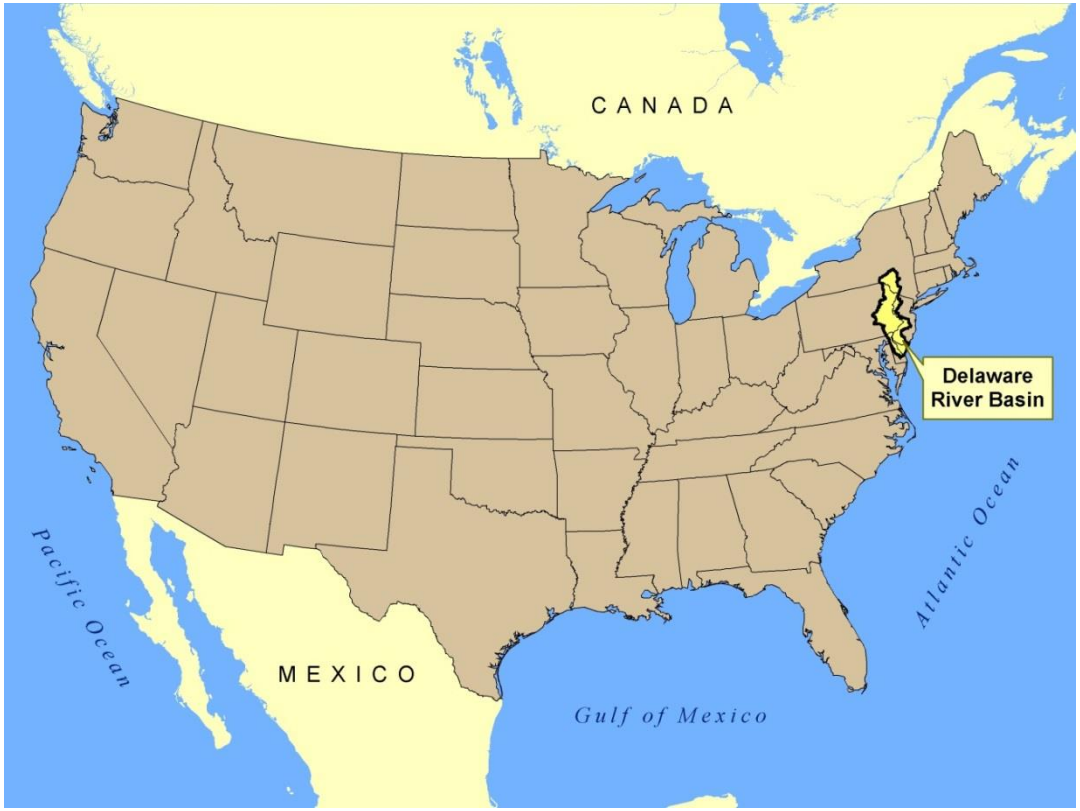
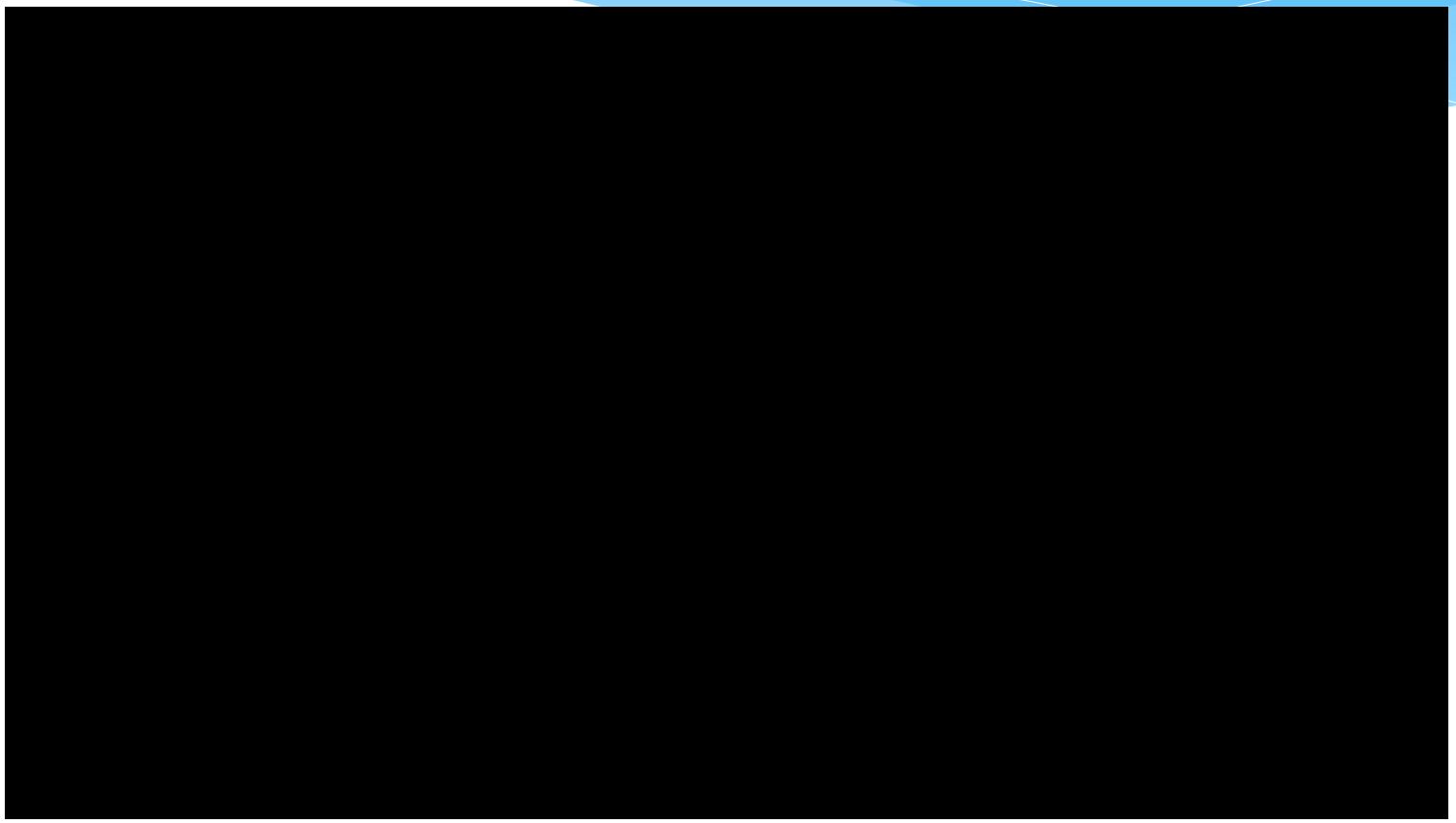
Delaware River Fast Facts



- Flows 330 miles from NYS to the Delaware Bay where it meets the Atlantic Ocean
- Forms an interstate boundary its entire length; basin includes portions of NY, PA, NJ, and DE
- 216 tributary streams
- Longest undammed U.S. river east of the Mississippi (dams are located on tributaries, not on mainstem)

- Drains 13, 539 mi^2 or 0.35% of the continental U.S. land area
- Roughly 13.5 million people (~ 4% of the U.S. population) rely on the waters of the basin (8+ million live in the DRB)
- National Wild and Scenic River: 6 sections

What is a Watershed?



(Video courtesy of caringforourwatersheds.com: https://www.youtube.com/embed/K_o-jK6vWIo)

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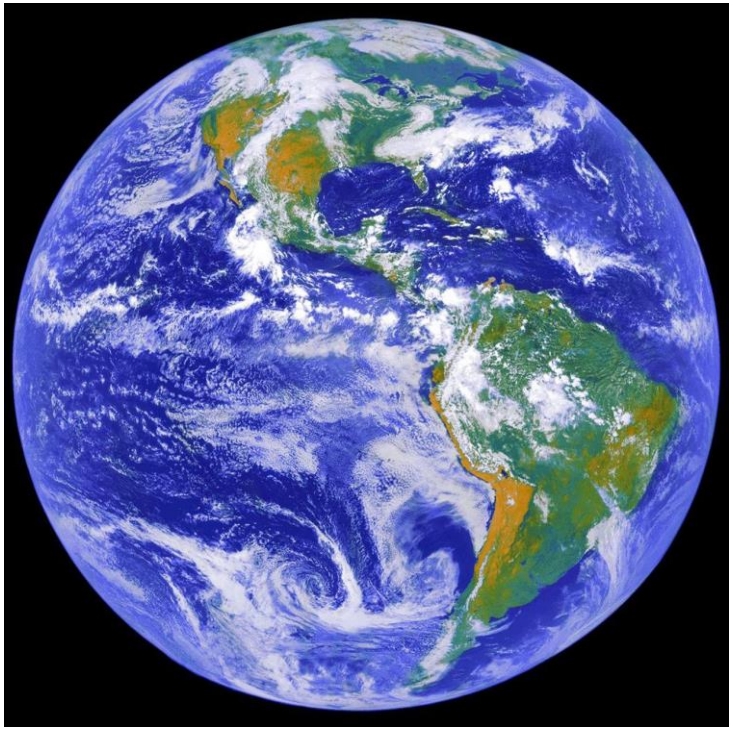
Water Fast Facts

- 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, under the earth's surface, or is too polluted for consumption.



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

Delaware River Basin Commission Founded in 1961

Five Equal Members:

- Delaware
- New Jersey
- Pennsylvania
- New York
- Federal Government

Note: New York City and Philadelphia are "advisors" and not members

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Why was the DRBC created?

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

The 1937 *Philadelphia Record* editorial page cartoon depicts the time when the tidal Delaware was an open sewer, where pollution in some stretches robbed the river of all its oxygen needed to support fish and other aquatic life.

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DRBC Functional Responsibilities

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

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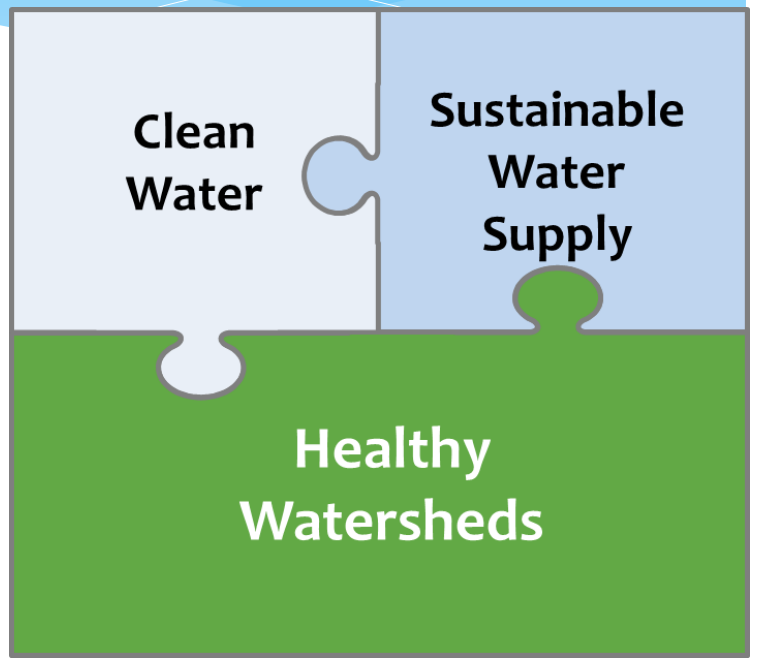
Top Down & Bottom Up: The DRB Needs Both

- The DRBC is a federal-interstate basin-wide water resource management agency
  - Our regulations target big picture issues: DO, Nutrients, PCBs, Salinity, Flow, large withdrawals & discharges
- But, the Delaware River Basin also benefits from on the ground efforts
  - Individual, local, sub-watershed
- Both approaches complement one another & are needed to improve water quality, conserve water, support healthy watersheds



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Less Water Used: A Win-Win-Win

- **Water is a Finite Resource:**
  - Water conservation is important for present & future generations – we all need water to survive.
  - Using less water reduces demand on our freshwater supplies, allowing for a healthier environment. WIN #1

- **Conserving Water Helps Reduce Pollution:**
  - Improved landscape practices (rain barrels, rain gardens, native plants) helps reduce runoff/non-point source pollution.
  - Using less water reduces the amount of energy used in water and wastewater treatment; energy reduction = pollution reduction. WIN #2

- **Conserving Water Saves $:**
  - Homes that use less water can yield substantial savings on water, sewer, and energy bills. WIN #3

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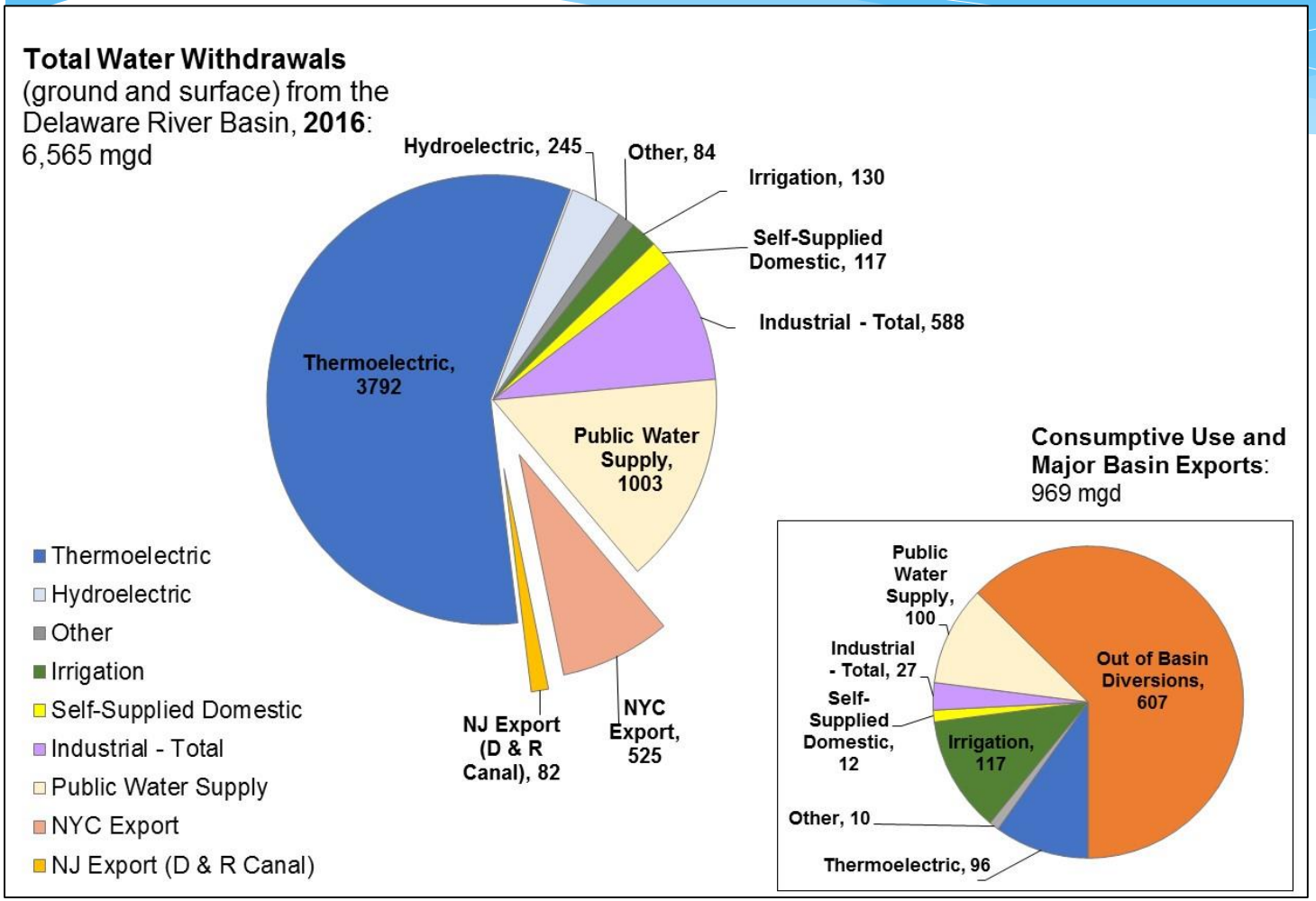
Conserving Energy Saves Water – Another Win!



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

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In the Home: Kitchen/Laundry

EPA WaterSense PARTNER

1. Always run full loads & check for leaks
Run full loads only in your dishwasher and washing machine. If possible, use less hot water in the laundry; wash in warm and rinse in cold, or use cold water for both. If possible, hang clothes to dry instead of your dryer to save energy.

2. Compost food scraps
Consider composting instead of using your garbage disposal or throwing in the garbage. Use your compost on your gardens to reduce fertilizer usage.

3. Drink water from the fridge
Use a Brita filter or faucet filter instead of bottled water. Keeping water cold in your fridge also means less water run from the tap before its cold enough to drink.

4. Consider efficient appliances
When it is time to replace, consider water-efficient or energy-saving appliances

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In the Home: Bathroom

EPA WaterSense PARTNER

1. Install Low Flow Toilets & check for leaks

--Look for the EPA Water Sense label &/or models that use less than 1.6 gallons/flush.

--Check your toilet for "silent" leaks by placing a little food coloring in the tank and seeing if it leaks into the bowl.

2. Install water efficient showerheads

--Look for the EPA Water Sense label &/or models that use less than 2.5 gallons/minute; you could save ~2,900 gallons/year.

--Take shorter showers when possible; shortening just 1 minute can save ~550 gallons/year

3. Turn off the faucet when not in use

When you are washing your hands, brushing your teeth, shaving, etc., don't let the faucet run while you aren't actively rinsing off. Use aerators on faucets to reduce water use.

4. NEVER flush meds!

Keep medications out of our rivers and streams by never flushing them down the drain. This is important for our drinking water as well as aquatic life.

Outside the Home

1. Reduce Salt Usage

Excess salt negatively impacts freshwater quality, plants, and animals, and can also impact drinking water. But, it's also needed in the winter to keep drivers safe. While adequate alternatives may not yet be available for our roads and parking lots, we can engage in best practices around our homes.

Another tip – check the temps! Rock salt most effective at 30 degrees, calcium chloride better at colder temps.

From Tookany/Tacony-Frankford Watershed Partnership: https://ttfwatershed.org

Outside the Home

2. Nothing but rain down the drain!
Do NOT litter or put anything down storm drains – they are all connected to waterways. Paper/plastic waste, oil and gas from a leaky vehicle, car wash soaps – all of these things can end up in storm drains and contribute to pollution of local waterways. If you wouldn't drink it… don't dump it!

3. Reconsider how you wash your car & clean your pavement:
Wash less often or wash it at a car wash where they clean & recycle the water. If you do wash your car at home, try to use less water & "greener" soaps. Use a broom instead of a hose to clean off your driveway or sidewalk.

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In the Yard

1. Pick up your pet's poo!
Not only does it introduce bacteria to our waterways, but it can contribute to nutrient overload causing overgrowth of algae and nuisance plants.

2. Decrease use of unnecessary lawn chemicals
Consider more earth-friendly alternatives or just use less! Always follow the instructions and remember: using more does not equal better results. And, check the weather before you apply: don't apply right before a rainstorm.

3. Recycle/compost your yard waste & grass clippings
Mulching lawnmowers recycle clippings; keep blades sharp for healthy grass. Cut your grass ~3" high to shade the roots, making it more drought tolerant. Try to water only in the evening or very early morning to minimize evaporation.

- https://blog.nutrilawn.com/best-practices-for-mowing-your-lawn

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In the Garden

1. Use a rain barrel!
Rain barrels are great ways to catch and reuse water. You can attach to a downspout, or you can hook up to your air conditioner. Be on the lookout for rain barrel building workshops – visit https://extension.psu.edu/rain-barrel-workshop & sign up to get info about events scheduled in your area.

2. 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.

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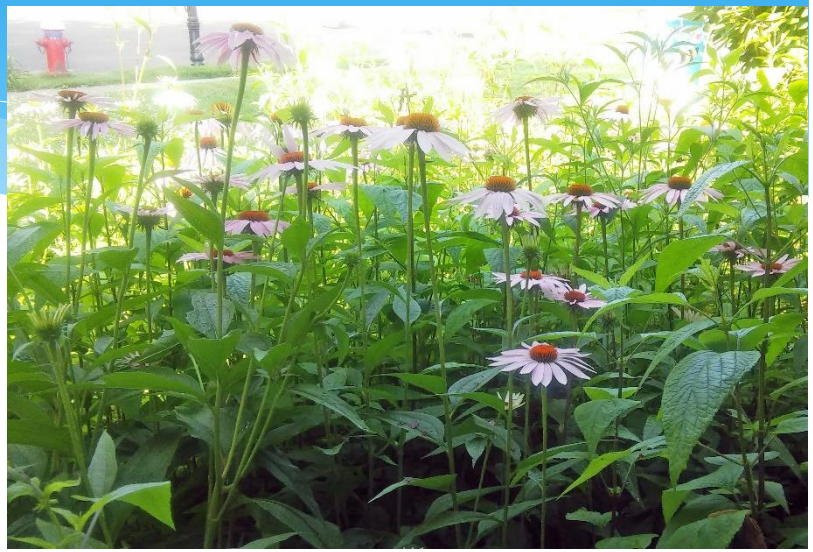
In the Garden



3. Use native plants & those adapted to your property's conditions

Native plants are used to growing in your area, reducing fertilizer and watering needs. They also benefit wildlife. Also, plant according to the sunny/shady spots of your yard.

4. Mulch beds

Mulching your garden beds helps retain moisture, which is beneficial for your plants & reduces runoff. It also reduces the growth of weeds, and, as it breaks down, it is good for your soil.

5. Install a drip-irrigation water system for valuable plants

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

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In the Garden

6. 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 during the colder months.

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Out & About

Consider using the following to conserve water & reduce plastic waste:

- **Refillable coffee mug**
- **Refillable water bottle**
- **Reusable bags**
- **Say "no thanks" to the straw (or BYO)**
- **BYO carryout containers**

Why?

- **91% of plastic ever made was not recycled (world-wide)**
- **Since 2012, the US only recycles 9% (Europe 30%, China 25%)**
- **Prediction: by 2050, there will be more plastic in the ocean than fish (ton for ton)**

https://news.nationalgeographic.com/2017/07/plastic-produced-recycling-waste-ocean-trash-debris-environment/

@yuvalzommer

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Volunteer!

Friends of the Delaware Canal:
Canal Cleanup – Sat., April 6, 2019,
9 a.m. – 12 p.m.
https://www.fodc.org/event/canal-clean-up-day/

Friends of Five Mile Woods: have regular volunteer workdays on the 2nd Saturday of each month, March – October. Workday hrs. are 9 am. – 12 p.m.
friendsoffivemilewoods@yahoo.com

Bowman's Hill Wildflower Preserve:
Earth Day Spring Cleanup – Sat., April 6, 2019, 9 a.m. – 1 p.m.; moriarty@bhwp.org

Great American Cleanup of PA: Volunteer for an event or register yours, March 1 – May 31, 2019; https://gacofpa.org/

Join a local watershed group: listing is available at https://www.nj.gov/drbc/basin/watershed/

Connect with DRBC on Social Media

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Photo: David B. Soete

Thank you!

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