

Clean Water Starts at Home:

How can I help improve water quality?

Presented by:
University of Delaware
Student Chapter
of the
American Water Resource Association

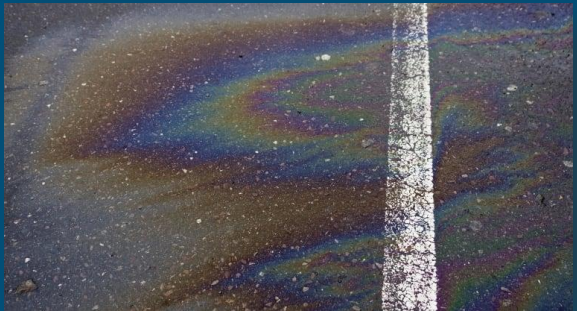
Who are we?

- *We are University of Delaware graduate students who study water and soil science*
- Delaware Student Chapter of the American Water Resources Association (UD AWRA)
- This program is part of our outreach initiative for UD AWRA



Outline

1. Intro to water pollution
2. Our drinking and waste water
3. Tips to prevent water pollution at home
4. Questions





Intro to water pollution

Take a guess!

- What percent of the water on the planet is freshwater (not salty)?

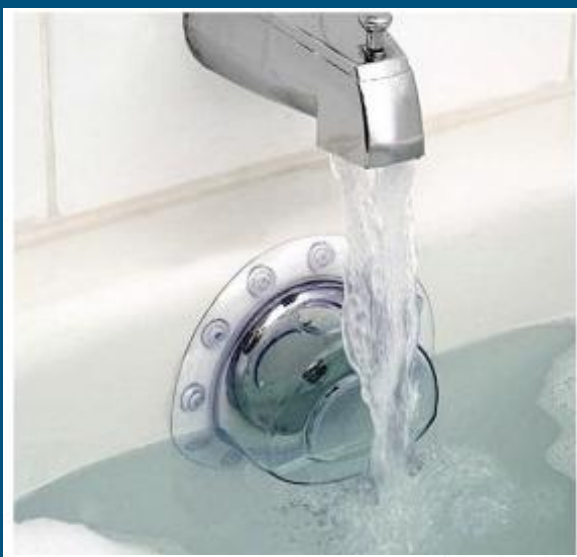
2.5%

- What percent of water on the planet can we drink?

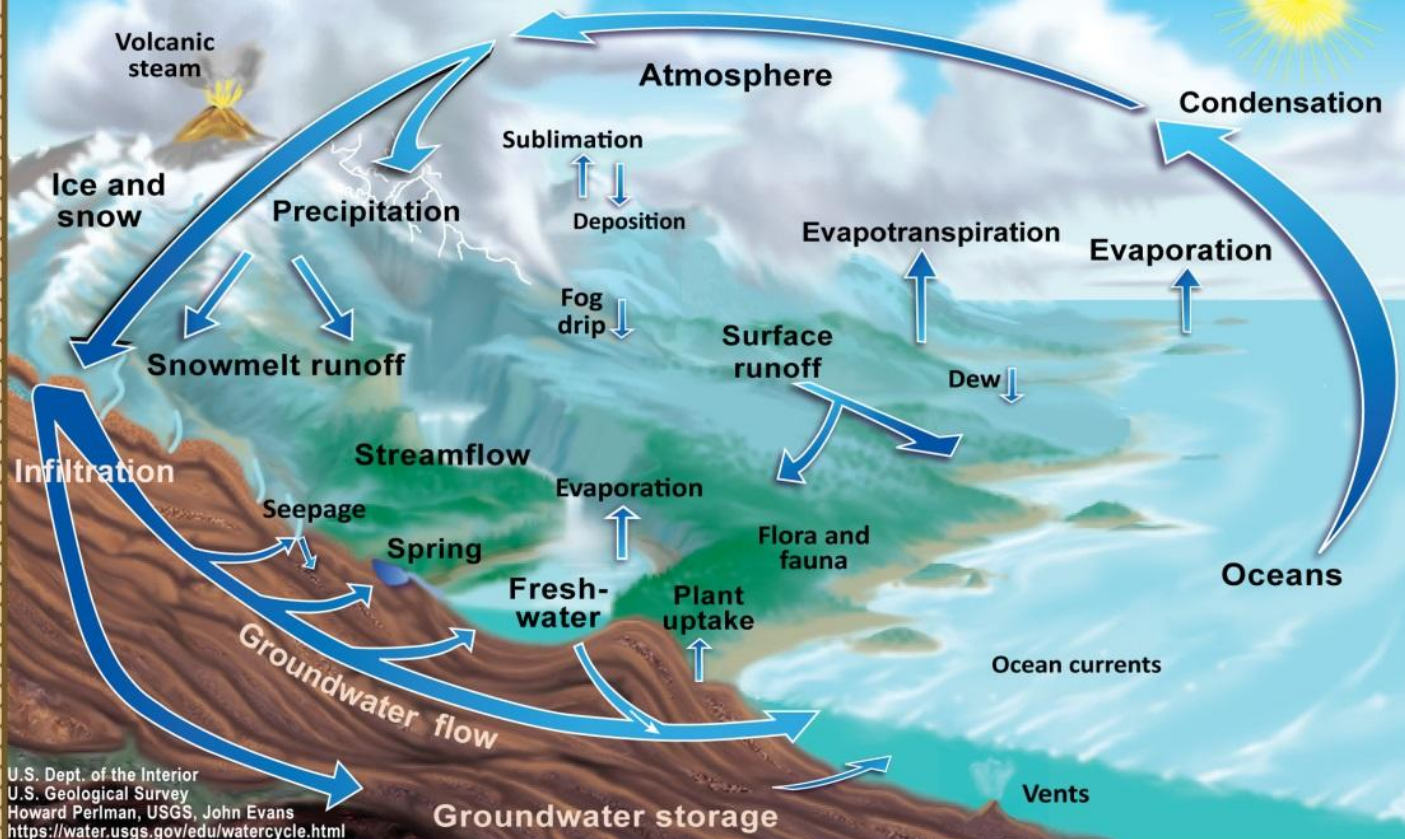
0.007%

- How much water does an average American use daily according to the USGS?

Between 80 and 100 gallons
This could fill a bathtub!



The Water Cycle

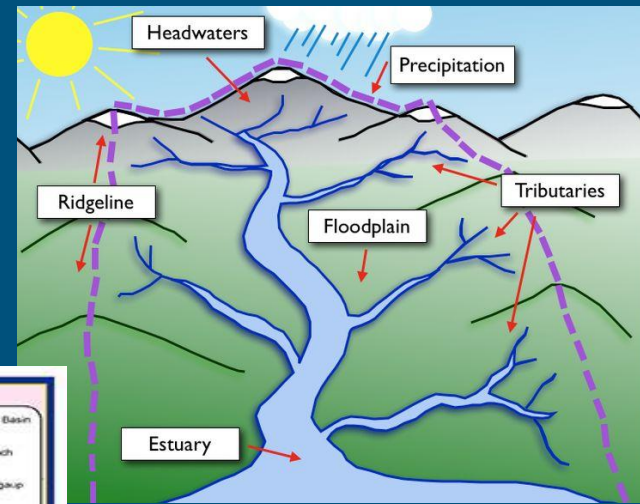
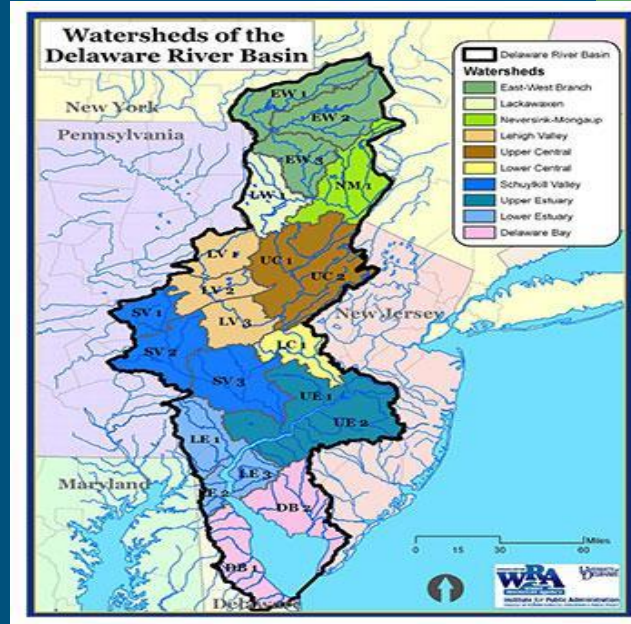


What is a watershed?

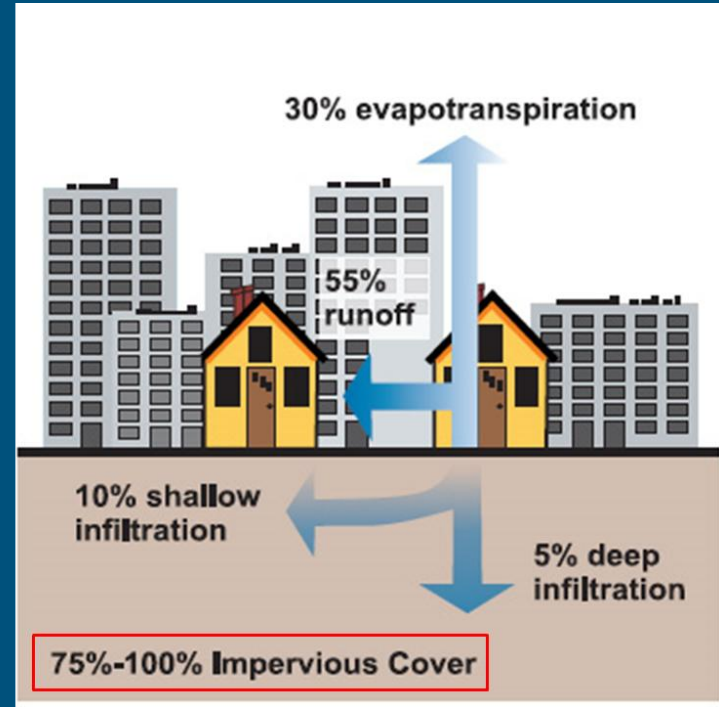
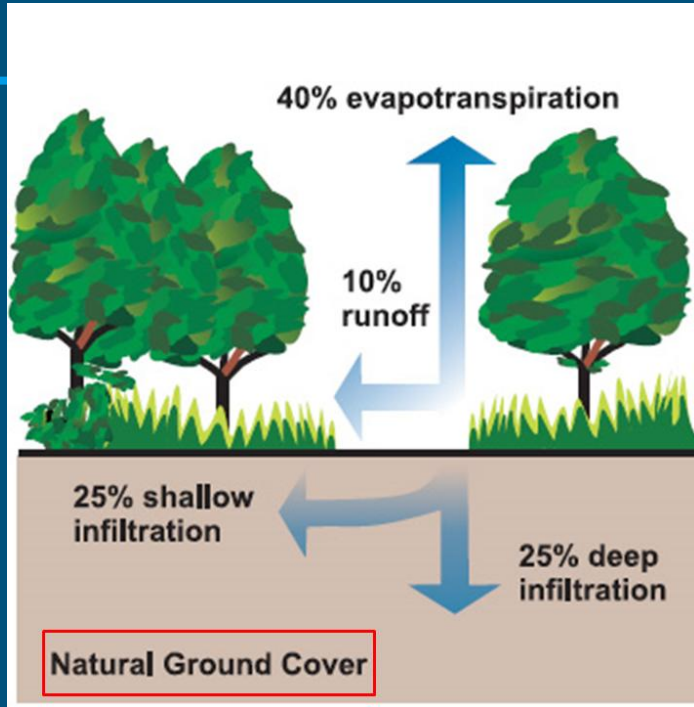
A watershed (or drainage basin) is an area of land that collects rainfall or snowmelt which eventually drains to a common river, lake or other body of water.

Your Watershed

Delaware River.



How impervious surfaces alter the water cycle



More impervious surfaces → More runoff → More pollutant transport to water systems



Our drinking and waste water

Where Does our Drinking Water Come From?

1. Water is collected from surface water (rivers, lakes, etc.) or groundwater and treated so that the water is safe for human consumption in a water treatment plant
2. The treated water is then sent to a Public Water System (PWS)
3. The PWS then sends us water directly to our homes



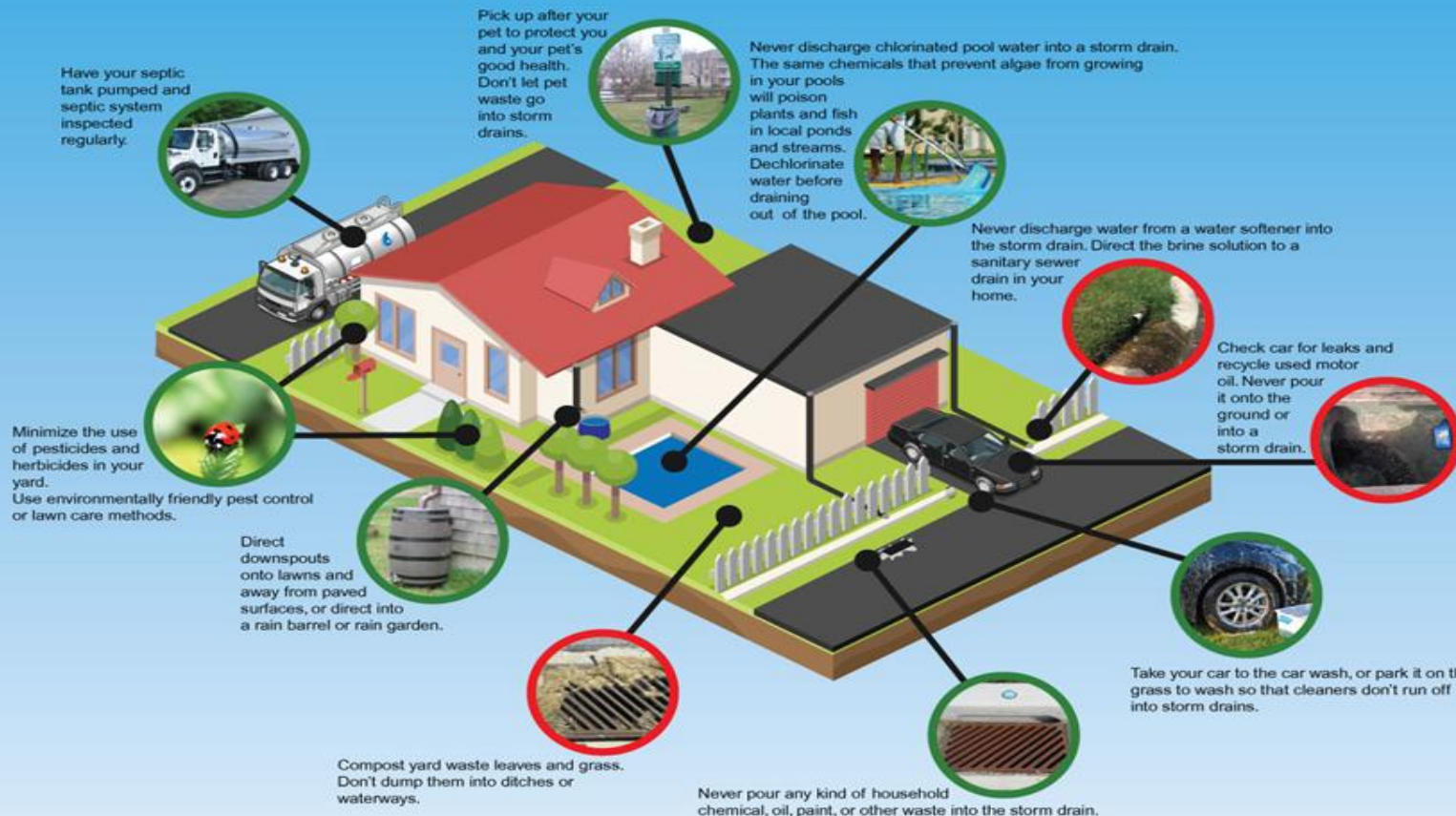
Where Does our Wastewater Water Go?

- Water that we use in our home goes down the drain and to a sewage treatment plant before being released back in the rivers and lakes.
- Water (and chemicals, trash, waste) that we dump down storm drains goes directly to rivers and lakes (like the Chesapeake and Delaware Bays **without** water treatment.)





Tips to prevent water pollution at home



Clean Water Starts at Home: Homeowner Tips to Prevent Pollution



Washing your Car

The Bad News:

- *Outdoor faucets use 2 gallons of water per minute (USGS)*
- *Cleaners contain harmful chemicals and nutrients*

How You Can Help:

- Try to wash car on gravel or grass; not driveway
- Or go to professional car wash- many car washes have discount days



Motor Oil

The Bad News:

- *Used oil from one oil change can contaminate one million gallons of water! (EPA)*



How You Can Help:

- Join the four million people who reuse oil as a lubricant, or take it to a recycling center



Pool Water

The Bad News:

- *Pool water is a major source of chlorine pollution. Chlorine is toxic to fish and other aquatic organisms*

What You Can Do:

- Make sure to dechlorinate your pool water before draining
- Drain your pool water into the ground, not storm drains



Dog Waste

The Bad News:

- *Leading cause of stormwater pollution*
- *Dog waste can go into water where we swim, fish & drink → bacteria & parasites*
- *Dog waste contains nitrogen and phosphorus.*

How You Can Help:

- Pick up your dog's waste (Trails, lawns)
- Bring enough waste bags on your walks
- Make sure the waste bags go into the trash



Fertilizers

The Bad News:

- ***Pesticides and herbicides:***
 - ***Harmful to humans and wildlife***
 - ***Can take years to degrade/break down***
- ***Fertilizers:***
 - ***Causes large algal blooms (algae eats N and P)***
 - ***Algal blooms kill aquatic life, degrade water quality***



How You Can Help:

- Be conscientious of the amount of chemicals put on your lawn
- Avoid applying chemicals before rain or snow
- Fertilize in the fall!



Household Chemicals

The Bad News:

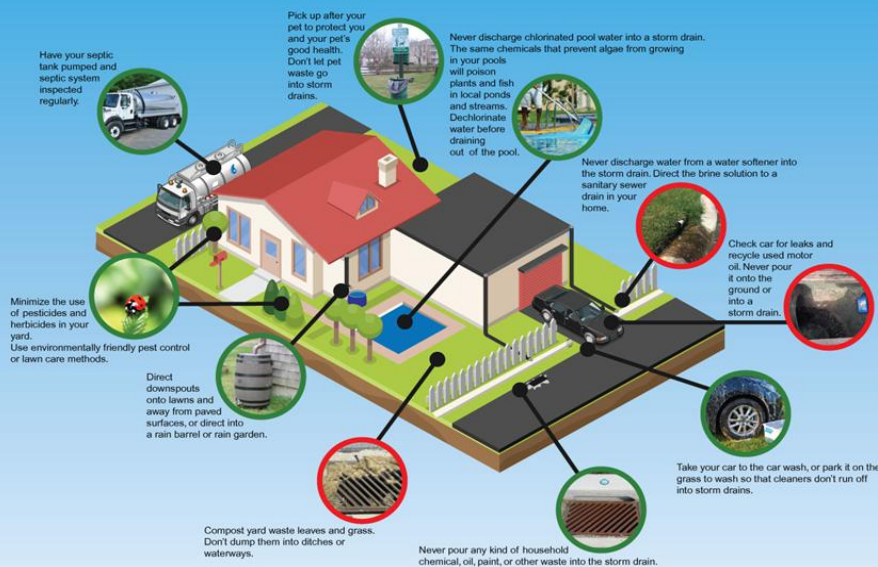
- Household chemicals (cleaners, paints, aerosols) can be harmful to humans and animals



How You Can Help:

- Always follow the directions when disposing household chemicals
- **Bring your unwanted household chemicals**
DE Solid Waste Authority's Household
Hazardous Waste Collection Events for New
Castle County for free!





Clean Water Starts at Home: Homeowner Tips to Prevent Pollution



Our
presentation
was a short
reminder that
everyone can
make a
difference with
local water
quality!

Thank you for time!

Questions?

For more information, contact: Lauren Mosesso (Imosesso@udel.edu)

Local Contacts

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