

The Dirt on Water Pollution





What will we talk about?

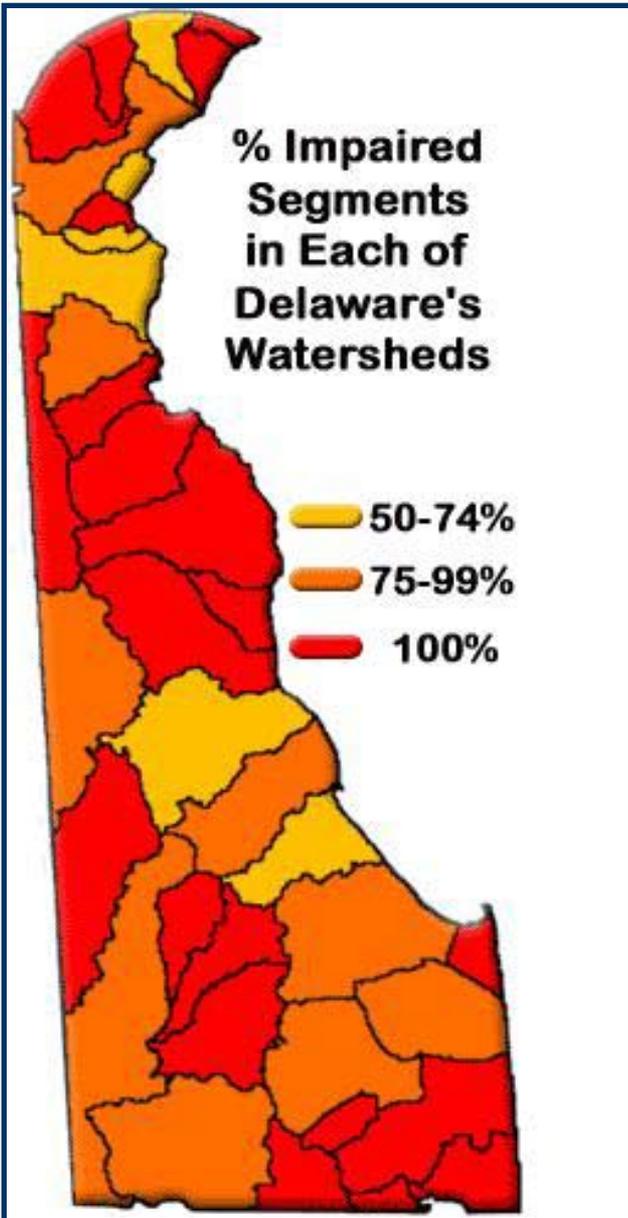
- What is a Watershed?
 - Stormwater in our Watersheds
 - Water Pollutants
 - Effects of Pollution
 - Solutions
- 

What is a Watershed?

All the water and the land area that “sheds” its water into a particular river, bay, or ocean



What are Delaware's Watersheds?



According to the State of Delaware's *2000 Watershed Assessment Report*...

“96% of Delaware’s rivers and streams do not fully support the swimming use and 71% do not fully support the fish and wildlife use.”

Impervious Surfaces



Consider This...



The Effect of Impervious Surfaces



10% Impervious Cover



Less than 5% Impervious



25-60% Impervious Cover



How does
stormwater in
my
neighborhood
affect streams?

Stormwater Contributes to Water Pollution





Wait!

Storm drains filter and
clean the water before they
go into streams...

... right??

Storm drains **do not**
filter water runoff
before they empty into
local waterways



Common Water Pollutants Found in Stormwater

- Nutrients (nitrogen & phosphorus)
 - Pesticides/Herbicides
 - Sediments
 - Bacteria
 - Oil and Greases
- 
- A close-up photograph of a single water droplet hitting a blue surface, creating concentric ripples that spread outwards. The droplet is in the center, and the ripples are most prominent in the foreground, fading towards the background.

Nutrients

Causes of nutrient pollution





Nutrients act as “vitamins” for plant and algae growth in the water

Sediment

Common sources of sedimentation are erosion from unprotected stream banks and having bare soils exposed



Suspended sediment gives waterbodies a brownish color.

This reduces amount of sunlight in the water that is important to aquatic life



Bacteria

Animal waste and human waste get washed into rivers and streams by stormwater flows.

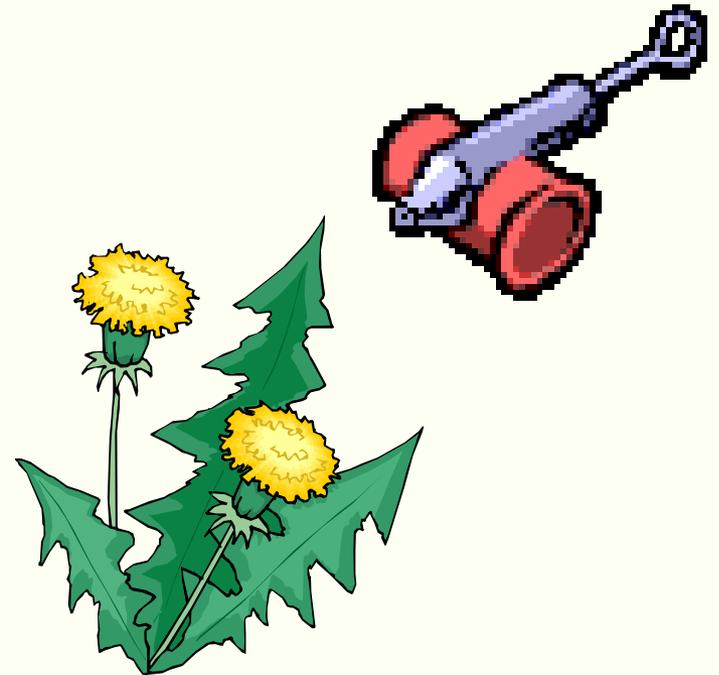




Bacteria found in waste material can be harmful to humans and wildlife

Pesticides and Herbicides

Just like fertilizers, applying too much pesticide and herbicide can contribute to water pollution



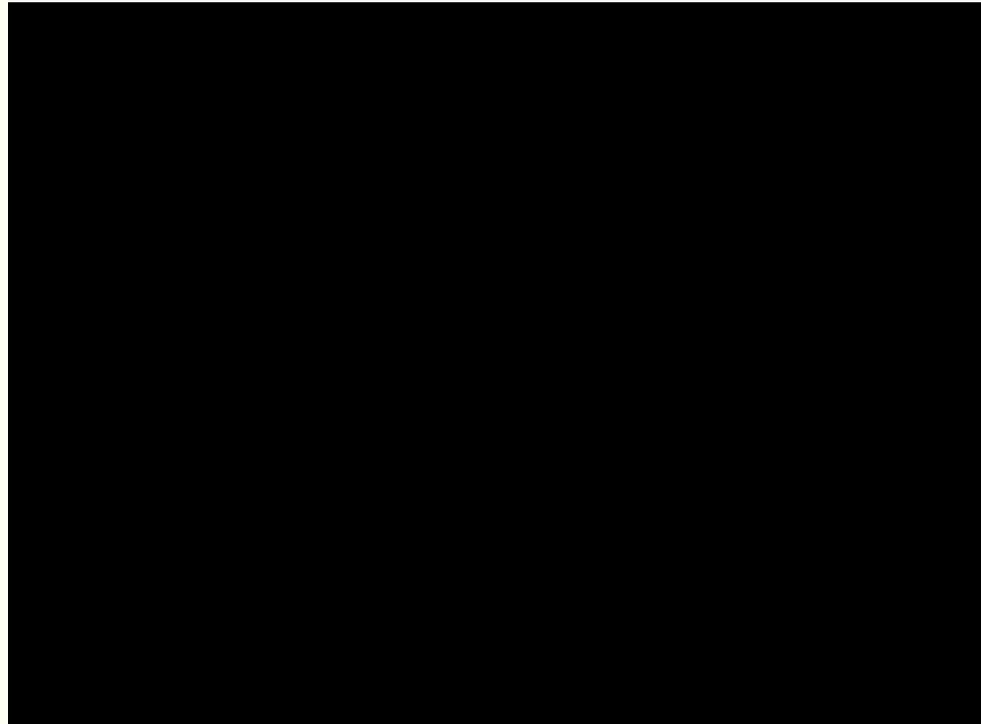
Oils, Greases and Household Chemicals



A Common Theme...



Look at it this way...



Water Pollution is Everyone's Problem

So, Be Part Of The Solution!

What are some things that
I can do that will make a
big difference?

Report Illegal Storm Drain Dumping

To Report Call:

■ DNREC

800-662-8802

■ DeIDOT

800-652-5600



To Report a Stormwater Maintenance Concern

- DNREC Stormwater Help Line:
800-464-4357

- DeIDOT General Information:
800-652-5600



Dispose of Hazardous Waste Properly



www.dswa.com  1-800-404-7080

**Household
Hazardous
Waste Collection**

Household Hazardous Waste Collection Events are scheduled for the first Saturday of the month listed for the following locations:

Delaware Recycling Center - September
Cheswold Collection Station - October
Pine Tree Corners - April
SSWMC (Sussex Landfill) - May

All events held rain or shine 8:00am - 4:00pm

Hazardous materials should never be poured down storm drains or buried

Clean up After Your Pet



Maintain Cars

- **Check** for drips and leaks of automotive fluids
- **Clean up** all spills immediately
- **Recycle** your car's oil

- **Properly dispose** of other automotive fluids as household hazardous waste
- **Wash** your car on a grassy area or use a carwash (they recycle water!)

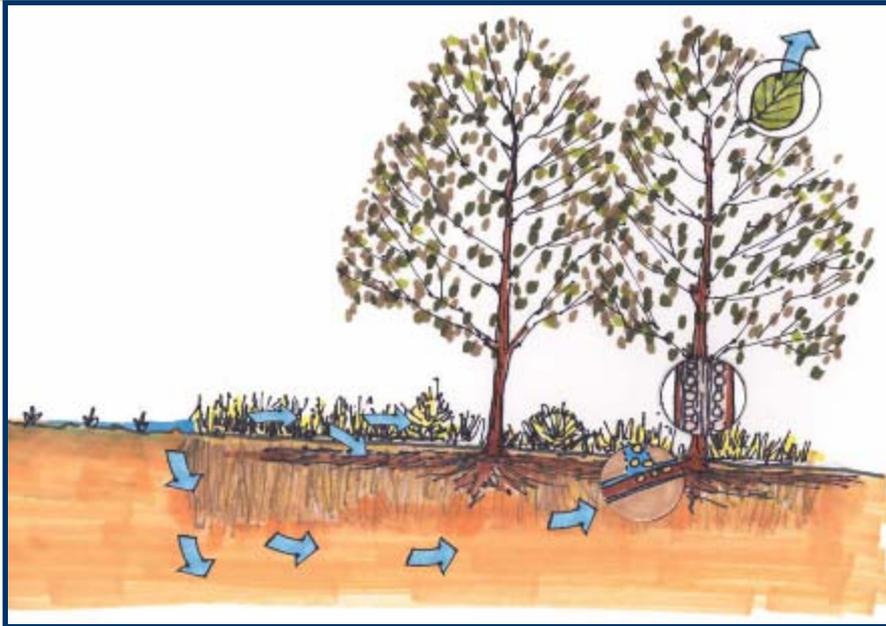




- Aim downspouts into a vegetated, or grassy area (away from the house), instead of the driveway, so that the water will be absorbed into the ground



Plant Native Plants

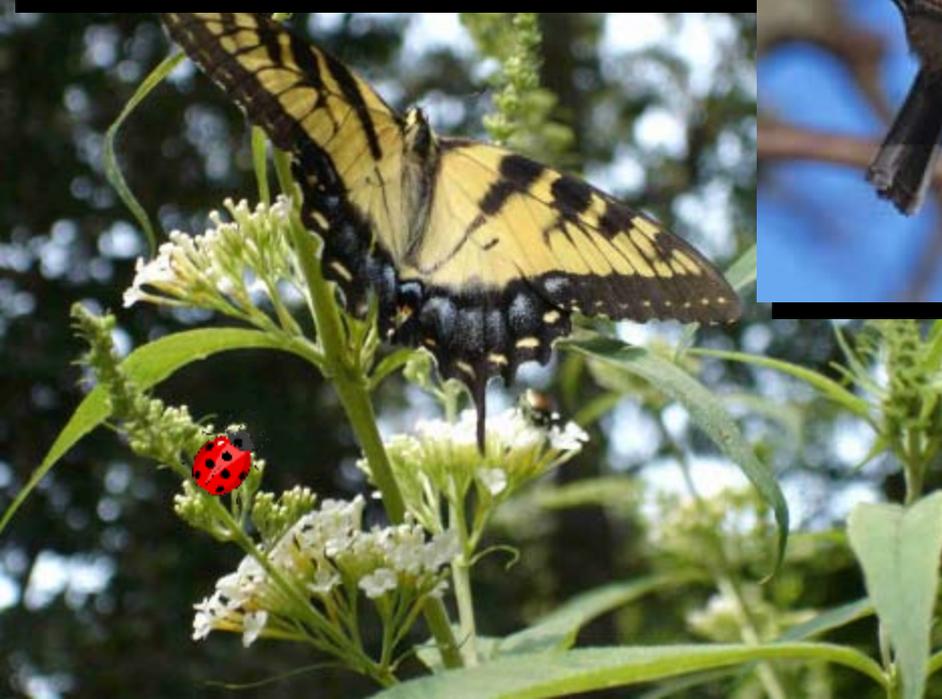


Native trees and plants slow down water runoff and their deep root structure stabilizes soils

Since they are used to local weather, they need little or no maintenance and can add a great look to your yard!

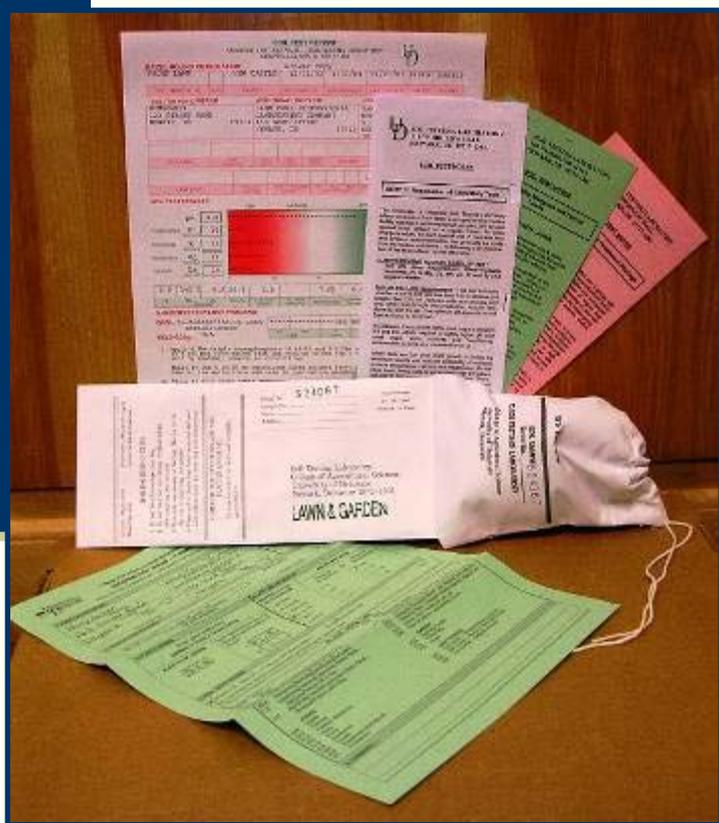






Have your Soil Tested...

...Before adding fertilizer



New Castle Cooperative Extension

(302) 831-2667

Kent Cooperative Extension

(302) 730-4000

Sussex Cooperative Extension

(302) 856-2585

Yard and Gardening

- Start a compost pile. It is a great way to cut back on waste and fertilizer use (and save money)!



More Yard and Gardening

- Let your grass clippings lay on your yard (they work as fertilizer for the soil) or use them as compost!
- Mow your yard to no shorter than 2 or 3 inches high and never cut along stream banks
- During a drought, water your lawn infrequently. Your lawn will naturally recover from a drought period and frequent watering encourages shallow roots and weeds.



Control Sediment

- Control sediment by protecting exposed soil when digging on your property, terracing steep slopes, and planting native trees and shrubs along stream banks



Maintain Septic Systems Properly



Remember to have your septic inspected every 3-5 years

Helping to Solve the Problem

- DeIDOT's Stormwater Quality Program works to prevent harmful pollutants from being washed by stormwater runoff (or dumped) into the storm sewer system and then discharged from the storm sewer system into local waterbodies.
- What specifically does the Stormwater Quality and the NPDES Program do?

The Stormwater Quality Program Includes

- Performing illicit discharge investigation and remediation
- Controlling construction site stormwater runoff
- Managing post-construction stormwater in new developments





Also...

BMP retrofits, structural controls and operations, spill prevention and response, and flood control projects

And...

Public education and training



For more information...

About stormwater issues and what we discussed in this presentation, you can:

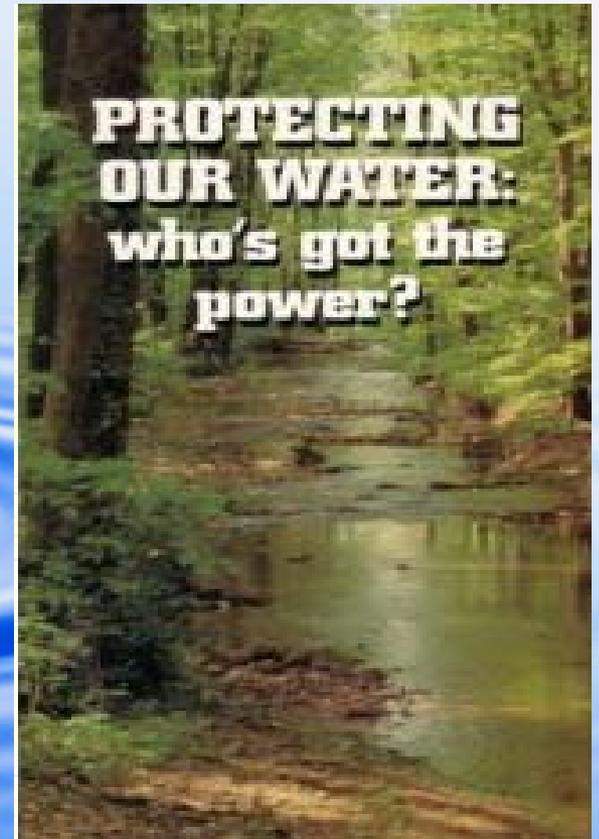
Visit our website at:

www.deldot.gov/stormwater

or

Request the Delaware Nature Society and the Stroud Water Research Center's video:

Protecting Our Waters: Who's Got The Power? from DeIDOT





Please DO YOUR PART
TO KEEP IT CLEAN!