



COLUMBIA COUNTY
CONSERVATION DISTRICT

Saving Rain for a Sunny Day

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Conserving Natural Resources for Our Future

ACKNOWLEDGEMENTS

FINANCIAL AND TECHNICAL SUPPORT PROVIDED BY:



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Pennsylvania DEP Chesapeake Bay Program



Columbia County Conservation District

EMPTY BARRELS PROVIDED BY:

Aqua Pennsylvania, Bear Gap

Wise Foods, Berwick



WORKSHOP OVERVIEW

WATER BASICS

- The Blue Planet
- Watersheds
- Stormwater



RAIN BARRELS & RAIN GARDENS

- What you can do to make a difference in your own backyard
- Stormwater management at the local level



WATER BASICS: “THE WATER PLANET”



- 2/3 of the Earth is covered by water
- 97% in oceans
- The remaining 3% is freshwater....BUT...
- Most of the 3% is unavailable, SO...

< 1% of the Earth's water is available for use



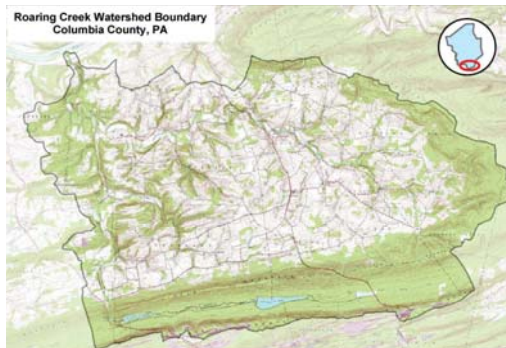
WATER BASICS: WATERSHEDS

"Wherever you are, you are in a watershed"
"We all live downstream"

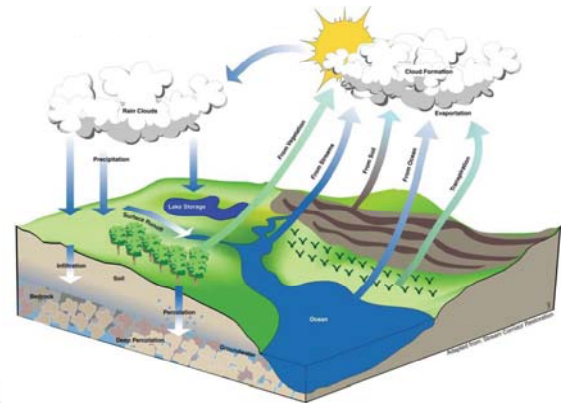


WATER BASICS: WATERSHEDS

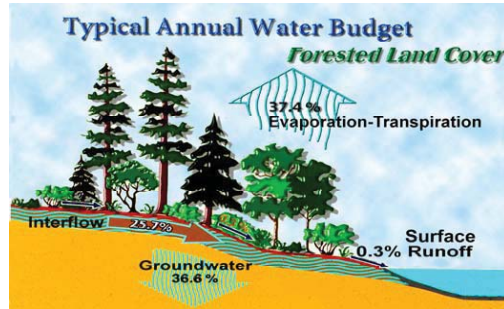
WATERSHED: *an area of land that drains into a body of water, such as a lake, stream, or ocean.*



WATER BASICS: The Hydrologic Cycle

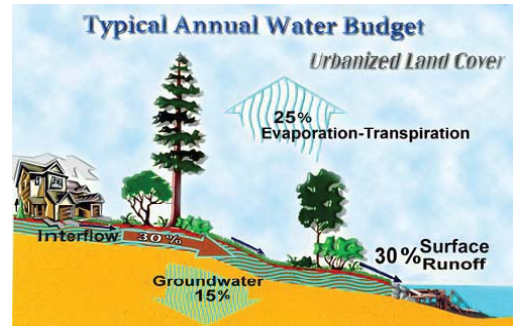


In Natural Conditions



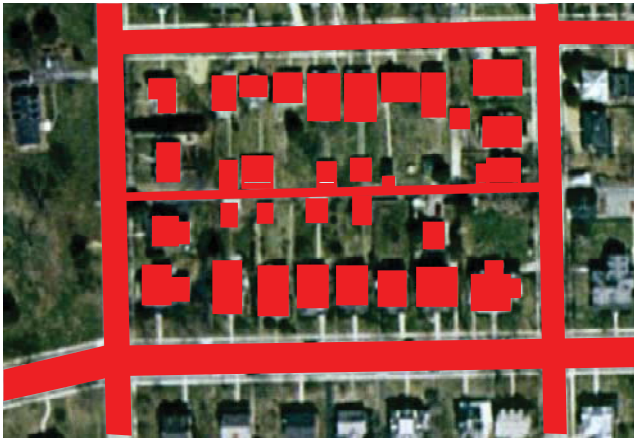
Courtesy May, U of W

In Developed Conditions



Courtesy May, U of W





WATER BASICS: STORMWATER

STORMWATER: *an abnormal amount of surface water due to a heavy rain or snowstorm*

Webster's New Millennium™ Dictionary of English, Preview Edition (v.0.9.6)



Internet



CCCC photo/ Barry Travelpiece

STORMWATER – WHY WE CARE

NONPOINT SOURCE POLLUTION:

a.k.a polluted runoff

- Comes from many diffuse sources
- Caused by rainfall or snowmelt moving over and through the ground



Source: <http://www.epa.gov/owow/nps/qa.html>



STORMWATER – WHY WE CARE

NONPOINT SOURCE POLLUTION:

- As the runoff moves, it picks up and carries away natural and human-made pollutants



- Pollutants are deposited into lakes, rivers, wetlands, the Chesapeake Bay, and underground sources of drinking water



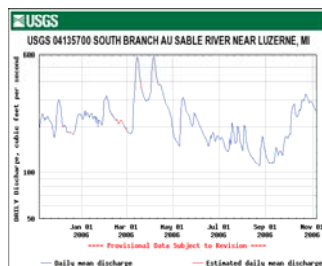
WATER BASICS: STORMWATER & STREAMS

URBAN



Flashy!

RURAL



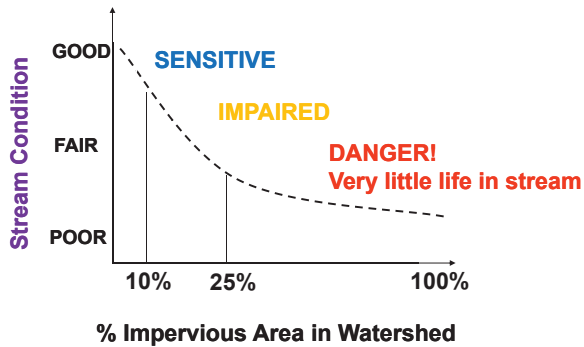
More normal



June 2006



WATER BASICS: STORMWATER & STREAMS



WATER BASICS: TAKE HOME POINTS

- WATER IS A FINITE RESOURCE – USE WISELY
- EVERY RAINDROP FALLS IN A WATERSHED
- AS WATER MOVES THROUGH THE WATERSHED, POLLUTION IS CARRIED ALONG WITH IT
- STREAM FLOODING IS NATURAL, BUT WE MAKE IT MORE FREQUENT AND INTENSE
- YOU CAN MAKE A DIFFERENCE!

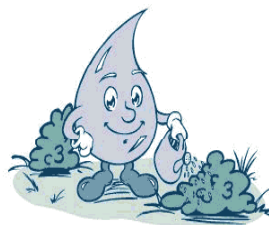


Rain Barrels



A rain barrel is a collection system that stores roof top runoff to be used later -- for activities such as lawn & garden watering, car washing, & window cleaning.

Use Rainwater to Water Plants



- Natural, no added chemicals, better for plants
- Reduces stormwater runoff
- Streams will be cleaner
- Saves groundwater for drinking & washing
- **Free! Saves Money!**



Rain Barrels



Rain Barrel Anatomy & Construction



Rain Barrel Installation



Rain Barrel Installation



Rain Barrel Myths

- It's UGLY
- It's a mosquito breeding ground
- It will catch all the water from my roof
- It can be used all year



Ugly? It Doesn't Have to Be!



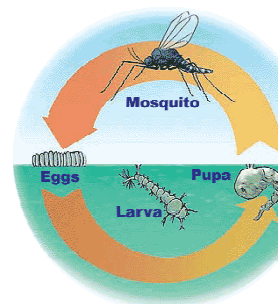
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The State 'Bird'

Mosquito Life Cycle



Mosquitos take about seven days to complete life history. The first three stages: eggs, larva and pupa are aquatic. Therefore the best way to prevent mosquito breeding is to remove the stagnant water.



Pesticides Used for Mosquito Control

MosquitoDunks, with *Bacillus thuringiensis israelensis*, can be placed in rain barrels to control mosquito larvae if screening is not used.



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How Much Runoff?

To estimate the runoff from a roof:

- Multiply the roof's length x width = square feet
- Multiply sq. ft. x 0.6 x rainfall in inches = gallons
(0.6 is a conversion factor)

For example, if your roof is 28' x 40' = 1120 sq. ft, and you have a 1/4 inch rainstorm:

Rain caught (in gallons) = 1120 sq. ft. x 0.6 x .25 inches = 168 gallons

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Rain Barrel Myths

- Don't forget to drain your rain barrel when the temperatures will drop below freezing

