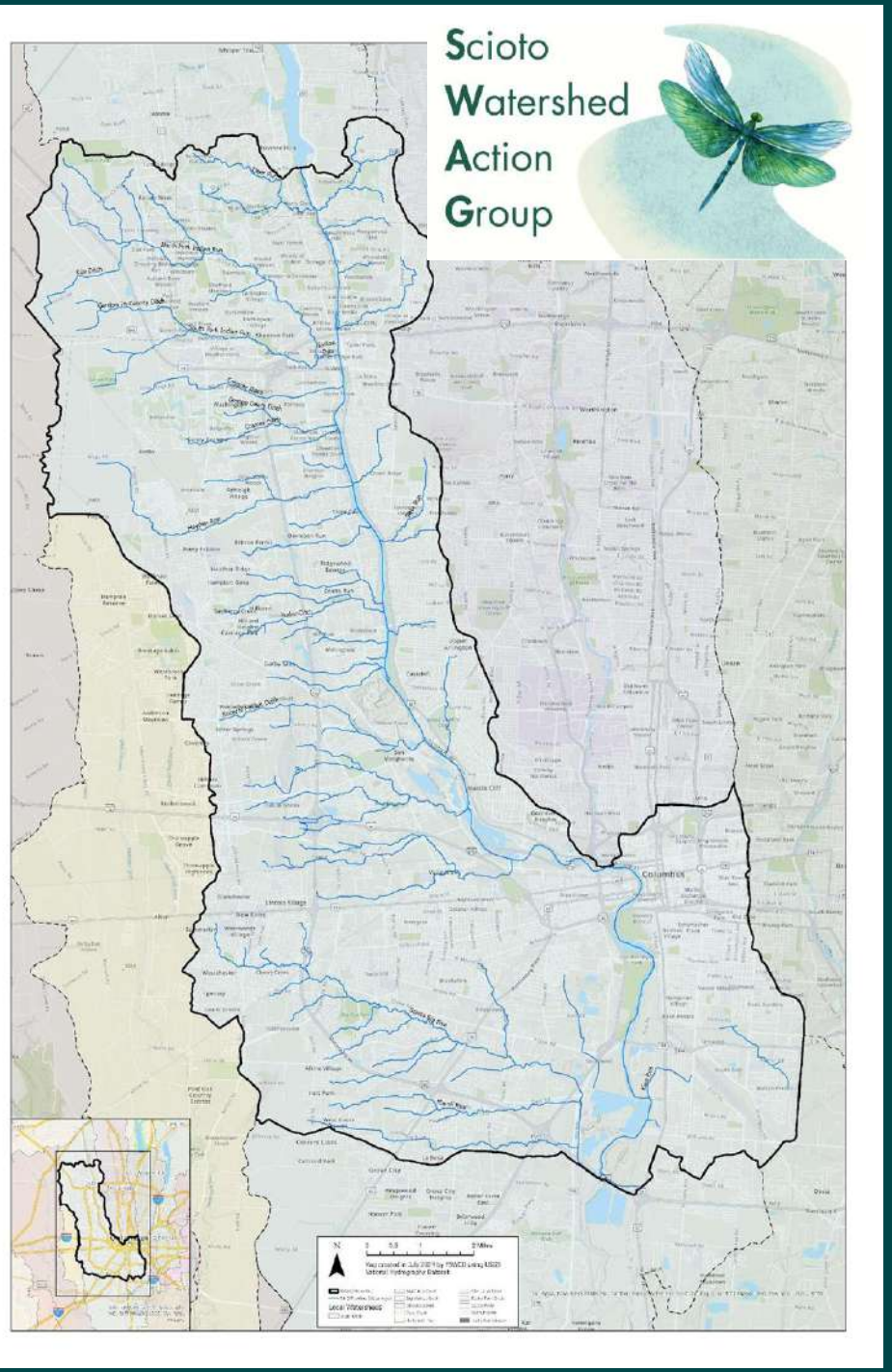
VOLUNTEER WATERSHED GROUPS

What Do They Do
&
Why Are They Important

Joe Carter
Petra Schmalbrock
Alaina Engdahl

First Community Church June 17, 2025





SCIOTO WATERSHED ACTION GROUP (SWAG)

- **Our organization's purpose is to protect, preserve and enhance the Scioto River and its watershed in Central Ohio**
- **Our work includes:**
  - Public Outreach & Education
  - Community Engagement
  - Hands-on Stewardship Projects
    - Plant native trees and deep-rooted plants
    - Remove invasive plants
    - Litter clean-up
  - Citizen Science Initiatives: SQM
  - Promotion of nature-based recreation

Who we are in 2025

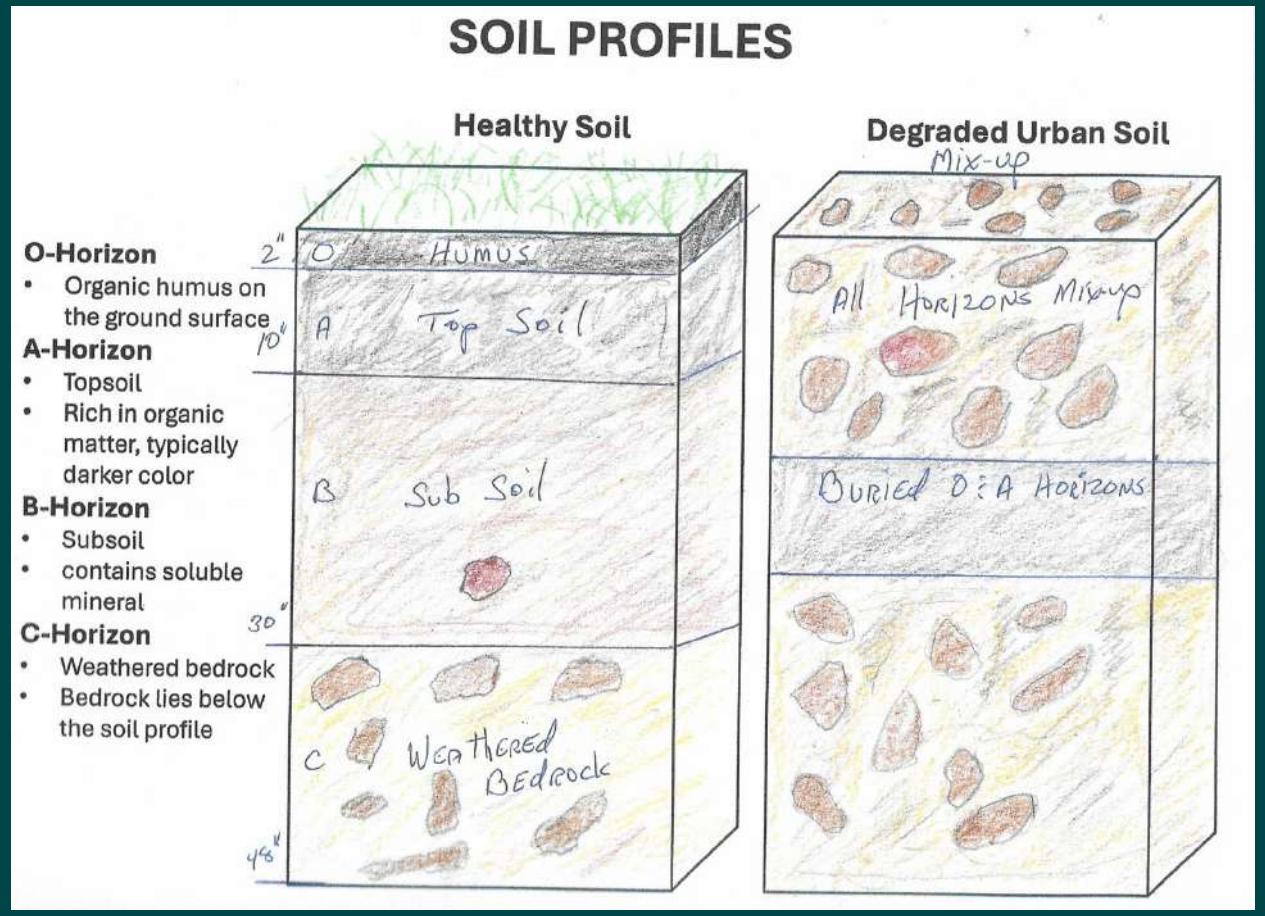
- **We have met monthly since February 2024**
- **We are funded for 2025 by Franklin Soil and Water Conservation District and the City of Columbus Department of Public Utilities 2024-2025 Watershed Partner Service Agreement Program**

  1)To Organize as a Non-Profit Organization
  - We have registered with Secretary of State, approved bylaws, elected Board of Directors and Officers, submitted IRS 1023-EZ for approval

  2) SWAG Outreach and Education
- **Find us on Facebook**
- **Working on Website**

PROBLEM: Compacted Urban Soil & Impervious Surfaces

- Impervious surfaces and lawns don't absorb and hold ***water*** thus creating runoff, leading to stream erosion
- Disturbed soil lacks soil organic matter (SOM), i.e., ***stored carbon***
- This ***impedes plant growth*** and reduced photosynthesis. Lack of plant biodiversity contributes to ***urban heat islands***



PROBLEM: Compacted Urban Soil & Impervious Surfaces

- Conversely, healthy natural soils store water and carbon (e.g., 1 g of carbon holds 8 g of water, that is 65% of precipitation)
- It took many decades of natural ecological succession to form healthy soil, but in the past 150 years, 50-80% of organic carbon in our topsoil has been lost
- Healthy functioning soil is habitat for microbes, fungi and insects that provide nutrient cycling, thus enhancing plant growth
- Diverse plant cover stores water in plants; conversely, lawn has little to no storage capacity but needs to be watered and fertilized
- Intact soil stores the sun's energy in plants and soil

GOALS FOR A HEALTHY WATERSHED:

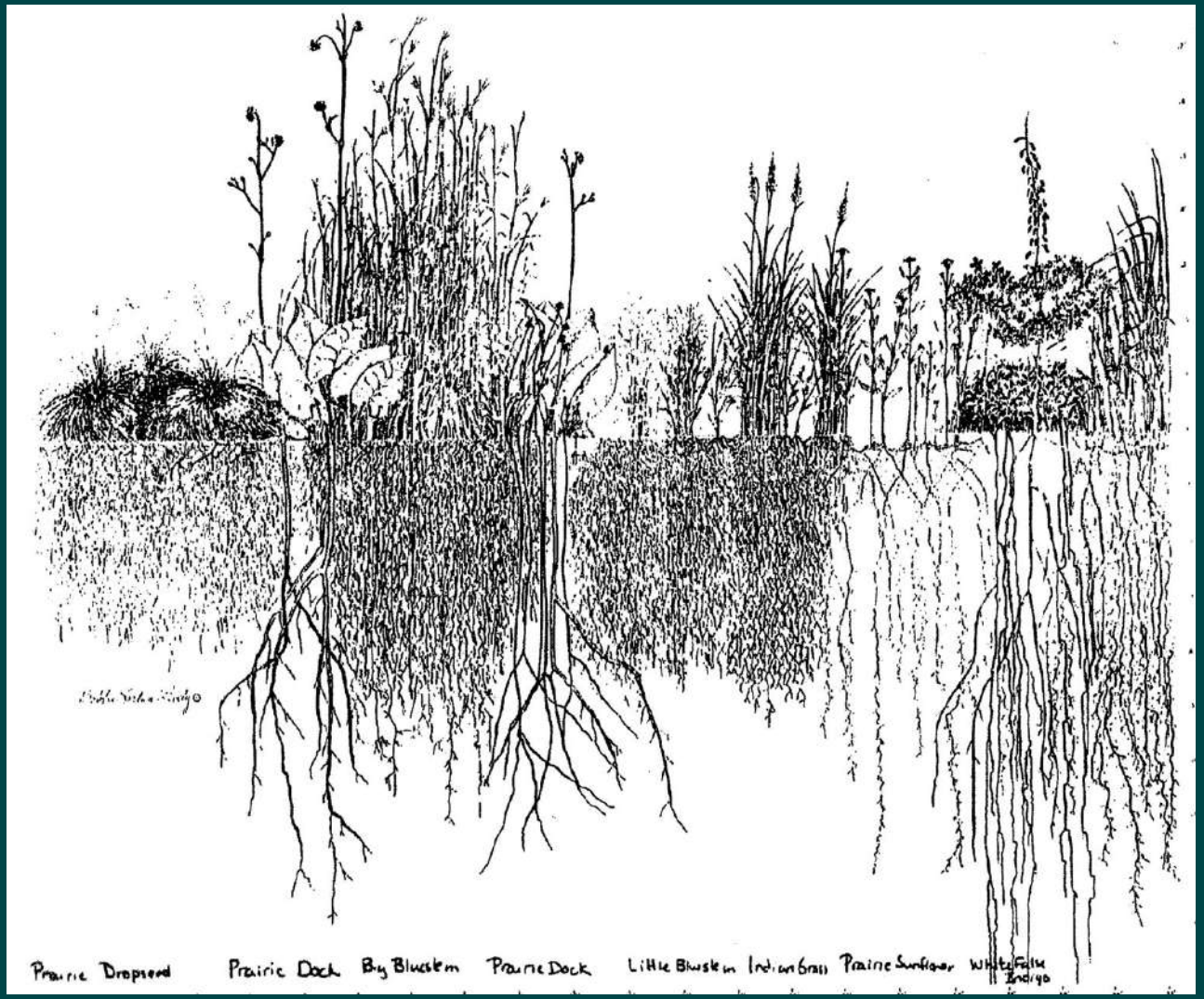
Healthy Functioning Soils

- Give Mother Nature a Nudge: help restore ***healthy functioning soils*** and in turn:
- ***Retain water*** on your landscape by storing it in soil and plants. An incredible amount of water is embodied in plants sometimes called "Green Water"
- ***Increase organic matter,*** this helps support soil function including water infiltration and habitat for soil biota
- ***Increase diverse plant cover***, this increases plant transpiration and moderates air temperature. Create your own cool island!
- Store the sun's energy in the soil

THE SOLUTIONS

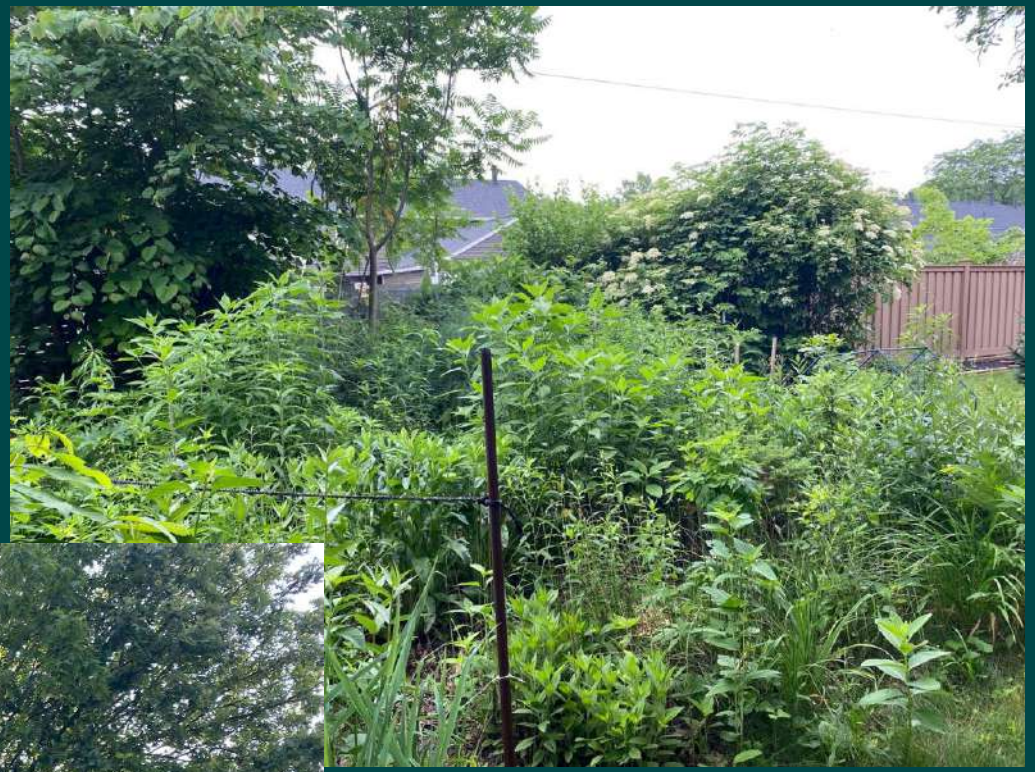
Decompaction and Aeration of urban soil (dirt) imposing levels of disturbance that add oxygen, and moisture can accelerate healthy topsoil formation and improve plant growth.

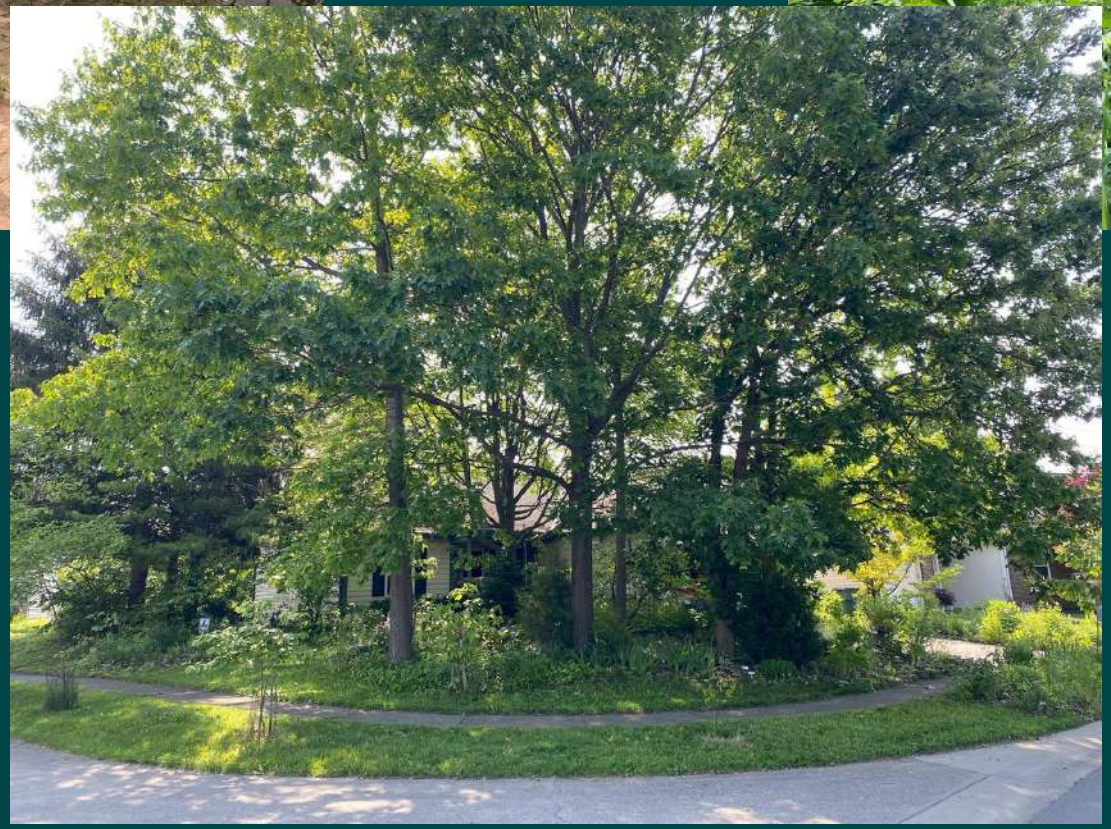




Add Deep Rooted Native Plants:
Reduce the size of your lawn

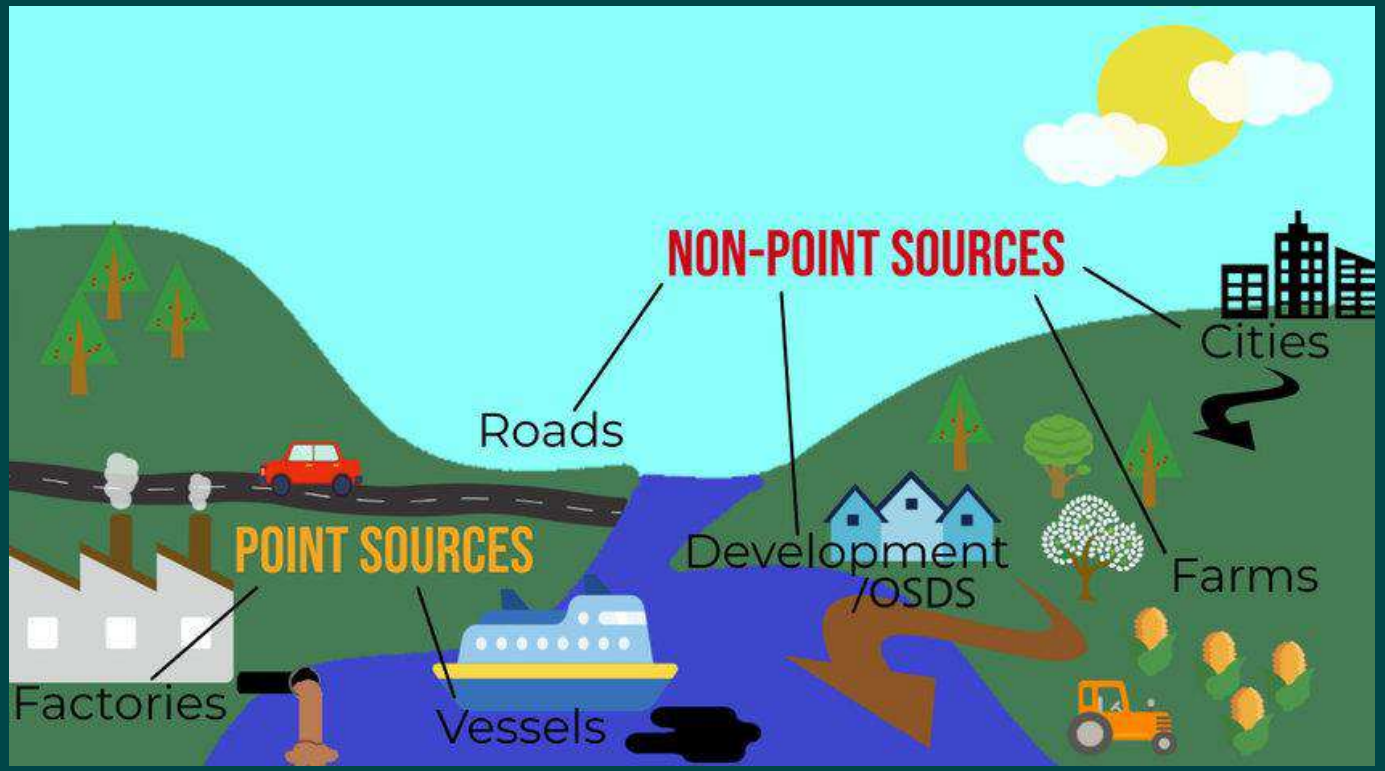






PROBLEM: Non-Point Pollution Sources

EPA has done a great job limiting pollution from point sources such as sewage management & industrial wastewater



Graphics: Izaak Walton SOS training Course

But water pollution from non-point sources cannot really be addressed by regulations, it requires a change of thinking and behavior by all

Non-Point Pollution Sources



- We shouldn't just blame farmers
- Urban turf grass lawns pollute too and there are no regulations
- Lawn care is a multi-billion-dollar business



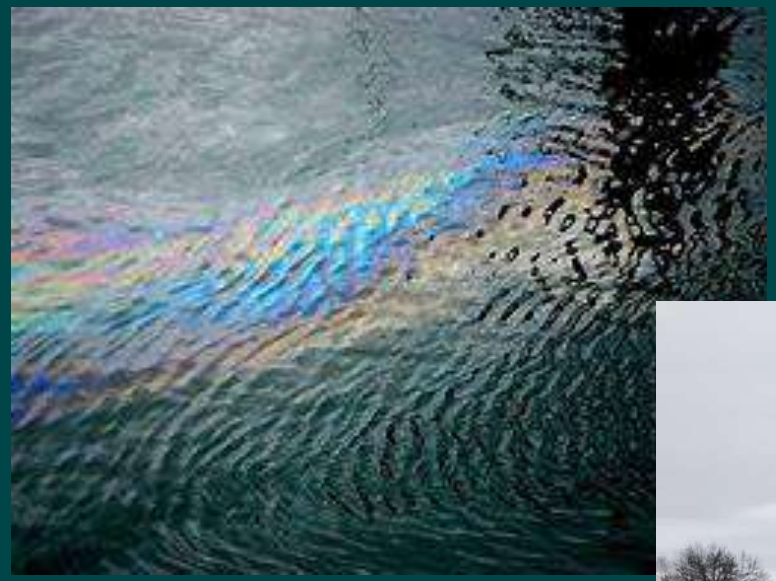
- Pesticides
- Herbicides
- Fertilizer (P, K, N)

Nitrates and Ammonia most likely to end up in streams

Izaak Walton: Nitrate Watch

Chemical Pollution

Non-Point Pollution Sources



Oil from parking lot
and road run-off
Chemical Pollution



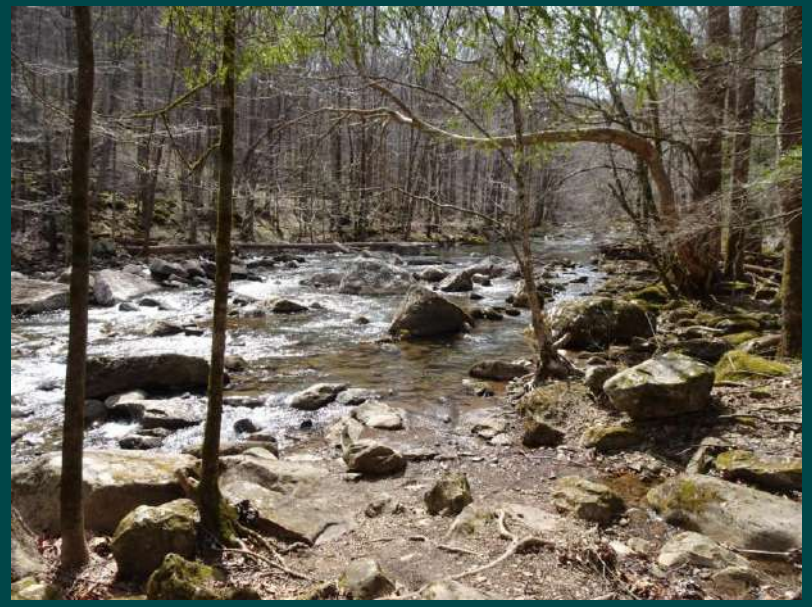


Road salt in winter
Chemical Pollution

Very large amounts of paved, built-up, and developed impervious surfaces

Non-Point Pollution Sources: Urban Streams

Natural Stream: Glade Run, WV



Degraded Urban Streams







Heavy run-off from impervious surfaces
causes severe erosion
Pollution from excessive sediments
Altered flow conditions

SWAG PARTNERS

- Franklin Soil and Water Conservation District
- City of Columbus Water & Power (formerly Department of Public Utilities)
- Columbus Recreation and Parks
- Dublin Parks and Recreation
- Green Columbus
- Friends of Upper Arlington
- HilltopUSA.org
- Metro Parks
- Sustainable Columbus/ Keep Columbus Beautiful

Current SWAG Projects: Outreach & Education

- 8 Tabling Events
- 200 participant contacts
- Monthly Newsletters since Nov 2024
- 4 Adult Education Classes with Dublin Parks & Rec
- 3 Educational Tours
  - Griggs
  - Sawmill Wetlands
  - Holton & Glenview Parks



Earth Day April 2025


Griggs Green Infra-Structure, Nov 2024

Current SWAG Projects:
Litter Removal and Pollinator Garden Maintenance

- Participated in 5 Litter Removal Events
- Maintain Pollinator Gardens at Carriage Place, McKnight, (Raymond), (Anheuser Bush South) & Homestead



KickButt Columbus, March 2025


Carriage Place Pollinator Plot May 2025

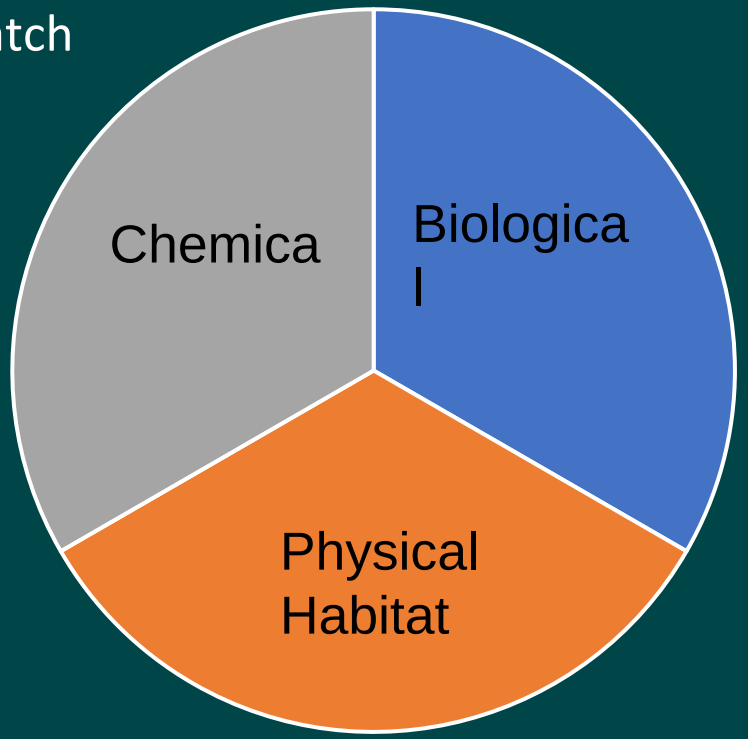
Current SWAG Projects: Tree Planting and Invasive Plant Removal

- Westmoor Park Tree Planting
- Honeysuckle Removal with CRPD at Redick, Big Run & Westmoor Parks



Current SWAG Projects:
Water Quality Monitoring

Test Strips
IWLA Saltwatch
IWLA Nitrate Watch
Sediment Stick



Requires a piece of paper and open eyes
Can be OEPA Level 1 data collector

Biological Monitoring requires a bit more training
Relatively cheap Equipment









Opportunities for Collaboration between SWAG and First Community Church

- Participate at SWAG Activities
- SWAG can advise and collaborate with restoration efforts at First Community Properties
- Spread the word about us!







END