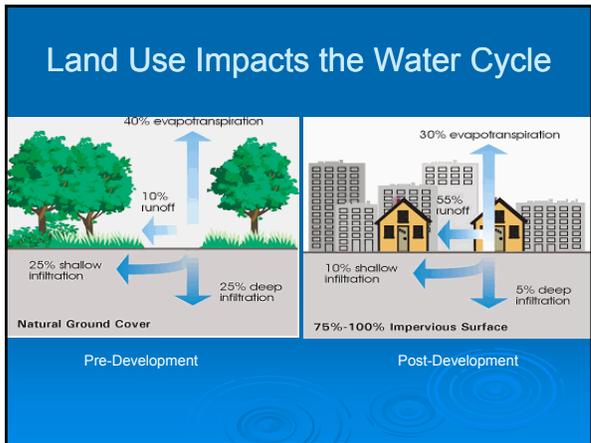


# Ohio EPA Storm Water Regulations

## Overview of Programs that Affect Land Development



- ### How Ohio EPA Regulates Storm Water Runoff
- National Pollutant Discharge Elimination System (NPDES) Permits
    - Federal Clean Water Act - 1972
      - Ohio EPA has permit authority in State of Ohio
      - Ohio Revised Code 6111
    - Applied to storm water discharges
      - Phase I - 1992
        - Municipalities ≥ 100,000
        - Construction Sites which disturb ≥ 5 acres
        - Various Industrial Activities

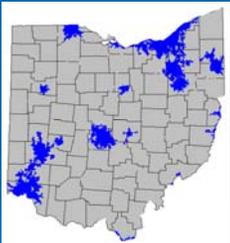
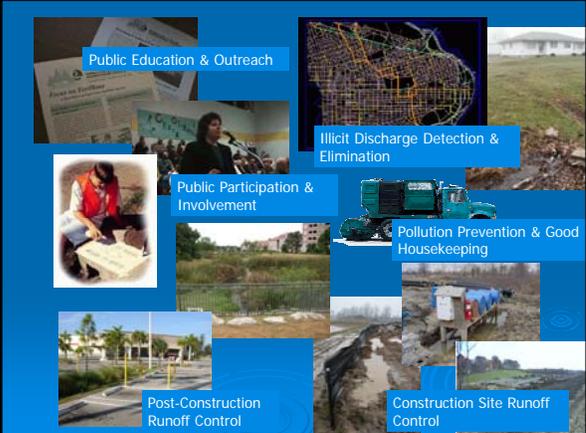
## How Ohio EPA Regulates Storm Water Runoff

- Phase II – 2003
  - Municipalities
    - Any "community" in Urban Area
    - Includes "non-traditional" communities, e.g., ODOT
  - Construction Activities
    - Disturbances ≥ 1 acre
    - Exceptions: Agriculture, Silviculture, Maintenance Activities where < 5 acres disturbed, Erosivity Factor "R" < 5
  - Industrial
    - Established "No Exposure" Exemption

## Municipal Storm Water Program

## Municipal Storm Water Permits

- Applies to Municipal Separate Storm Sewer System (MS4)
- Community implements Storm Water Management Program (SWMP)
  - Submitted in 2003
  - Fully-implemented by 2008
  - Best Management Practices (BMPs) to address the Six Minimum Control Measures (MCMs)
  - Submit Annual Report to Ohio EPA

The collage includes several images with labels:
 

- Public Education & Outreach
- Public Participation & Involvement
- Post-Construction Runoff Control
- Construction Site Runoff Control
- Pollution Prevention & Good Housekeeping
- Illicit Discharge Detection & Elimination

## Storm Water Permits for Construction Activities

## Construction Permit Program

- Applies to Construction Site "Operators"
  - Developers
  - Home Builders
  - General Contractors
- Larger Common Plan of Development or Sale disturbs ≥ 1 acre
- BMPs in a Storm Water Pollution Prevention Plan (SWP3)
  - Sediment & Erosion Control during Construction
  - Controls for Other Pollutants during Construction
  - Post-Construction Runoff Controls

## Sediment & Erosion Control



## Other Sources of Pollutants on Construction Sites



## Post-Construction BMPs

- Applies to all sites regulated by construction site permit
  - "Larger Common Plan" disturbs  $\geq 1$  acre
  - Except linear projects that create no impervious area
- Two types
  - Structural BMPs
    - Devices that remove pollutants and control the discharge rate of the Water Quality Volume (WQv)
  - Non-Structural BMPs
    - Ordinances, zoning codes and other measures that limit the creation of runoff, protect water resources or change behavior

## Non-Structural Post-Construction BMPs



## Non-Structural BMPs

- Ohio EPA encourages a minimum stream setback of 25 feet
  - More stringent requirements apply to sites in Darby Creek watershed
- Communities in Urban Areas will establish additional requirements
  - Through implementation of their SWMP under the MS4 program
  - Must adopt best local land use practices

## Structural Post-Construction BMPs

- Grass Filter Strips
- Enhanced (Water Quality) Swales
- Bioretention Cells
- Water Quality Ponds
  - Dry Extended Detention Basin
  - Wet Extended Detention Basin
  - Constructed Wetland
- Sand Filters
- Infiltration Trenches



## Structural BMPs

- Must be used on sites where "larger common plan" disturbs  $\geq 5$  ac
  - But, appropriate on all sites
- Incorporate into the permanent drainage system
- Must treat Water Quality Volume (WQv)
  - Based on 0.75-inch rainfall
  - Outlet designed per target "drawdown time"
- Reduced requirements for redevelopment projects
  - Encourage non-structural approach, i.e., reduce impervious area
  - If not, treat 20% of WQv

## Traditional vs Water Quality BMPs

- Traditional Structures
  - Detain runoff only from large, infrequent storm events
  - Do not provide significant pollutant removal
  - Do not protect the integrity of the receiving channel
- Water Quality Structures
  - Detain 85% of all storm events which occur
  - Remove pollutants from the "first flush", i.e., WQv
  - Release the WQv over a 24 - 48 hour period



## Extended Detention Outlet



OUTSIDE VIEW



INSIDE VIEW

## Summary

- Municipal NPDES Permits require
  - Communities in Urban Areas to pass ordinances and establish a local program to require best local land use practices
- Construction Activity NPDES Permits require
  - Developer to incorporate them into site design
- Goals
  - Develop compatible state and local programs
    - Local may be more stringent than Ohio EPA requirements
  - Review by local community
    - SWP3
    - Site Inspections
    - Enforcement

## Summary

- Post-construction BMPs affect site design
    - Plan up-front to avoid conflicts later
    - Provide easements to access BMPs so that maintenance can be performed
      - Must name entity that will be responsible for maintenance
    - Non-structural BMPs often require deed restrictions or conservation easements to assure their long-term viability
  - Everyone is on a learning curve
    - You may get conflicting information
    - Do not be afraid to contact the Ohio EPA and ask questions
- Ohio EPA Post-Construction Q&A Document

## For More Information

### Websites

USEPA [http://cfpub.epa.gov/nodes/home.cfm?program\\_id=6](http://cfpub.epa.gov/nodes/home.cfm?program_id=6)

Ohio EPA [www.epa.state.oh.us/dsw/storm/index.html](http://www.epa.state.oh.us/dsw/storm/index.html)

### Ohio EPA Contacts

#### *NE District Office*

Dan Bogoevski (330) 963-1145

[dan.bogoevski@epa.state.oh.us](mailto:dan.bogoevski@epa.state.oh.us)

Chris Moody (330) 963-1118

(Ashtabula, Geauga, Medina & Trumbull)

[chris.moody@epa.state.oh.us](mailto:chris.moody@epa.state.oh.us)

Kelvin Rogers (330) 963-1117

(Portage & Summit)

[kelvin.rogers@epa.state.oh.us](mailto:kelvin.rogers@epa.state.oh.us)

#### *Central Office*

Jason Fyfe

(614) 728-1793

[jason.fyfe@epa.state.oh.us](mailto:jason.fyfe@epa.state.oh.us)

Anthony Robinson

(614) 728-3392

[anthony.robinson@epa.state.oh.us](mailto:anthony.robinson@epa.state.oh.us)