



MS4 Services and the Balanced Growth Initiative


Land Use and Best Practices Matter

cuyahoga
SOIL & WATER
conservation district

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Director

OHIO'S BALANCED GROWTH INITIATIVE

A voluntary, incentive-based strategy to protect and restore Lake Erie, the Ohio River, and Ohio's watersheds to assure long-term economic competitiveness, ecological health, and quality of life. The goal of the program is to link land-use planning to the health of watersheds and major water bodies.

The background of the slide features several concentric, light blue circular ripples that resemble water droplets or waves, positioned in the lower right and bottom center areas.

Mission

To advocate and implement best management practices for conservation of land and aquatic resources through education, stewardship and technical assistance.



The stormwater management/ erosion and sediment control connection to Balanced Growth?

Stormwater management and erosion and sediment control are primary tools for reducing impacts to water quality as a result of development of the watershed.

- Every BMP implemented will result in better quality of our water resources by slowing, storing, filtering and infiltrating stormwater runoff
- Erosion and sediment control measures reduce soil loss and sedimentation, which are significant pollutants in our streams, lakes and rivers.
- In keeping with the economic goals of Balanced Growth, stormwater management and erosion and sediment control also provide economic benefit – **by reducing water quantity and quality impacts, our properties are better protected from flooding and sedimentation; our communities save tax money through reduced infrastructure needs; and our quality of life is ensured for prosperity in the future.**

Cuyahoga SWCD Programs

Conservation Education

- general public programs and events
- schools programs and events



Natural Resources Protection

- conservation easements
- stormwater control measures
- urban agriculture



Stormwater Pollution Prevention

Watershed Management

- Euclid Creek and Rocky River

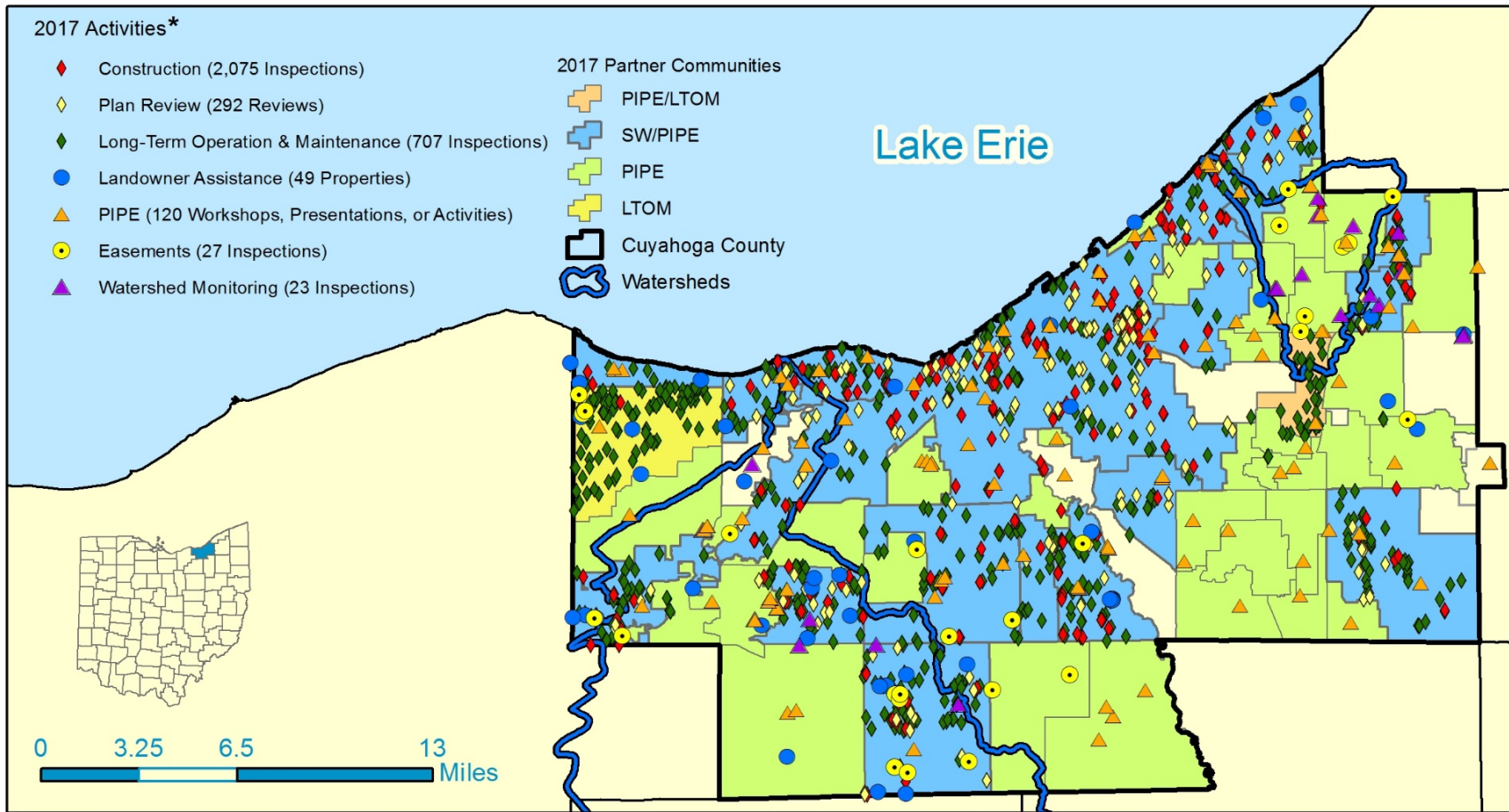


Storm Water Program Requirements

Minimum Control Measures

- Public Involvement
- Public Education
- Illicit Discharge Detection and Elimination
- Erosion and Sediment Control
- Post Construction Runoff Control
- Pollution Prevention/Good Housekeeping

Cuyahoga SWCD Partner Communities and Watershed Programs



* Monthly Construction Inspections, Multiple Construction Plan Reviews Per Site, Annual Long-Term Operation & Maintenance Inspections, Annual Easement Monitoring
 Partner Community Programs: SW = Sediment and Erosion Control Plan Review, Construction Site Inspections, and Long-Term Operation & Maintenance Inspections,
 LTOM = Long-Term Operation and Maintenance, PIPE = Public Involvement and Public Education Programs, County Programs: Landowner Assistance and Easement Monitoring

Staying ahead of changes and trends

- New MS4 permit requirements
 - Cities required to address Total Maximum Daily Loads (TMDL) of constituent pollutants for receiving water bodies
- Updated Storm Water Management Plans (2016)
- Emphasis on enforcement
- Emphasis on post-construction O&M

PIPE

- NPDES Phase II MCMs 1&2
- Public Education
 - Workshops
 - Brochures
 - Posters
 - Blog
 - Facebook
 - Targeted Annual Mailing
- Public Involvement
 - Events



Reaching 10% of the population
Per year in each community.

Proactive Public Education Program Success

A SPECIAL PRESENTATION

NEW YEAR NEW YARD

Alternatives to the "perfect" green lawn

TUESDAY, MARCH 31, 2015 • 6:30–8 P.M.

Beachwood Community Cntr, 25325 Fairmount Blvd.

Author Anita Sanchez will talk about her book *Teeth of the Lion: The Story of the Beloved and Despised Dandelion*

- What's the proper perspective on the "home landscape?"
- Redefine your lawn and landscaping attitudes
- Learn how to keep our water clean by reducing chemicals

Free and open to the public. Copies of the book will be sold for \$5. Soil testing kits and other giveaways! Registration required by calling Mary at (330) 722-9322 or maungst@medinaco.org by MARCH 20.

Sponsored by the Northeast Ohio Public Involvement and Public Education (NEOPIPE) work group
Funded in part by the Ohio Department of Natural Resources Division of Soil and Water Resources



- Cuyahoga SWCD named a NEORSD Preferred Service Provider
- Cuyahoga SWCD recognized as the Ohio Conservation District of the Year

MCM2

Public Involvement Program



Stormwater Program: Construction & Post-Construction Stormwater Runoff

- NPDES Phase II MCMs 4&5
- Construction Site Stormwater Runoff
 - Planning & Preliminary Meetings
 - SWP3 Reviews
 - Monthly Inspections
 - Reports & Follow-up Dialog
 - Enforcement Escalation
- Post-Construction Stormwater Runoff
 - Annual Facility Inspections
 - Mapping of Facilities
 - Reports & Follow-up



MCM4

Construction Site Stormwater Runoff Program



CSWCD Construction Site Stormwater Runoff Program

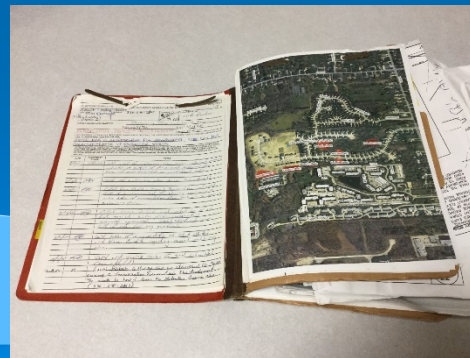
- 2003: Cuyahoga SWCD implements technical assistance to Phase II communities
 - Active construction program expanded and evolved over 14 years
 - Working with 17 MS4 permit holders
 - ~200 active construction sites
 - ~100 new sites per year
 - ~150 plan reviews
- (goal to address all comments on initial review)



Construction Site Stormwater Runoff

Key Program Elements

- Regulations
- Stormwater Pollution Prevention Plan Review (SWP3)
- Monthly Inspections & Reports
- Follow-up & Transition Points
- Enforcement Escalation



Storm Water Program: Tools for Compliance

- Municipal Staff
 - Train the trainer
 - Walk-along inspections
 - Good housekeeping
- Design Engineers
 - Toolbox Talks
 - Technical E-Blasts
 - Temporary BMP lists
- Contractors
 - Poster/On-site materials
 - Temporary BMP lists

Personal Attention



Active Construction Program: The Bad



**Delineated
Wetland
Boundary**

Active Construction Program: The Bad

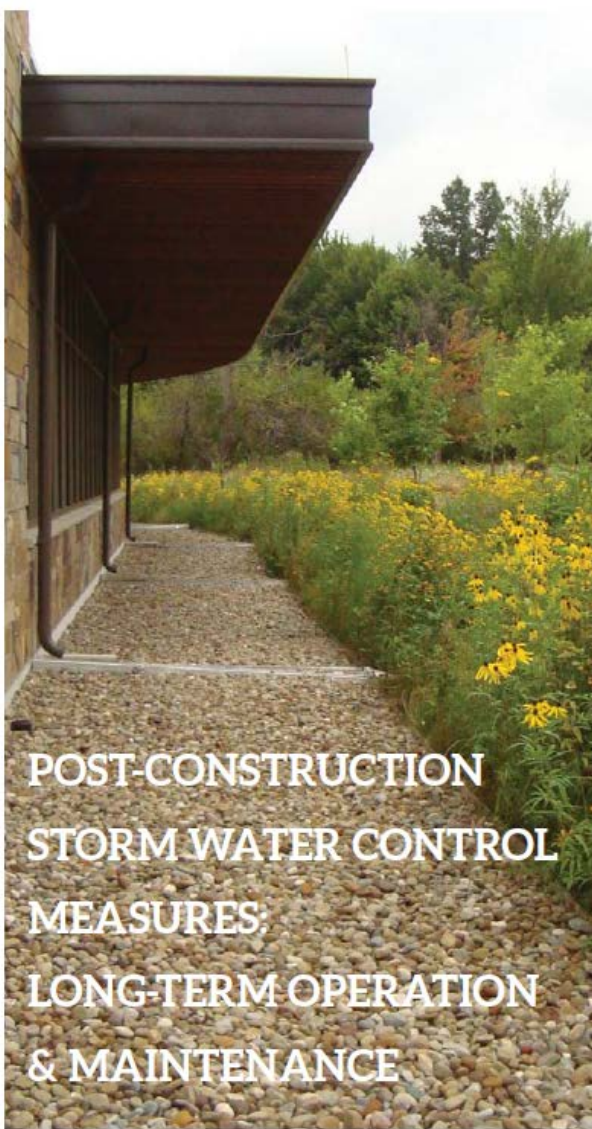


**Riparian
Setback
Boundary**

Post-Construction Stormwater Runoff Control Program

MCM5





- Partnership Driven
- Countywide Program
- Alleviates Program Implementation Efforts
- Trained and Certified Staff
- Gov't to Gov't = Affordable

Post Construction BMPs (green infrastructure)

In addition to lowering the burden on traditional water infrastructure, incorporating BMPs into new developments can reduce development costs (due to smaller costs for piping and detention facilities, grading, paving, etc.) and increase property values (due to proximity to open space and similar



(2007)

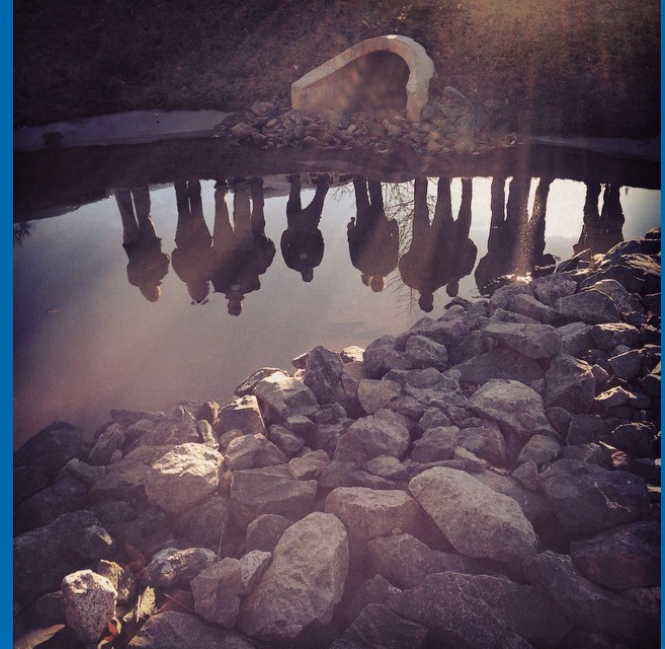
Post Construction and Balanced Growth

- Non-structural BMPs, such as natural vegetation (riparian corridors) and landforms (floodplains), slow, store, infiltrate and filter stormwater runoff and floodwaters, reducing flooding and erosion, reducing sedimentation, and improving water quality.
- **The preservation and restoration of natural features as land is developed provides for a lower-cost, lower-maintenance alternative to higher-cost, increased-maintenance, man-made structural BMPs.**
- A combination of structural and non-structural BMPs through good site design and construction site management along with local, county and/or regional land use planning (e.g. floodplain management) will be most effective at reducing on-site and off-site flooding, erosion and sedimentation, and water pollution impacts.



Post-Construction SCM LTOM Program

- Ohio NPDES Phase II Requirement
 - “ensure *adequate* long-term operation & maintenance of structural BMPs”
- Often
 - Past reports either not delivered or not enforced
 - Same report year after year – no results
 - Communities content to inspect once per permit cycle or use self inspections
 - Hesitant to enforce
 - Lack of staff to enforce
 - Maintenance was neglected
 - Costly repairs now needed
- Enhanced Goals
 - Transition meetings
 - Past reports either not delivered or not enforced
 - Same report year after year – no results
 - Annual inspections and follow up-site visits, information and education
 - Training for landowners, muni staff and professionals
 - Maintenance is getting done; Sites are coming back to baseline



CSWCD Post-Construction SCM LTOM Program

- Currently 19 MS4 Permit Holders
 - **Over 750 Sites**
 - **Over 1,300 Stormwater Control Measures**
- Facilities
 - Detention/Retention Basins
 - Bioretention
 - Underground Detention Systems & Sand Filters
 - Green Roofs
 - Permeable & porous pavements
 - Reduced Imperviousness



Post-Construction Success: Inspection, Training, Assistance



After



Before



