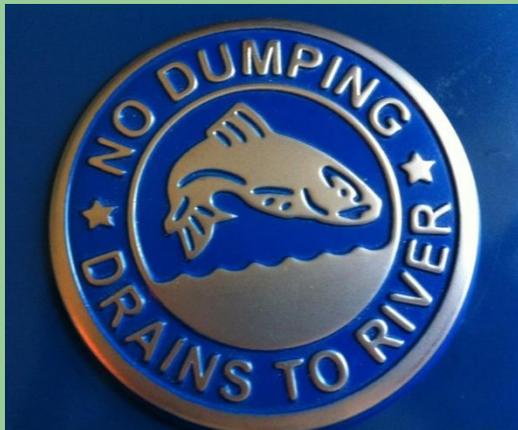


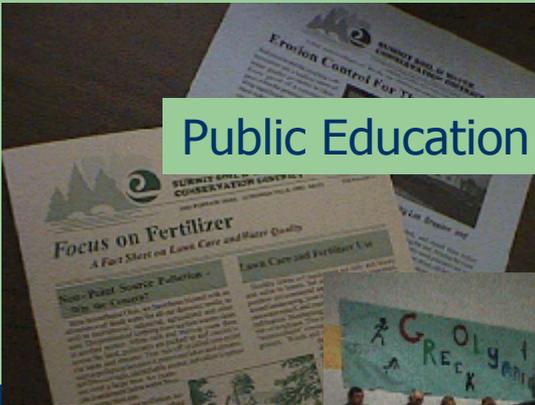
# Ohio EPA Expectations

For Illicit Discharge Programs under the Small MS4 Program



October 2011

## Public Education & Outreach



## Illicit Discharge Detection & Elimination



## Public Participation & Involvement



## Pollution Prevention & Good Housekeeping



## Post-Construction Runoff Control



## Construction Site Runoff Control



# What is an Illicit Discharge?



# What is an illicit discharge?

These are ALL illicit discharges!



# Illicit Discharge Program Goals

- Develop a proactive, on-going program
  - Detect
  - Eliminate
- Detect by
  - Taking an inventory of the MS4 system
  - Dry weather screening of outfalls
  - Training on identifying illicit discharges
  - Encouraging complaints

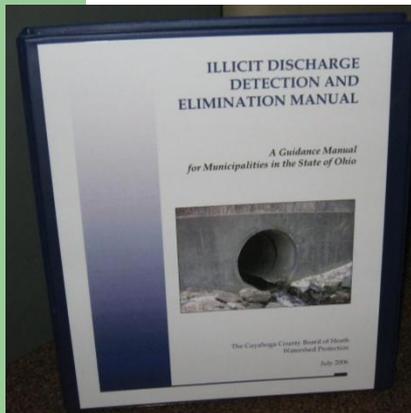


# Illicit Discharge Program Goals



- Eliminate by
  - Passing ordinance to prohibit illicit discharges
  - Enforcing the ordinance
  - Disconnecting sources
  - Developing a maintenance and repair program

# Elements of an IDDE Program



## Prohibit Illicit Discharges to the MS4

- Ordinance or Resolution
  - Was due in 2008 for most MS4s
  - If Appendix 7 Community or your waiver was denied, due 5 years from date of initial permit coverage
  - Models available from Chagrin River Watershed Partners at [www.crwp.org](http://www.crwp.org) or [www.stormwatercenter.net](http://www.stormwatercenter.net)

### ORDINANCE NO. 2007-139

AN ORDINANCE ESTABLISHING CHAPTER 1353 OF THE CODIFIED ORDINANCES OF THE CITY OF WILLOUGHBY, OHIO, ENTITLED, "ILLICIT DISCHARGE & ILLEGAL CONNECTION CONTROL".

**WHEREAS**, illicit discharges to the City of Willoughby's separate storm sewer system create water quality risks to public health, safety, and general welfare; and,

**WHEREAS**, illicit discharges may necessitate repair of storm sewers and ditches; damage to public and private property; and may damage water resources by reducing water quality; and

# Allowable Non-Storm Water Discharges



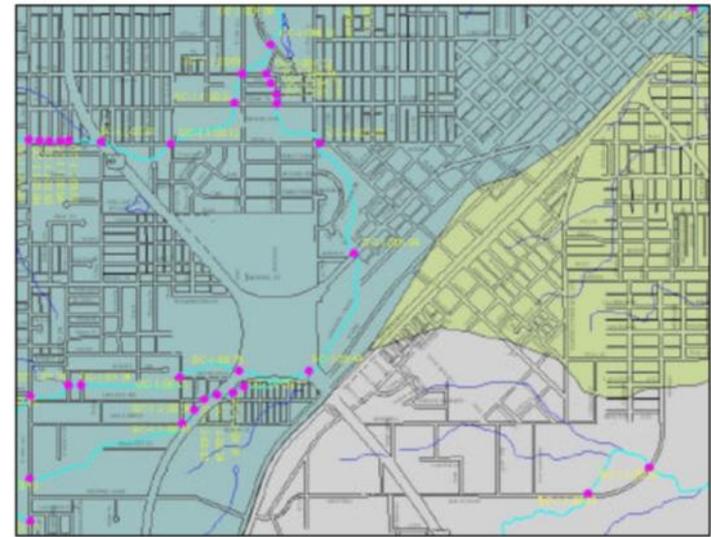
- Water line flushing
- Landscape irrigation
- Diverted streams
- Foundation drains and crawl space sump pumps
- Air conditioning condensate

Does your ordinance authorize these discharges?

- Discharges from potable water sources
- Flows from riparian areas and wetlands
- Dechlorinated swimming pool water
- Car washing
- Street wash water
- Fire fighting activities
- Discharges authorized by an NPDES permit

## Map the MS4

- Map of Outfalls to MS4
  - Was due in 2008
  - 100% of outfalls identified
- Map of entire MS4
  - Due within 5 years of Permit Renewal Date (June 2014 for most)
- For Appendix 7 or Waiver Denied MS4s
  - Both due within 5 years of Permit Issuance Date



• Outfall

# What is an Outfall?



YES

# Expanding the MS4 Map

- Pipes, ditches, catch basins
- Flood Control Structures
  - Detention/Retention Facilities
  - Publicly-owned only
- Post-Construction BMPs installed to meet Ohio EPA post-construction requirements
  - Required by CGP since April 21, 2003
  - Both public and privately-owned

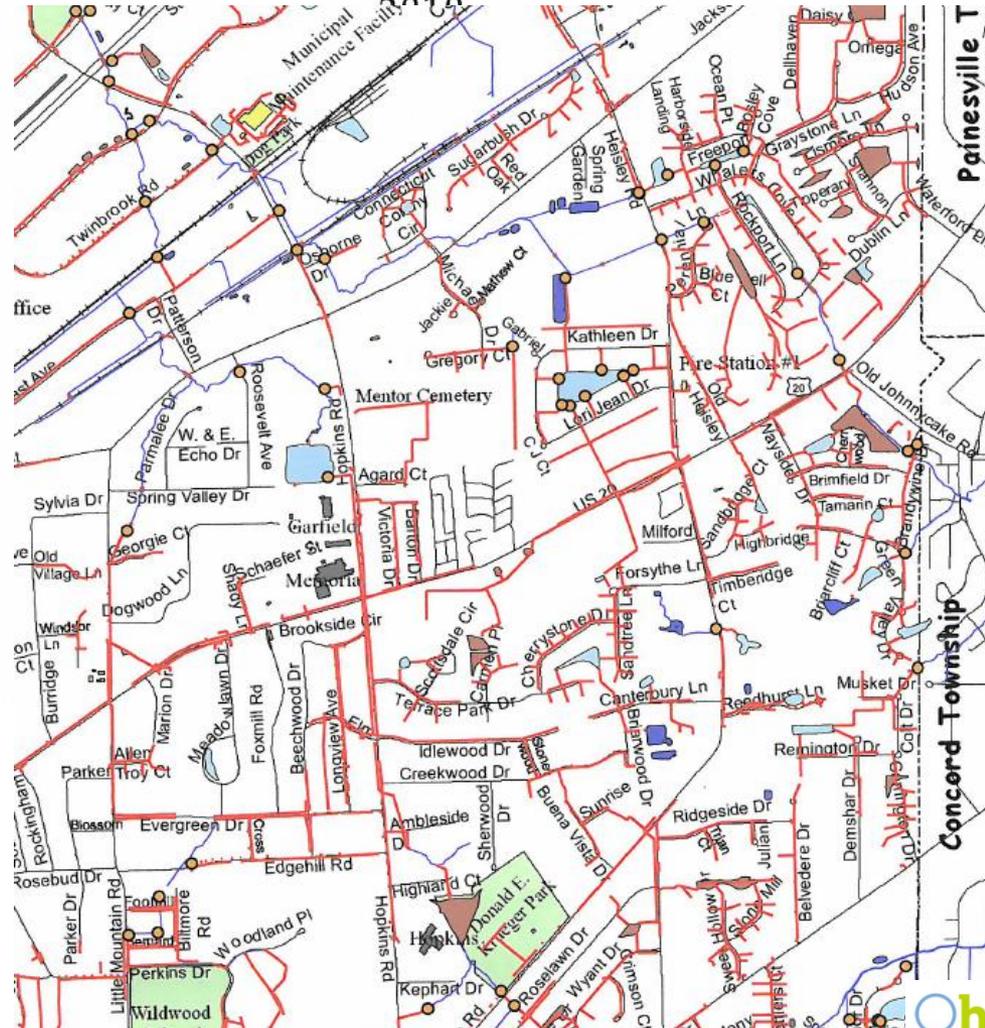
# THE CITY OF MENTOR

## MS4 MAP

### LAKE COUNTY, OHIO

#### LEGEND

-  NPDES
  -  Culverts
  -  Storm\_Main
  -  Stream
  -  Municipal Buildings
  -  School Buildings
- 
- #### Basins
-  Detention Basin
  -  Pond
  -  Retention Basin



# Common Mapping Issues at Audit

- Map does not show outfalls from MS4s that are open ditch systems
- Map does not identify outfalls to interconnected MS4s
- Community lacks a system to update map when changes occur
- Map of outfalls was not completed by deadline

# Dry Weather Screening

- All outfalls to be screened at least once by end of the current permit term
  - Observe when there has been no rain in the past 72 hrs
  - If flow, odor or visual indicator of contamination exists, you have a potential illicit discharge
- Develop protocol to trace source of illicit discharge
  - Cuyahoga Co Board of Health manual
  - US EPA guidance at <http://cfpub.epa.gov/npdes/stormwater/idde.cfm>

# Dry Weather Screening



- Source Tracking
  - Prioritize outfalls based on if it's a hotspot, age of system, and results of dry weather screening
    - Priorities and goals are to be revised annually
  - Start at outfall and work your way back up the MS4 network
    - Visual observation
    - Smoke or dye testing
    - Camera the pipes
  - IDDE Ordinance provides authority to enter properties to conduct illicit discharge investigations
  - Sampling may be required to determine source and provide documentation for enforcement cases

# Common Sources of Illicit Discharge

- Cross-connections from sanitary sewers and floor drains, e.g., laundry wastewater
- Discharging or failing HSTS
- Automobile maintenance operations
- Spills from accidents
- Unauthorized industrial discharges
- Inflow and infiltration from sanitary sewers
- Open dumping

Your IDDE program is expected to address all of these issues

## Home Sewage Treatment Systems

- Must provide Ohio EPA a list of addresses
  - All systems that discharge to MS4
- Systems must be mapped
- Completed within 5 years of initial permit coverage
- Repair, replace or connect to sewer, as feasible
  - Work with BOH to determine suitable options



# Home Sewage Treatment Systems

- For failing on-lot systems, must have a written plan to address the problem
  - Work with BOH to determine feasible options
    - Connection to sanitary sewers is preferred
  - Provide a schedule to complete the plan

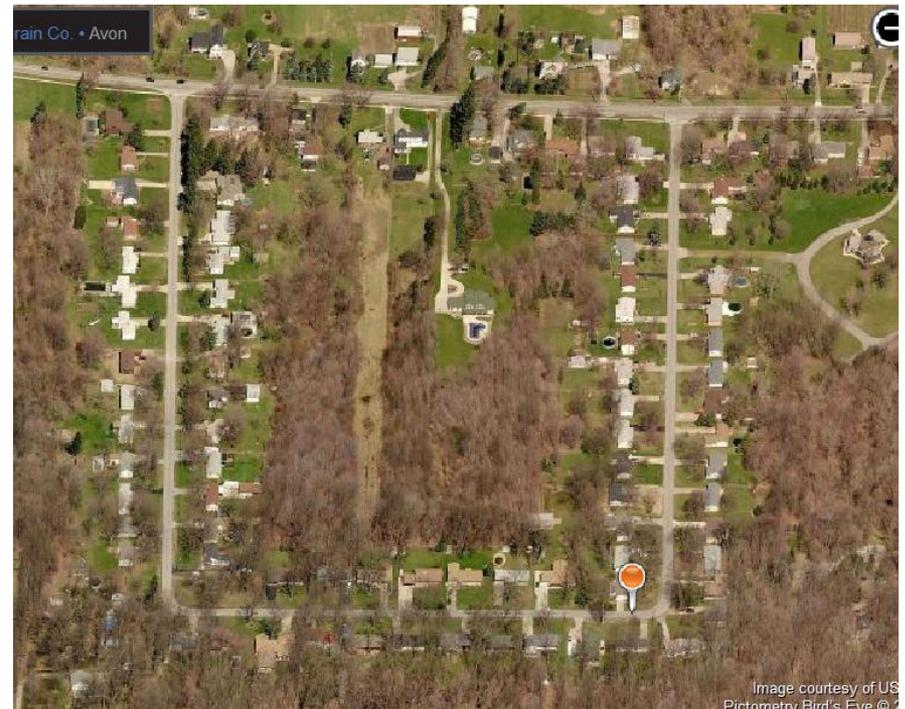


Image courtesy of US  
Proximity Birds, Eva ©

# NPDES Permitting for HSTSs

- HB 231 amended ORC 3718 to
  - Specify that new or upgraded discharges from HSTS must comply with an NPDES permit
  - Prohibit discharging systems for new lots
- Ohio EPA General NPDES permits for HSTS
  - For new discharges on lots or subdivisions created before effective date where an on-lot system is not feasible
  - For existing systems when they must be replaced and on-lot system is not feasible
    - Does not legitimize illicit discharges from existing systems
  - Permit for BOH, effective date is Jan 1, 2007
  - Permit for communities where BOH has not signed an MOU with Ohio EPA, effective date is July 1, 2008

# Separate Sanitary Overflows

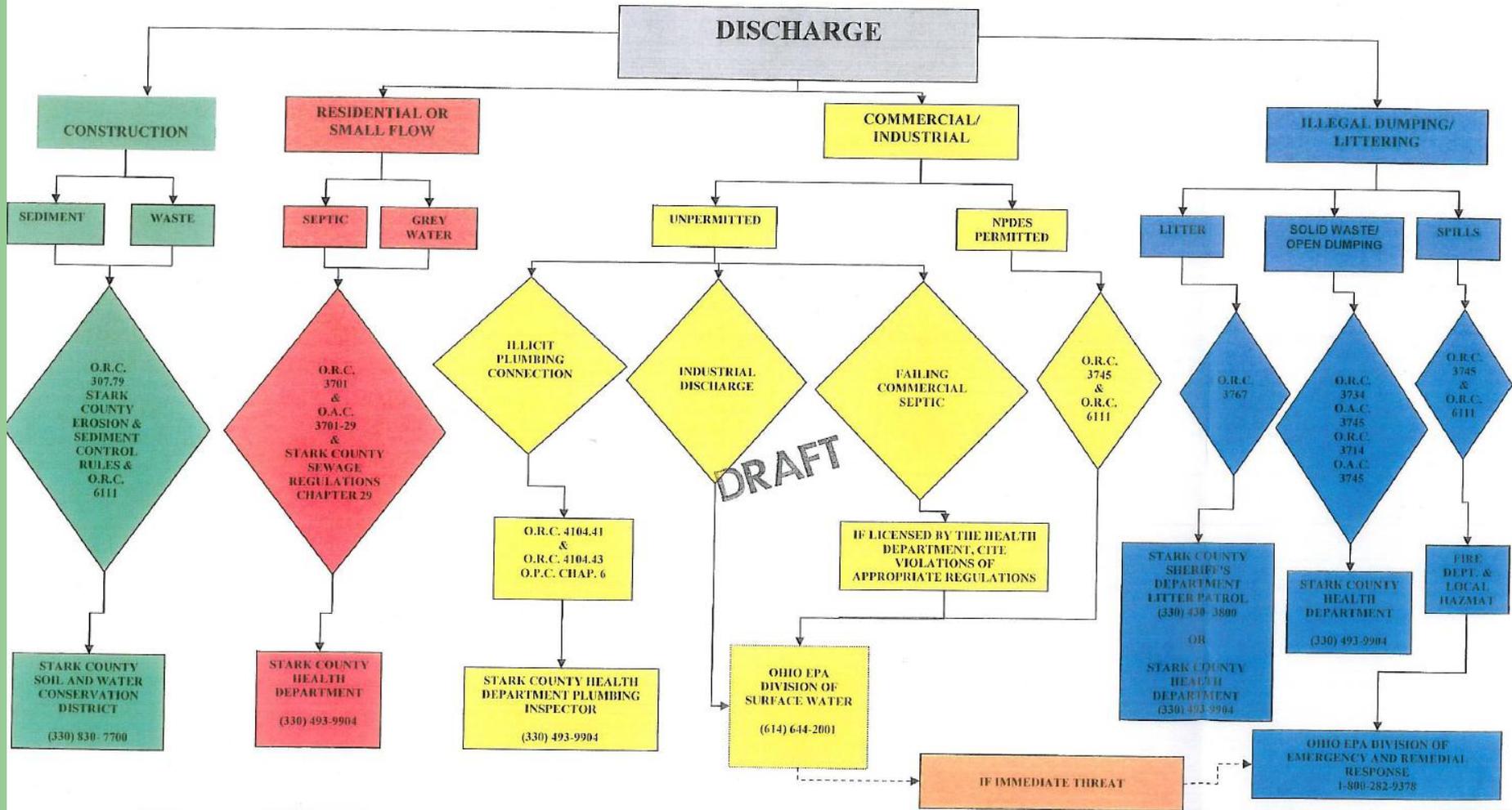
- Don't overlook SSOs
  - 15-35% of all sanitary sewers are over capacity
  - 140 overflows per 1,000 miles of sanitary sewer
- Issues
  - Deteriorating sanitary pipes and manholes
  - System design, e.g., “Over Under” sewers
  - Clogging or root intrusion
  - Equipment failure and power outages



# Enforcement for Illicit Discharge

- Ordinance or resolution must include provisions for enforcement
  - Ability to access property to conduct an investigation
  - Name department/agency responsible for conducting investigations and initiating enforcement
  - Enforcement action for non-compliance
    - Examples: citation, fine, order to cap or connect





**STARK COUNTY SWMP ILLICIT DISCHARGE DETECTION AND ELIMINATION PROTOCOL  
DRAFTED 11/14/07**

# A Note About Using Third Parties

- Must have an MOU that specifies duties and responsibilities
  - Third party may only have authority to eliminate certain illicit discharges...MS4 must make up the gap
  - Third party may provide you with a list of outfalls with suspected illicit discharge, but what is MS4 doing to eliminate the discharge?

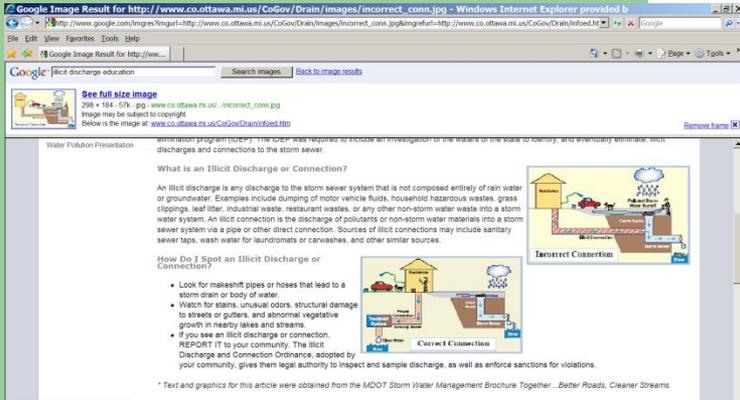
# Common Issues During Audit

- Program is only reactive, not proactive
- MOU with Third Party service provider is not current
- MS4 does not submit information required in Annual Report
  - List of illicit discharges detected, but not eliminated
  - Schedule to eliminate unresolved illicit discharges
- MS4 has no plan to eliminate illicit discharges
  - Board of Health may identify problem outfalls, but has the MS4 issued citations or developed a written plan to eliminate the unresolved sources?

## IDDE Education

- Inform public employees, businesses and the general public of hazards associated with illicit discharge
  - Ties into MCM #1 & 2: PIPE
    - At least 5 storm water messages over permit term reaching 50% of population using more than one mechanism
  - Ties into MCM #6: P2GH for municipal ops
    - At least one training per year

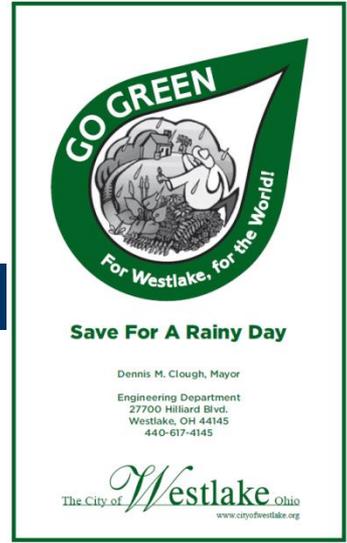




Use Your Website



Pass out yard signs

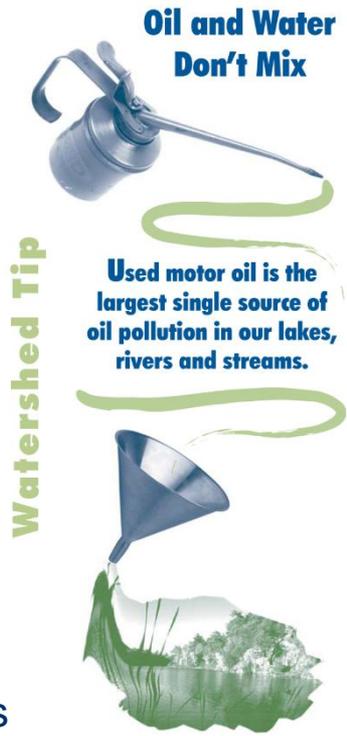


Distribute brochures



Information booth at community event

Posters for businesses



Stencil storm drains

# What to Expect During an IDDE Inspection



# IDDE Inspection Process

- Interview of MS4 Staff
  - Based on EPA MS4 Program Evaluation Guide
  - Includes a file review of IDDE incidences
  - Make sure you have documentation from third party service provider
- Field Observation
  - Ohio EPA will select a number of outfalls to observe based on interview and file review
  - Go out with department or service provider and observe them conducting IDDE activities

# Documentation We May Review

- IDDE ordinance
- Enforcement escalation plan
- Dry weather screening procedures and report form
- Summary of findings from dry weather screenings
- IDDE investigation procedures
- Documentation of IDDE investigations
  - Including enforcement activities
- IDDE education materials
- IDDE complaint log
- Spill tracking system
- Evaluation of storm systems for cross connections & I/I
- Training agendas, sign-in sheets and materials for MS4 staff

# For More Information

## Websites

Ohio EPA

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

USEPA

[www.epa.gov/npdes/stormwater/municipal](http://www.epa.gov/npdes/stormwater/municipal)

## Ohio EPA Northeast District Office

Cuyahoga, Geauga, Lake, Lorain, & Wayne Counties

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Phil Rhodes (330) 963-1136

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