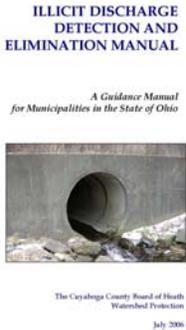


# Cuyahoga County Board of Health Stormwater Program

## Inventory and Mapping

### IDDE Manual

- Grant from OEEF
  - Printing of document
  - Regional Meetings
- TAC
  - Engineers
  - Health Departments
  - Watershed Organizations
  - Sewer District
  - Ohio EPA



### Chapter 1: What is an Illicit Discharge

- An **illicit discharge** is defined by the US EPA's Phase II Storm Water Regulations as "any discharge to an MS4 (Municipal Separate Storm Sewer System) that is not composed entirely of storm water..."



### Illicit Discharges

- The following are not considered illicit discharges unless community identifies them as such:
  - water line flushing, landscape irrigation
  - diverted stream flows, rising ground waters
  - uncontaminated ground water infiltration & pumped ground water
  - discharges from potable water sources
  - foundation drains, air conditioning condensation
  - irrigation water, springs
  - water from crawl space pumps, footing drains
  - lawn watering, individual residential car washing
  - flows from riparian habitats and wetlands
  - dechlorinated swimming pool discharges
  - street wash water, flows from fire fighting activities

### Chapter 2: Mapping/Inventory

- What is an MS4
  - Conveyance or system of conveyances including:
    - Roads with drainage systems
    - Municipal streets
    - Catch basins
    - Curbs
    - Gutters
    - Ditches
    - Manmade channels
    - Storm Sewers



### Outfalls come in various sizes and locations



## What is an Outfall?



## Inventory of Outfall Locations

- Basic Information
  - Safety considerations
  - Time of year considerations
  - Supplies
  - Staffing requirements



## Inventory of Outfall Locations

- Supplies
  - Digital camera
  - GPS unit
  - Tape measure
  - Waders
  - Clip Boards / pens
  - Flashlight
  - First aid kit
  - Cell phone
  - Field survey sheets
  - Maps:
    - stream maps, community maps, storm sewer maps, etc



## Inventory of Outfall Locations

- Review all known data prior to field work
  - Hotspots
  - Problem areas
- Field surveys
  - Walk surface waterways
  - Locate designated MS4 outfalls



## MS4 Outfall Location

- Assign unique ID code to outfall location
- Take photo of outfall
- GPS location to record location of outfall
- Address of outfall location – if available
- Fill out field form



## Field Survey



## Field Survey



## Field Survey



## Field Survey



## Field Survey

- Physical Indicators
  - Outfall damage
  - Stains
  - Poor water quality in plunge pool
  - Odor
  - Color
  - Turbidity
  - Floatables

## Field Survey

- Land use
  - Look for land use affecting drainage
    - Industrial
    - Residential
    - Commercial
    - Open space

## Outfall ID

- Utilize 8 digit code
- First four letters indicate stream segment
  - ACMB – Abrams Creek Main Branch
  - ACT3 – Abrams Creek Tributary 3
- Last four numbers are numbers assigned to outfall
  - 0010
  - 0020
  - 0010



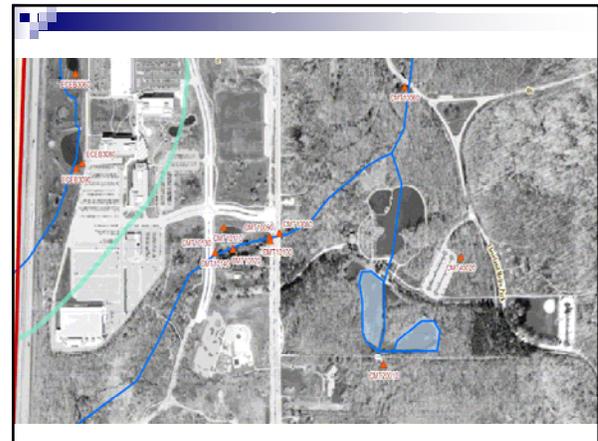
<ul style="list-style-type: none"> <li>■ Shape of outfall</li> <li>■ Size of outfall</li> <li>■ Material</li> <li>■ Condition</li> <li>■ Location description</li> <li>■ Location (downstream)</li> <li>■ ID of outfall</li> <li>■ Stream</li> <li>■ Watershed</li> <li>■ Outfall type</li> </ul>	<b>General Location Information</b> Housing System County Region Municipality County Precinct State Place ID State Place ID Census Tract Census Tract Longitude Latitude Location Description		Outfall Photograph           Location Map
	<b>Stream System Map Information</b> Outfall on Map <input type="checkbox"/> Yes <input type="checkbox"/> No Map Orientation Map Source Outfall Located on Existing Stream/Stream		
	<b>Pipe Characteristics</b> Pipe Material <input type="checkbox"/> Cast Iron <input type="checkbox"/> Steel <input type="checkbox"/> Clay <input type="checkbox"/> Polypropylene <input type="checkbox"/> Other describe Pipe Length (ft) Pipe Width (in) Pipe Material <input type="checkbox"/> HDPE <input type="checkbox"/> PVC <input type="checkbox"/> VCP <input type="checkbox"/> CMP <input type="checkbox"/> DIP <input type="checkbox"/> Other describe Pipe Condition <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor <input type="checkbox"/> None		
	<b>Additional Details</b> Outfall Type/Character Comments		



<b>ACMB0010</b> <b>General Location Information</b> Housing System County Region Municipality County Precinct State Place ID State Place ID Census Tract Census Tract Longitude Latitude Location Description Big Creek Watershed <b>Stream System Map Information</b> Outfall on Map <input type="checkbox"/> Yes <input type="checkbox"/> No Map Orientation Map Source Outfall Located on Existing Stream/Stream		  Location Map
<b>Pipe Characteristics</b> Pipe Material <input checked="" type="checkbox"/> Cast Iron <input type="checkbox"/> Steel <input type="checkbox"/> Clay <input type="checkbox"/> Polypropylene <input type="checkbox"/> Other describe Pipe Length (ft) Pipe Width (in) Pipe Material <input type="checkbox"/> HDPE <input type="checkbox"/> PVC <input type="checkbox"/> VCP <input type="checkbox"/> CMP <input type="checkbox"/> DIP <input type="checkbox"/> Other describe Pipe Condition <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor <input type="checkbox"/> None		
<b>Additional Details</b> Outfall Type/Character Comments		

## Outfall Materials

 High Density Polyethylene (HDPE)	 Vitrified Clay Pipe (VCP)	 Corrugated Metal Pipe (CMP)
 Reinforced Concrete Pipe (RCP)	 Polyvinyl Chloride (PVC)	 Ductile Iron Pipe (DIP)



## Contact Information

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