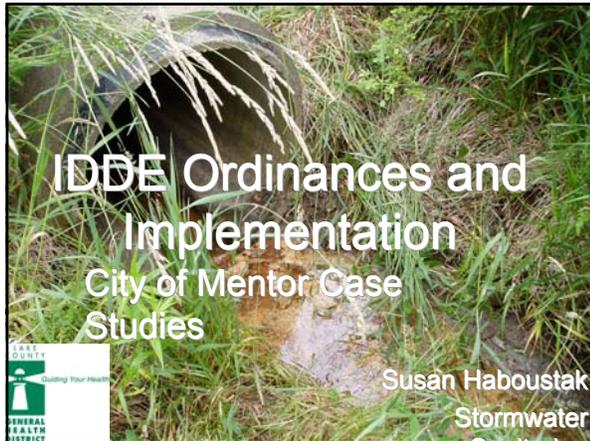


IDDE Ordinances and Implementation

City of Mentor Case Studies



Susan Haboustak
Stormwater



Outline

- Illicit Discharge Complaints
- Screening Process
 - Dry weather sampling
 - Detection
 - Priority Listing
- City of Mentor Ordinance
 - Purpose and Scope
 - Objectives and Regulation
 - Use for monitoring illicit discharges and illegal connections
- Case Studies
 - Metric Drive, transitory and intermittent illicit discharge
 - Polychem illicit discharge to retention basin
 - Belflower Rd and elevated conductivity



Complaints

- LCGHD process of investigating complaints
 - Routine Outfall Screening
 - Illicit Discharge Forms
 - OEPA Referrals



Mentor is not a member community of the Lake County Stormwater Management Department

Screening Process

- Dry weather sampling, 72 hours no rain
- Use mapping systems to locate outfall
- Use screening form
 - Visual Inspection of outfall, flow, and surrounding area.
 - Note Odors
 - Test parameters

Use your senses, follow your instincts



Screening Process

- If flowing, complete entire screening form.
- More likely that flow during dry weather is due to illicit discharge.
- Low-cost sampling processes to locate problem areas
- Prioritize outfall based on inspection
 - Rate as High, Medium, or Low Priority
 - Compare with average statewide standards



Lake County General Health District

Illicit Discharge Form-Mentor



Inspection Date:	Time:
Nearest Address:	Township/Village/City:
Primary Inspector:	Secondary Inspector:
Date of Last Visit:	Weather Condition:
Last Precipitation:	Dry Weather Flow: YES / NO

Visual Observation
 Outfall Material/Size:
 Headwall: Yes/No
 Flow Condition: Plugged / Open / Inhibited / Not Applicable
 Structural Condition: Corrosion / Cracking / Normal / Not Applicable
 Color: Clear / Red / Yellow / Brown / Green / Tan/Gray / Black / White / Cloudy / Other _____
 Odor: None / Chlorine / Foul or Oil / Fuzzy / Muddy / Sewage / Sulfur / Chemical / Detergent / Other _____
 Floatables: None / Oil / Shims / Garbage / Sewage / Other _____
 Turbidity: Clear / Slightly Turbid / Moderately Turbid / Very Turbid / Suspended Solids / N/A

Field Screening:
 Field Parameters
 Nitrate (ppm) *
 Phosphate (ppm)
 pH
 Conductivity (mS/25 °C)
 Dissolved Oxygen (%)
 Dissolved Oxygen (mg/L)
 Temperature (°C) **
 Approximate Flow Rate (gal/min)
 Salinity



Mentor Ordinance No. 06-O-123

- Purpose and Scope:
 - “. . . to provide for the health, safety, and general welfare of the citizens of the City of Mentor through the regulation of illicit discharges to MS4 . . .”
- Objectives of regulation
 - Prohibit illicit discharges and illegal connections
 - Establish legal authority, monitoring procedures, and enforcement actions
 - *Establishing access is a critical requirement*
 - Applies to all residential, commercial, industrial, or institutional facilities responsible for discharges



Mentor Ordinance No. 06-O-123

Also in Ordinance:

- Section of Definitions
- Disclaimer of Liability, Conflicts, Severability, Nuisances, and Responsibility
- Responsibility for Administration
- Discharge and Connection Prohibitions
- Monitoring of Illicit Discharges and Illegal Connections
- Enforcement
- Failure to Comply
- Abatement of Violations, Prosecution of Violations
- Injunctive Relief
- Remedies Not Exclusive
- Penalties

Ordinance in Depth

- Responsibility for Administration
 - City of Mentor will Administer, implement, and enforce provisions
 - Contract LCGHD to conduct inspections, monitoring, and assist with enforcement for illicit discharge
- Discharges and connection Prohibitions
 - Prohibition of Illicit Discharges
 - Prohibition of Illegal Connections

Ordinance in Depth

- Monitoring of Illicit Discharges and Illegal Connections
 - Monitoring Program
 - Mapping
 - Routine outfall inspection
 - Facility inspections and investigations



Ordinance in Depth

- Inspection of facilities
 - Permit official to enter to ensure compliance.
 - Conduct necessary monitoring
 - Require monitoring or sampling at owner's expense.
 - Cannot unreasonably delay official's investigation
 - Can obtain search warrant
 - Any associated costs assessed to facility/owner



Ordinance in Depth

In Issuing Orders to make corrections, use:

- Nuisance Rules
- State plumbing code
- LCGHD Sewage Rules
- Ordinance or county rules when applicable



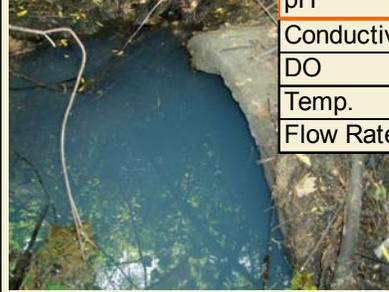
Case Study: Metric Dr. Outfall

- Found transitory illicit discharge during routine screening
- Created a complaint
- After blue cleared, worked to track/oil and odors
- Worked up pipe to locate source



Routine Outfall Screening

Screening Results	
Nitrate	0.0 mg/L
Phosphate	0.35 mg/L
pH	9.5
Conductivity	840 µS
DO	6.2 mg/L
Temp.	23.3°C
Flow Rate	1.0 gal/min



Case Study: Metric Dr.

Commercial Illicit Discharge Inspection Form

- Operations performed, products produced
- Waste generation
- Chemical Storage 
- Locate floor drains, ensure drainage to sanitary with dye test
- Check for illegal connections to storm sewers

Illicit Discharge Ordinance makes the inspection possible!



Illicit Discharge Inspection of Commercial Business

Inspection Date _____ Location Address _____
 Name of Business _____ Type of Business _____
 Owner/Manager's Name _____
 Mailing Address _____
 Phone _____
 Description of operations, products and by-products at the facility: _____

Interior Premise Checklist: (check applicable categories)

Chemical/Hazardous Waste generation: Yes No
 If yes, explain storage and disposal practices in detail _____

Chemical Storage/Waste Oil: Yes No
 If yes, what chemicals are stored? _____
 How are chemicals stored? _____
 In case of spill, are measures taken to contain it? How is it cleaned up? _____

Wastewater Service: Unknown Sanitary Sewer On-Site Sewage System
 If on-site systems, where is it located? _____

Wastewater Pretreatment: Yes No

Grease Trap/Oil Separator: Yes No Unknown
 If yes, give details _____

How often is it pumped? _____
 Pumped by whom? _____

Floor Drain/Laundry Area: Yes No
 If yes, give details _____

Where do floor drains/laundry drain to? Sanitary Sewer On-site sewage system
 Storm Sewer Unknown





Utility/Mop Sink(s): Yes No
 If yes, state number of sinks _____ Location _____

Sinks drain to: Sanitary Floor Drains Storm Sewer Unknown
 Explain in detail what they are used for: _____

Equipment Wash/Rinse Area: Yes No
 If yes, explain practices in detail _____

Where does wastewater from this area drain to? _____

Dishwasher/Garbage Grinder: Yes No
 If yes, where do they drain to? _____

Exterior Premise Inspection:

Parking lot drains: Yes No
 If yes, where do they drain to? _____

What other purposes are they used for? _____

Dumpsters on Premises: Yes No
 If yes, what are they used for? _____

Name of disposal company providing dumpster? _____

Fueling Areas: Yes No
 If yes, are there drains in area? Yes No
 If yes, where do they drain to? _____

Pipes found in ditch? Yes No
 If yes, where are they located? _____

Pipes found in storm sewer? Yes No
 If yes, describe type, size, flow and observations _____

Name and title of person conducting self-inspection _____




Metric Dr. Commercial Inspection

- During investigation, found other continuous or intermittent discharge
- Tracked up the pipe
- Tools during investigation
 - Building plans
 - Stormwater and sanitary system plans
 - Plumbing Records
 - Video Taping of pipes
 - MSDS



Case Study: Polychem

- Company produces plastic strapping
- Complaint from Mentor Fire Department
- Strange odor coming from detention area
- Investigated complaint
 - Inspected basin
 - Water sampling
- Visited the facility to discuss industrial process, plumbing inspection
 - Rinsing filter plates from cooling system, chemically-treated cooling water discharged to basin
- Issued orders
 - Analyze rinse water
 - Determine components of chemicals in cooling water

Polychem

Complaint from MFD



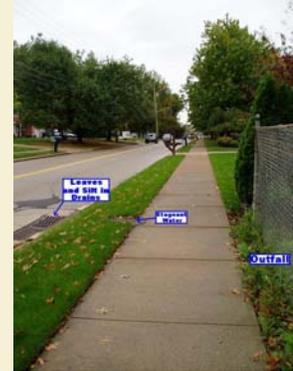
Case Study: Bellflower Rd. Outfall

- Routine outfall screening resulted in High Priority Rating

Flow yellow in color, musty smell, slightly turbid

Nitrate	8.4 mg/L
Phosphate	0.5 mg/L
Conductivity	2427 μ S
DO	5.6 mg/L

- Heavy snow in April, screening in early June; salt and organic matter did not get flushed through



Case Study: Bellflower Rd. Outfall



Case Study Bellflower Rd. Outfall

- Investigated up the pipe
 - Standing water in manhole
 - Storm drains filled with leaf debris, organic matter, trash, shoes.
- City of Mentor cleaned out storm drains, re-screened



	Before	After	
Nitrate (mg/L)	8.4	0.0	0.0
Phosphate (mg/L)	0.5	0.6	0.3
Conductivity μ S	2427	1640	1460
DO (mg/L)	5.6	5.06	5.75

Review: Use of Ordinance

- **Commercial Cases**
 - Ordinance faxed to Lawyers for entry into facility
 - Cited Ordinance when issuing orders to require sampling
 - Performed commercial inspections
- **Residential Cases**
 - Routine screening takes place
 - Cooperate with city officials to improve water quality