

# Session A1: Illicit Discharge Detection & Elimination Panel Discussion

September 6, 2017

# Identifying Different Illicit Discharges



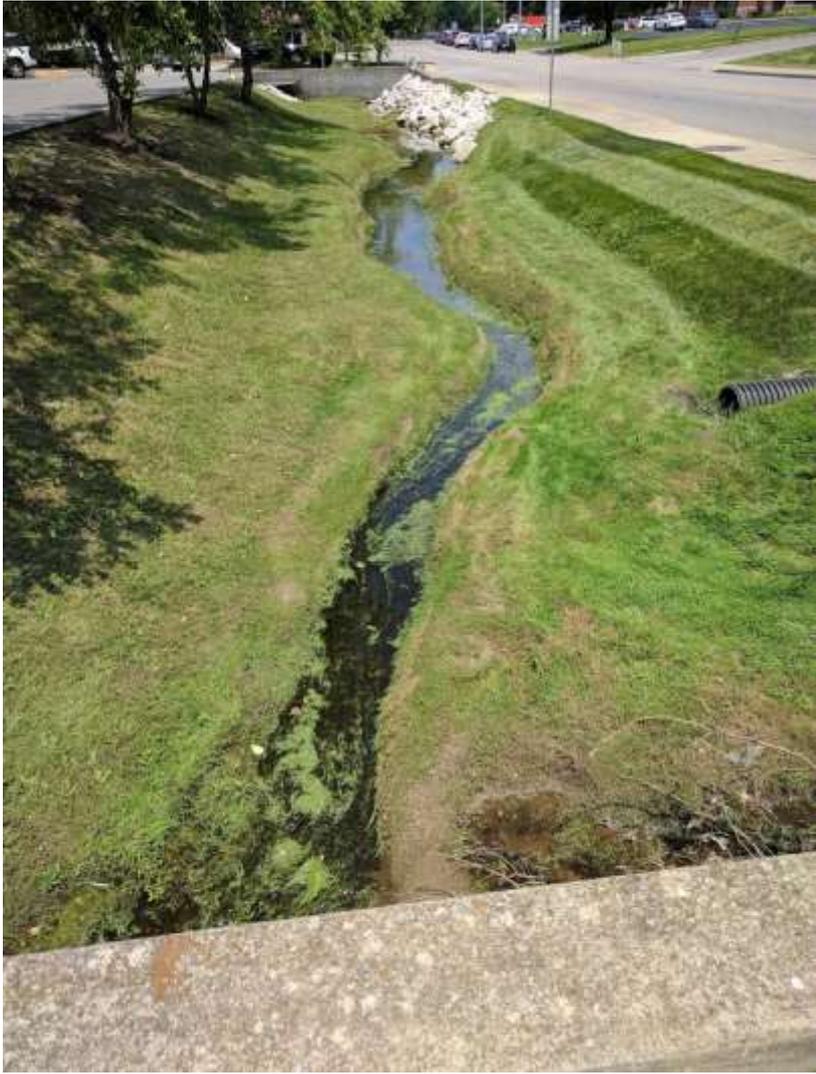


Coolant  
from semi-  
truck

2009.04.17



Pavement sealer











2010.11.30





2007.09.28





# IDDE Case Study

Dave Bradway, Muncie Bureau of Water Quality



## *The call or complaint...*

“Red liquid in ditch near industrial center. Industry X is dumping.”



## *The call or complaint...*



- Desktop Assessment
- MS4?
- Industrial Waste?
- Permitted Industry?
- Involve Pretreatment Staff?





## Site Visit



- Ditch is MS4
- Industry X Not Permitted by MSD
- BWQ is Pretreatment Reg.
- Unsure of Chemical
  - Testing needed?

## Site Visit



# *Other Considerations...*

- Large Spill?
- IDEM needed for Spill Response?
- Rule 6 permit for Industry X?



# *Industry X*

- Packaging Industry
- No chemicals
- Industry X is not the source



## *Other sources*

- Other Industries?
  - Interviewed surrounding industries
  - Not a source of red liquid
- No residential on ditch
- Transient Dumping?

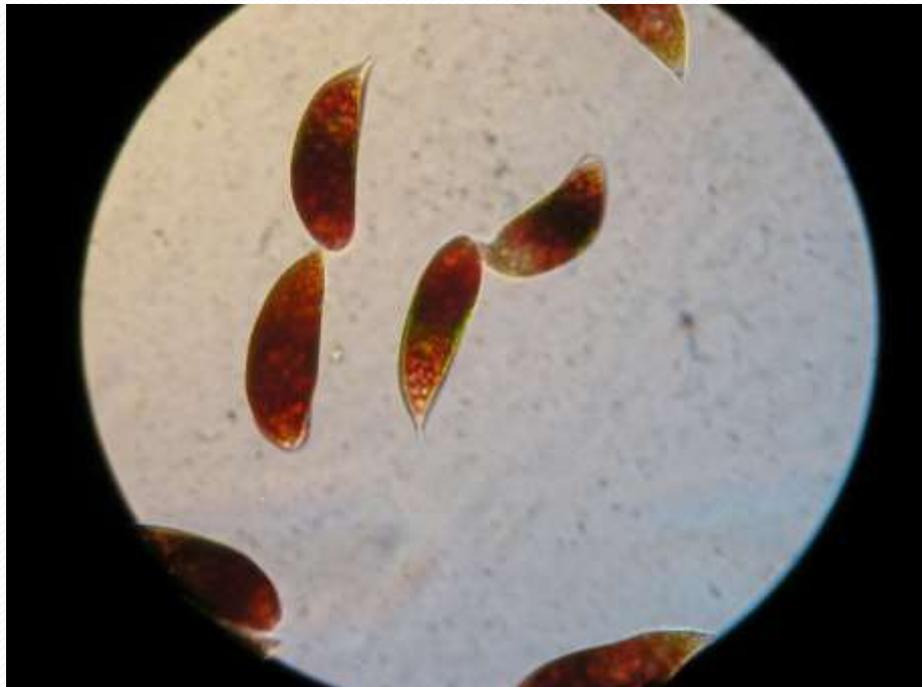


# *Sampling and Analysis*

- Grab sample pulled
- Sample Peculiar
  - Red color coming from particles in the water, not from dissolved chemical
- Took sample to Biology lab to view under microscope



# *Sampling and Analysis*



# *Red Euglena*

- Naturally occurring
- Not an illicit discharge or spill
- Turn red in presence of astaxanthin found in algae



# *IDDE Case Study*



Sarah Brichford, Howard County Stormwater District

INAFSM Annual Conference  
September 6, 2017

# The call or complaint .....

Hello!  
County government.  
How may I help you?

May 12, 2014

*“All the fish in my pond are dead!  
There is pollution coming from a  
pipe and I know who did it!”*



## *The call or complaint .....*



- Do I understand the caller's issue?
  - ☑ *Yes – potential illicit discharge into a stormwater retention pond*
- Is this an emergency?
  - ☑ *No for human health*
  - ☑ *Yes for evidence and assessment*
- Is this issue under my authority?
  - ☑ *No – possibly NOT my conveyance*
  - ☑ *Yes – MCM 3 local ordinance for my conveyance*
- Is this location in my area of authority?
  - ☑ *Yes - site visit required immediately*



## *Site visit .....*

- Map of area and conveyances
  - storm (no) and sanitary (green)
- Caller owns the retention pond (~ 1 acre)
- Subdivision was in county MS4 but had recently been annexed by city
- No regulated drains
  - Downstream receiving water is county MS4
- Mix of private and public concerns



## Site visit .....



## *Site visit ....*

- Interview the landowner
  - When? What? Where?
    - May 12: milky white discharge at the inlet to the pond
      - Fish and turtles dead
    - strong chemical smell from the nearby golf course on May 12
    - approached the golf course – no response
  - Anything else ?
    - *May 8: landowner applied 2,4-D (ester) to his lawn and empty lot next door*
- Rainfall
  - May 10 - 0.4 in, May 11 – 0.04 in, May 12 – 0.69 in



## *Site visit ....*

- Scout the downstream segment
  - pond outlet under the road to a small stream that flows north to MS4 receiving water
  - clear water
  - fresh dead turtle / no dead fish



## *Site visit ....*

- Call city MS4 counterpart
  - WTP lab pulled samples
- Call IDEM spill response
  - Investigator on his way
- Visited the golf course to ask questions
  - City MS4 confirmed storm conveyance shown in light blue



## Site visit ....

- Golf course staff cool but obliging
  - turf pesticides had been applied prior to rainstorm
- WTP drew samples from inlet structure
- Inspect maintenance area
  - drain by chemical shed / no sign of product



drain



## *Site visit ....*

- IDEM spill response arrives
  - inspect pond and downstream
  - determined that impact did not reach “waters of the U.S.”
- Contacted Office of the Indiana State Chemist (OISC)
  - golf course involved
- OISC investigator took over the case
  - pulled samples of pond, soil and fish (landowner had preserved in freezer)
  - obtained records of the golf course certified applicator
  - interviewed neighboring landowners about pesticide use



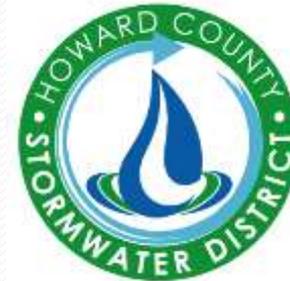
## *Conclusion ....*

- WTP samples for 2, 4 D show presence
  - concentration not high enough for extent of fish and turtle kill in pond
- OISC samples showed fungicide product that is toxic to fish
  - golf course denied knowledge of how the product could have gotten into the pond
  - applicator & golf course warned for violation of Indiana Pesticide Use & Application Law
  - OISC case summary finalized on February 26, 2015
- July 1, 2015
  - landowner restocked pond & recovered 70% of the cost from the golf course management
  - golf course turf manager no longer employed at the site



## *Lessons Learned*

- accurate maps of conveyances essential for effective IDDE
  - continuous locating and updating
- knowledge of laws and ordinances
  - Geographic area and limits of authority
- cooperate with counterparts and partners
- listen and follow-through with people involved





How to talk about...

# Sensitive Stormwater Subjects (S3)



Kriste Lindberg  
Stormwater Education Specialist  
City of Bloomington Utilities Department



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## A few pointers...

- Approach positively
- Work with rather than against, turn a negative into a positive
- Use tact, humor (emotions carry a lot of weight)

### Advantages

- Reduces stress and defenses, builds trust
- Increases reception and cooperation

*Remember: Do not take personally!*



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## A scenario...

- Use the 'sandwich' approach – be positive, state your case, be positive).
- Helpful hints

Approach as though all will work out just fine and hold the positive outcome in mind, dress professional, be mindful of body language and look the part, use discretion (will increase reception/trust), smile and hold space for a 'confession' (will help encourage), listen, affect an open demeanor, acknowledge, state your case, discuss what should be (they're more likely to agree at this point), offer what will help, like a training or water quality project (such as storm drain marking) for all to get involved with and take ownership of, make progress, keep your promises such as doing a training, continue the relationship.

An example...

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The southeast side **ABC** and  
**XYZ** Creek



Kriste Lindberg  
Education Specialist  
City of Bloomington Utilities



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## Overview

The southeast side **ABC** and **XYZ** Creek

Drainage

Watersheds

Pollutants

What can I/we do?

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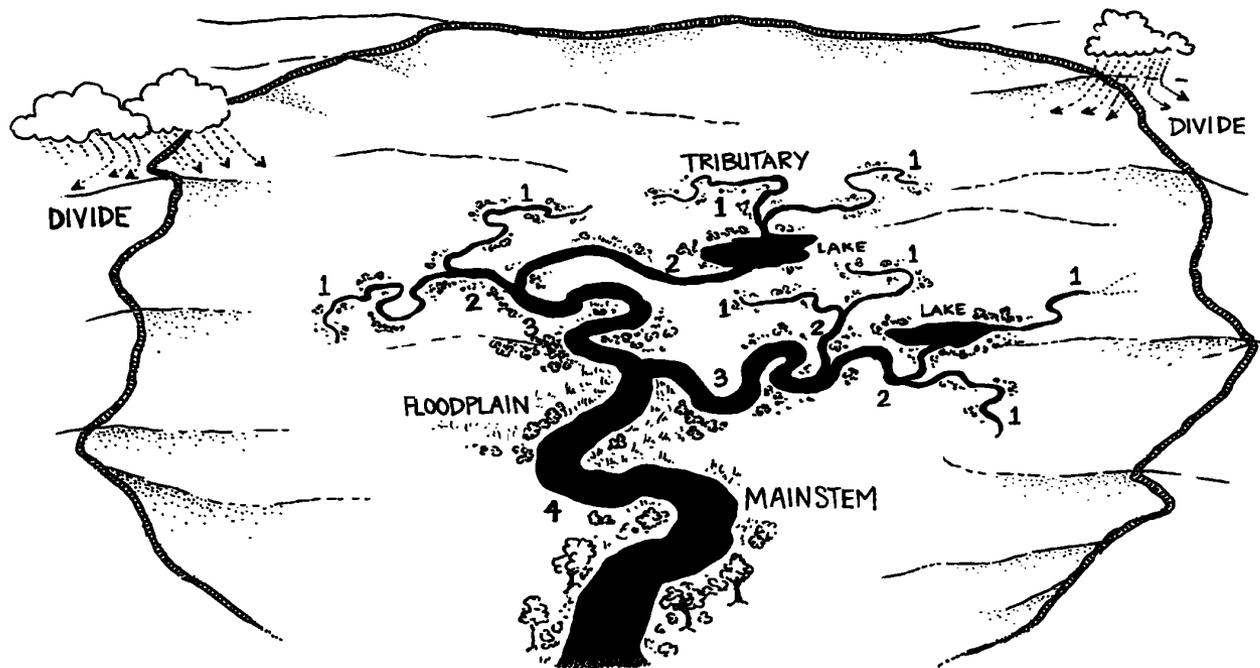
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## XYZ Creek



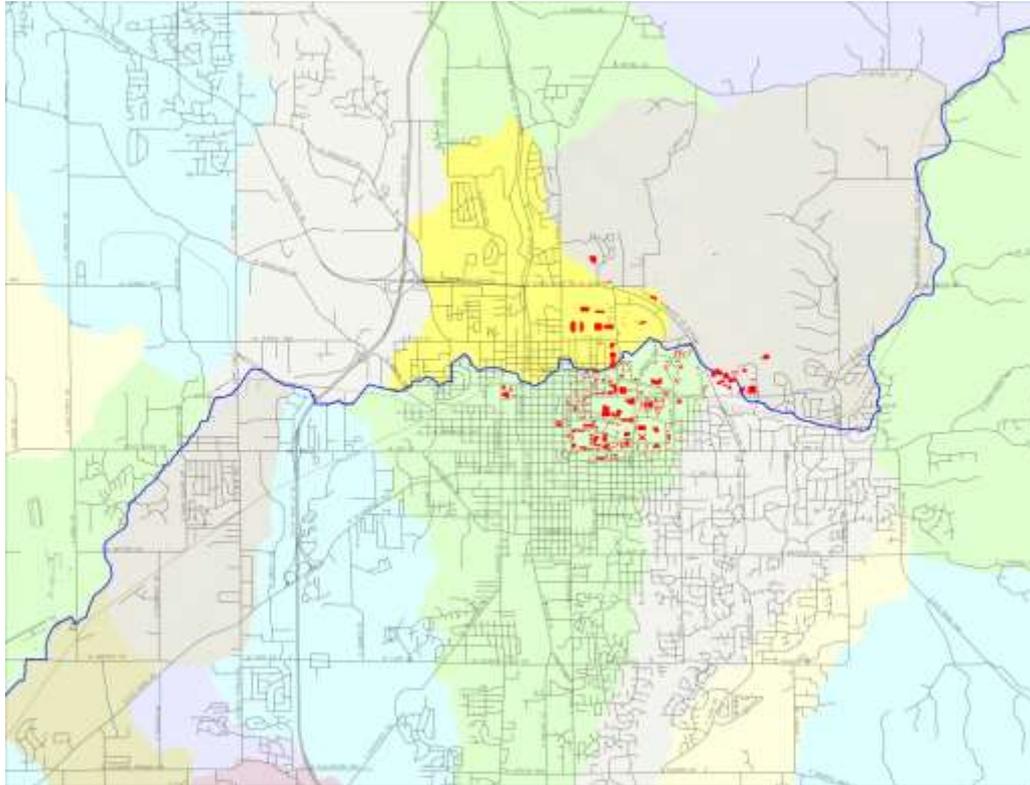
# Watershed

An area of land that drains to a particular body of water

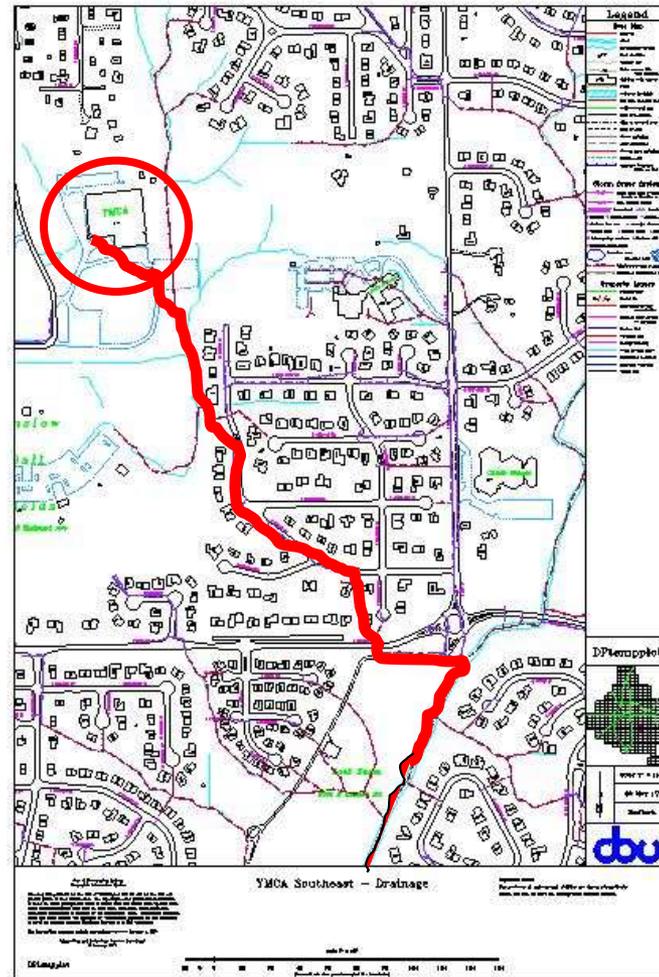




## Bloomington's two main watersheds...



# Southeast ABC and XYZ Creek...



## Storm Drain Marking...



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Questions?

*Let's go!*

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