



Illicit Discharge Detection & Elimination Program

**Prepared for:
Doylestown Township and Citizens**

**Doylestown Township, Pennsylvania
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Russell Mehalick & Kimberly Hunsberger | Presenters



Agenda

- Current Status IDD&E
- 2020 Inspections, Mapping, and Sampling Results
- DNA Sampling
- Going Forward 2021
- Takeaways
- Q&A

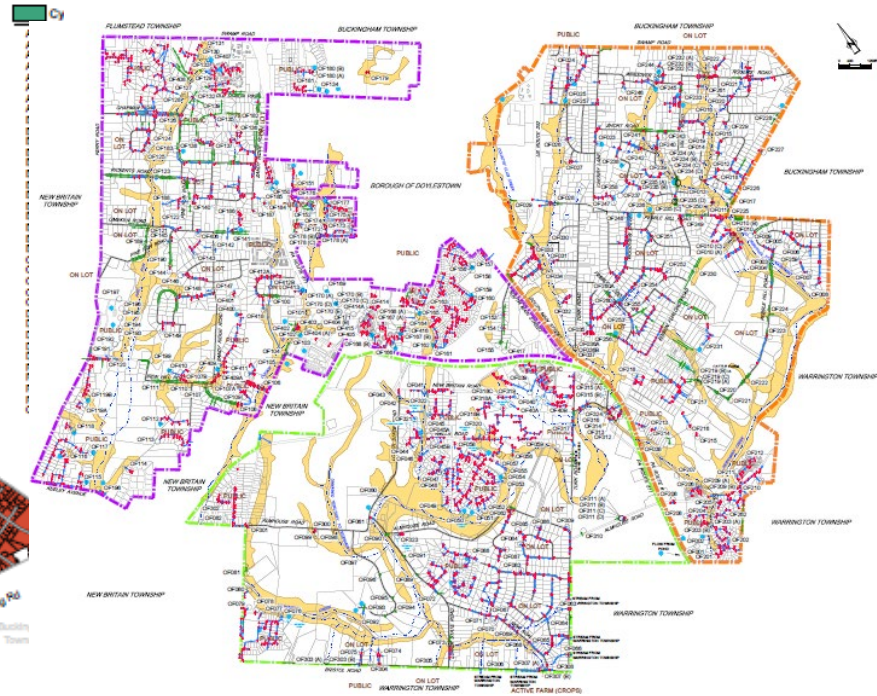
Current Status of IDD&E

- Year 18 of the Program
- GHD completed typical hot spot IDD&E sampling
- GHD Collected 22 samples from Hot Spots
- Doylestown Township remains in compliance
- New Permit received in December 2019. Good for 5 years until November 2024
- September 2022 – Next PADEP MS4 report due



IDD&E – Dry Weather Inspection

Doylestown Township
 Septage Management Program
 Streets by Cycle



- Cycle I
 Start: January 2019
 End: December 2019
- Cycle II
 Start: January 2020
 End: December 2020
- Cycle III
 Start: January 2021
 End: December 2021



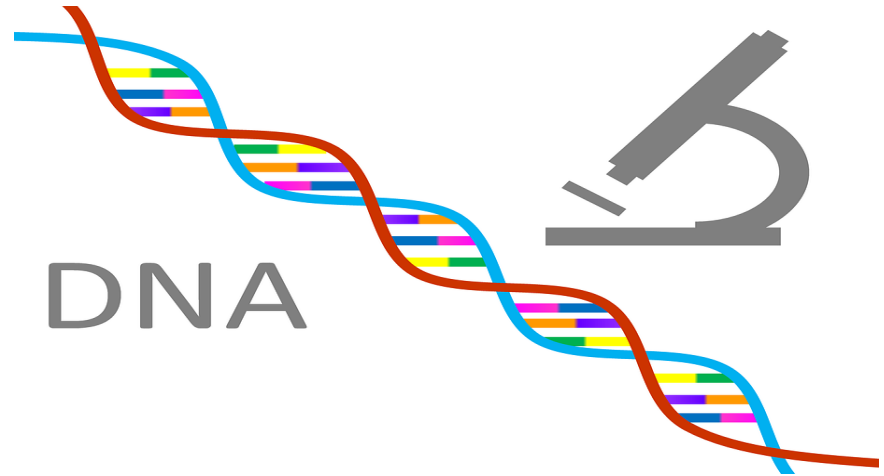
IDD&E Inspections, Sampling & Results - 2020

- Focused Inspections & Sampling
 - Historical Hot Spots (Areas 1, 2, and 3)
- Sample Analysis - Fecal Coliform (FC) at all locations with flow
 - Area 1 – 11 inspections / 11 sampled
 - Area 2 – 9 inspections / 9 sampled
 - Area 3 – 2 inspections / 2 sampled
- Data Review – Chose 5 locations (Areas 1 and 2) for DNA fingerprinting
 - 6th year of DNA sampling
 - 5 samples per year since 2015
 - In 2020, 5 Outfalls re-sampled for FC plus DNA based on the 5 highest FC readings during the 1st round of sampling

DNA Fingerprinting

DNA Tests 2020

- Goose (0 indicator tests)
- Cow (0 indicator tests)
- Ruminant [e.g. deer] (1 indicator tests)
- Dog (0 indicator test)
- Human (3 indicator tests)



IDD&E Sampling - 2020

Area 1 – 11 Inspections

- 11 samples
- 2 samples FC >200 col/100 ml
- Maximum FC = 1,800 col/100 ml

- DNA testing (1 samples)
 - Non-detected for all DNA analysis

IDD&E Sampling - 2020

Area 2 – 9 Inspections

- 9 samples
- 4 samples FC >200 col/100 ml
- Maximum FC = 3,000 col/100 ml

- DNA testing (3 samples)
 - 3 positive for Human
 - 1 positive for Ruminant

IDD&E Sampling - 2020

Area 3 – 2 Inspections

- 2 samples
- No samples >200 col/100 ml
- Maximum FC = 1 col/100 ml

- No DNA samples collected

IDD&E Sampling – 2016 through 2020

Area 1

2016 - 2 >200 col/100 ml
2017 - 5 >200 col/100 ml (Max = >600)
2018 - 5 >200 col/100 ml (Max = 3,200)
2019 - 7 >200 col/100 ml (Max = >600)
2020 - 2 >200 col/100 ml (Max = 1,800)

Area 2

2016 - 5 >200 col/100 ml (Max = 1,700)
2017 - 7 >200 col/100 ml (Max = 600)
2018 - 5 >200 col/100 ml (Max = >6,000)
2019 - 2 >200 col/100 ml (Max = 600)
2020 - 4 >200 col/100 ml (Max = 3,000)

Area 3

2016 - No FC >200 col/100 ml
2017 - 1 >200 col/100 ml (Max = 2,200)
2018 - 1 >200 col/100 ml (Max = 240)
2019 - No FC >200 col/100 ml
2020 - No FC >200 col/100 ml



IDDE Mapping - 2020

- GHD used the Township's mapping tool from CSDatum to map, photograph and document the inspections in 2020.
- This tool allows GHD to automatically update the township storm water map, input the data collected in the field in real time, and produce the forms required for their storm water report.
- GHD will continue using this tool for all future storm water sampling and inspections to keep information updated.



IDD&E – Going Forward 2021

GHD will:

- Continue to GPS outfalls and observation points using CSDatum program, Update Outfall Map
- Complete inspections/Historical hot-spot sampling (Areas 1, 2, and 3) using CSDatum program (~30 locations)
- Complete additional Inspections & Sampling as requested
- Comply with current permit PAG-13
- Perform additional source investigations as needed
 - Dye tracing
 - TV inspections
 - DNA testing



IDD&E – Takeaways

- Township in Compliance
- Continue Inspections/Sampling
- GPS outfalls, Update Outfall Map
- Septic System Maintenance
- Public Participation
- Pollution Prevention and good housekeeping
- Goal is to Improve Water Quality!



For more information contact

Kimberly Hunsberger
Russ Mehalick
GHD
410 Eagleview Blvd
Exton, PA 19341

Kimberly.Hunsberger@ghd.com
Russell.Mehalick@ghd.com

