



Illicit Discharge Detection & Elimination Program

**Prepared for:
Doylestown Township and Citizens**

**Doylestown Township, Pennsylvania
2022 Permit Year**

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Agenda

- Current Status IDD&E
- 2022 Inspections, Mapping, and Sampling Results
- DNA Sampling
- Going Forward 2023
- Takeaways
- Q&A



Current Status of IDD&E

- Year 20 of the Program
- GHD completed all outfall/observation point inspections and IDD&E sampling
- GHD Collected 36 samples from 580 locations
- Doylestown Township remains in compliance
- New Permit received in December 2019. Good for 5 years until November 2024
- September 2023 – Next PADEP MS4 report due



IDD&E Inspections, Sampling & Results - 2022

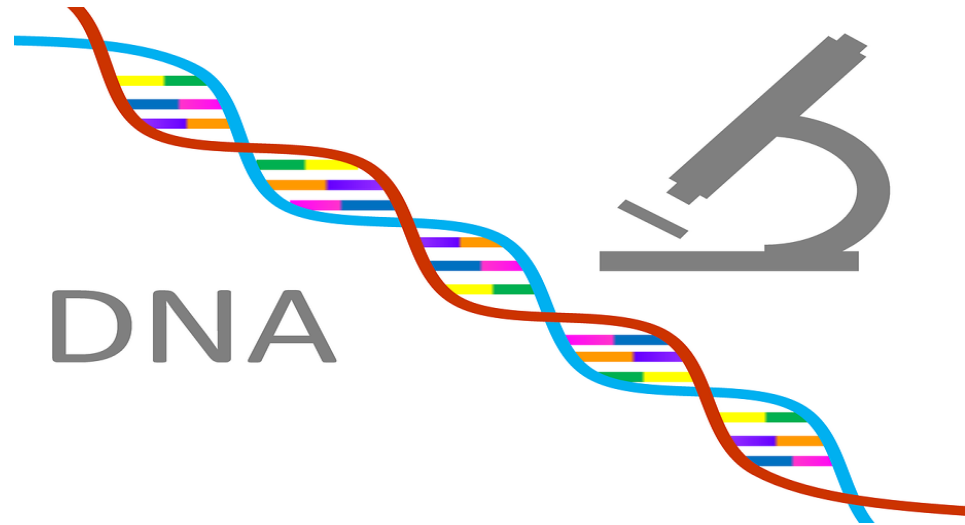
- Inspections & Sampling
 - All existing outfall/observation points (Areas 1, 2, and 3)
- Sample Analysis - Fecal Coliform (FC) at all locations with flow
 - Area 1 – 172 inspections / 12 sampled
 - Area 2 – 153 inspections / 15 sampled
 - Area 3 – 255 inspections / 9 sampled
- Data Review – Chose 5 locations (Areas 1, 2, & 3) for DNA fingerprinting
 - 8th year of DNA sampling
 - 5 samples per year since 2015
 - In 2022, 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 2022

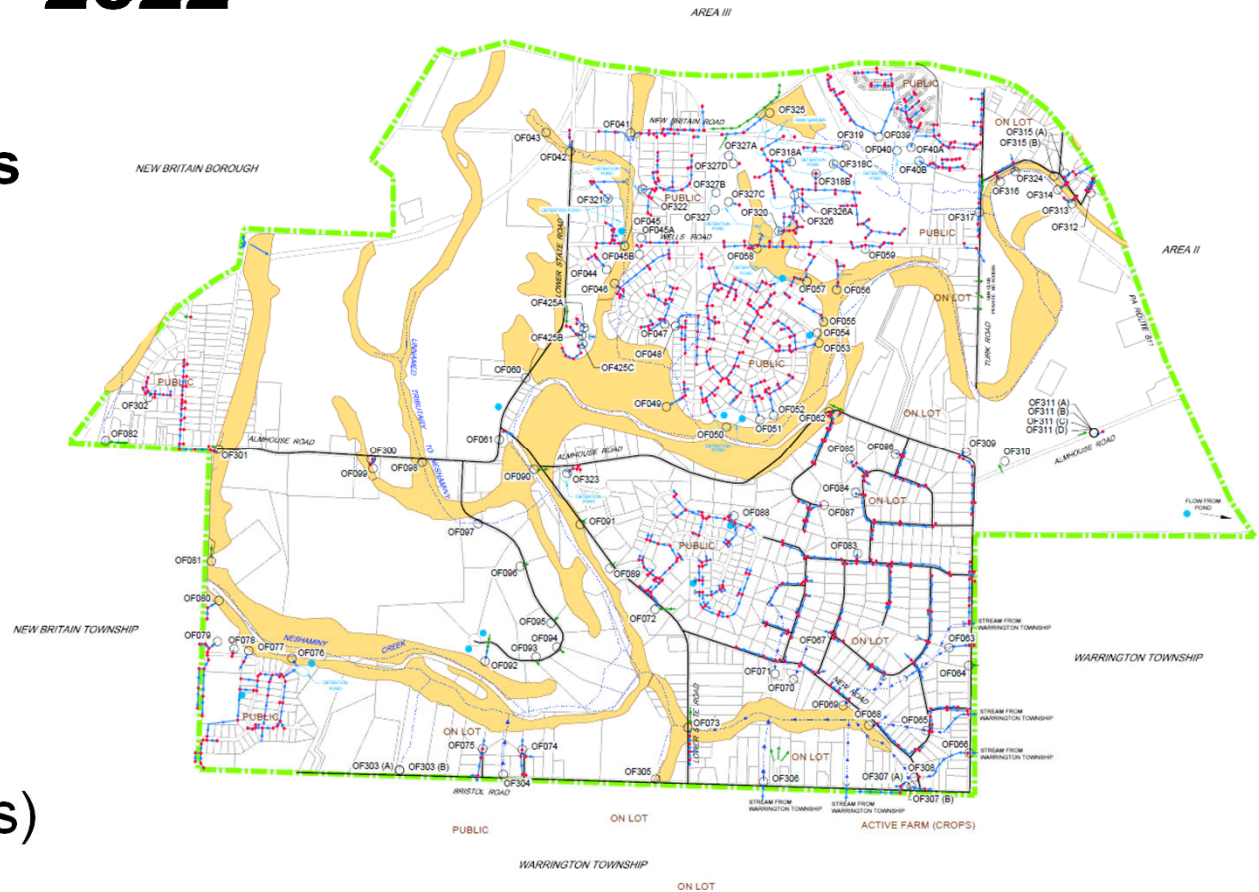
- Goose (2 indicator tests)
- Cow (0 indicator tests)
- Ruminant [e.g. deer] (3 indicator tests)
- Dog (3 indicator test)
- Human (1 indicator tests)



IDD&E Sampling - 2022

Area 1 – 172 Inspections

- 12 samples
- 3 sample FC >200 col/100 ml
- Maximum FC = 1,000 col/100 ml
- DNA testing (2 samples)
 - 1 location had trace results for Dog & Human
 - 1 location had trace results for Ruminant & Dog



IDD&E Sampling - 2022

Area 2 – 153 Inspections

BOROUGH OF DOYLESTOWN

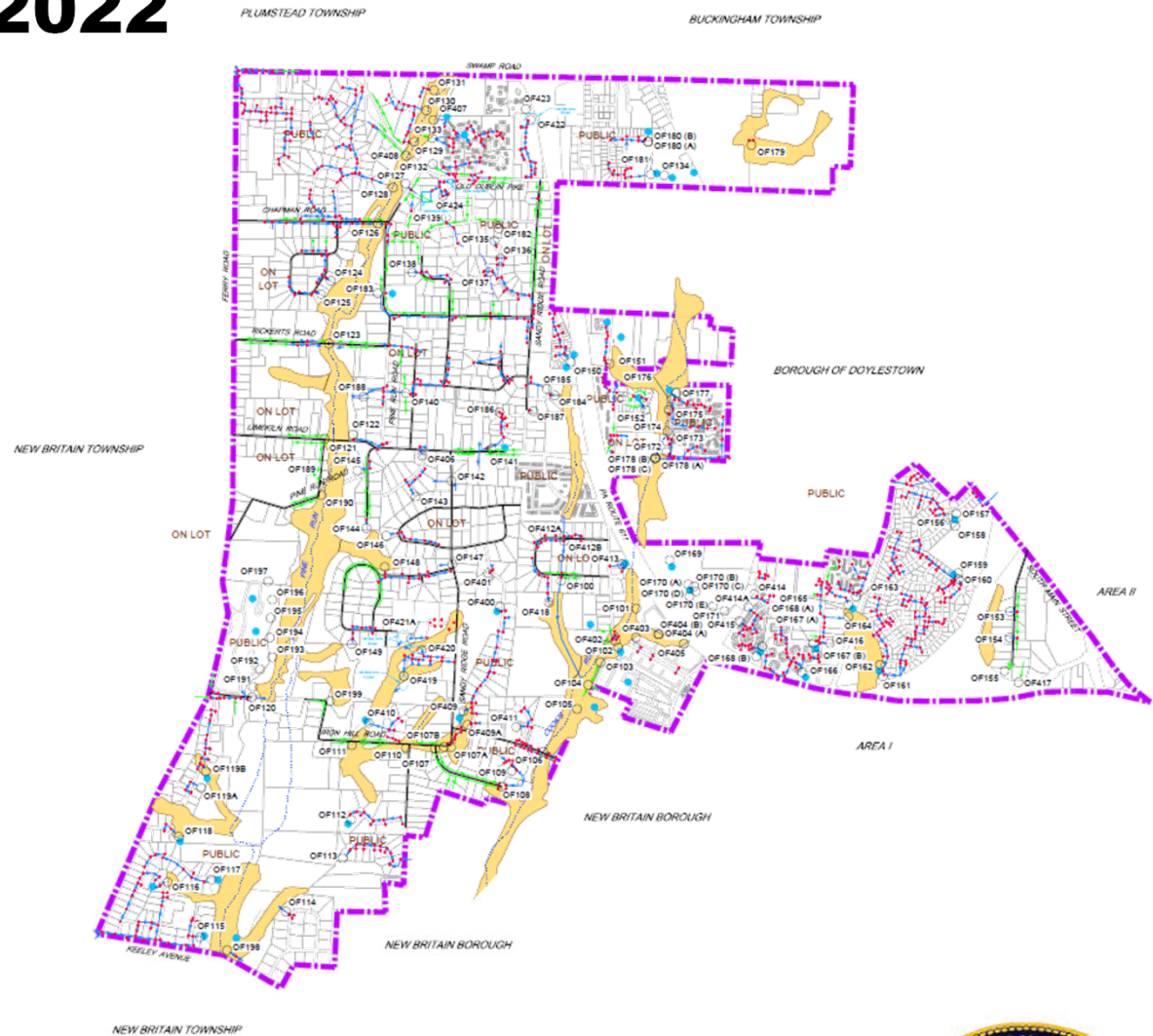
- 15 samples
- 3 sample FC >200 col/100 ml
- Maximum FC = >6,000 col/100 ml
- DNA testing (2 samples)
 - 1 location had trace results for Goose & Dog, low level results for Ruminant
 - 1 location was ND for all DNA analyses



IDD&E Sampling - 2022

Area 3 – 255 Inspections

- 9 samples
- 1 sample FC >200 col/100 ml
- Maximum FC = 270 col/100 ml
- DNA testing (1 sample)
 - 1 location had trace results for Goose & Ruminant



IDD&E Sampling – 2016 through 2022

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)
2021 – 1 >200 col/100 ml (Max = >6,000)
2022 – 3 >200 col/100 ml (Max = 1,000)

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)
2021 – 1 > 200 col/100 ml (Max = 320)
2022 – 3 > 200 col/100 ml (Max = >6,000)

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
2021 – No FC > 200 col/100 ml
2022 – 1 > 200 col/100 ml (Max = 270)



IDDE Mapping - 2022

- GHD used the Township's mapping tool from CSDatum to map, photograph and document the inspections in 2022.
- 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 2023

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!





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