



# Illicit Discharge Detection & Elimination Program

**Prepared for:  
Doylestown Township and Citizens**

**Doylestown Township, Pennsylvania  
August 2022**

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# Agenda

- Current Status IDD&E
- 2020 Inspections, Mapping, and Sampling Results
- DNA Sampling
- Going Forward 2022
- Takeaways
- Q&A



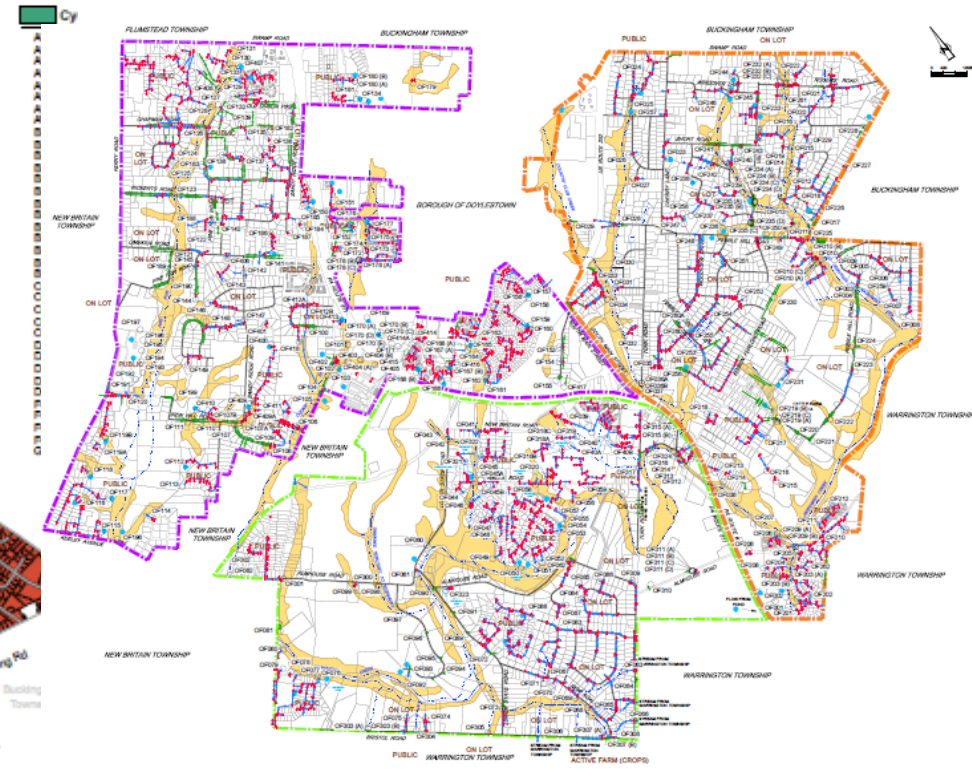
# Current Status of IDD&E

- Year 19 of the Program
- GHD completed typical hot spot IDD&E sampling
- GHD Collected 23 samples from Hot Spots
- 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 – 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 - 2021

- 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 – 3 inspections / 3 sampled
- Data Review – Chose 5 locations (Areas 1, 2, & 3) for DNA fingerprinting
  - 7th year of DNA sampling
  - 5 samples per year since 2015
  - In 2021, 5 Outfalls re-sampled for FC plus DNA based on the 5 highest FC readings during the 1<sup>st</sup> round of sampling





# DNA Fingerprinting

## DNA Tests 2021

- Goose (0 indicator tests)
- Cow (0 indicator tests)
- Ruminant [e.g. deer] (1 indicator tests)
- Dog (2 indicator test)
- Human (4 indicator tests)



# IDD&E Sampling - 2020

## Area 1 – 11 Inspections

- 11 samples
- 1 sample FC >200 col/100 ml
- Maximum FC = >6,000 col/100 ml
  
- DNA testing (2 samples)
  - 1 positive for Human
  - 1 positive for Dog

# IDD&E Sampling - 2020

## Area 2 – 9 Inspections

- 9 samples
- 1 sample FC >200 col/100 ml
- Maximum FC = 320 col/100 ml
  
- DNA testing (3 samples)
  - 3 positive for Human
  - 1 positive for Ruminant
  - 1 positive for Dog





# IDD&E Sampling - 2020

## Area 3 – 3 Inspections

- 3 samples
- No samples >200 col/100 ml
- Maximum FC = 60 col/100 ml
  
- No DNA samples collected



# IDD&E Sampling – 2016 through 2021

## 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)

## 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)

## 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



# IDDE Mapping - 2021

- GHD used the Township's mapping tool from CSDatum to map, photograph and document the inspections in 2021.
- 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 2022

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**

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