



Illicit Discharge Detection & Elimination Program

Prepared for:
Doylestown Township and Citizens

Doylestown Township, Pennsylvania
December 1, 2015

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At a glance – CRA is now GHD

The infographic is a grid of 10 rows and 4 columns. Each row contains a central grey box with a statistic and four surrounding images. The statistics are: 1. GHD logo, leading engineering, environmental, and construction services companies; 2. operating in 5 continents; 3. 200+ offices worldwide; 4. 85+ years in operation; 5. 8500+ people; 6. 2014 revenue: USD 1.5 billion; 7. serving 5 global markets; 8. 75+ service lines.

GHD leading engineering, environmental, and construction services companies

operating in **5** continents

200+ offices worldwide

85+ years in operation

8500+ people

2014 revenue: USD **1.5** billion

serving **5** global markets

75+ service lines



Agenda

- Current Status IDD&E
- 2015 Inspections, Sampling, Results
- DNA Sampling
- Going Forward 2016
- Takeaways
- Q&A



Current Status of IDD&E

- Year 13 of the Program
- GHD completed typical hot spot IDD&E sampling
- Township requested inspection of ~60 additional outfalls
- PADEP (2015)
 - PADEP remains pleased at how Doylestown Township manages their IDD&E program
- Application submitted to extend NPDES Permit
- PADEP working on new PAG-13 2018 Permit conditions (March 2018)
- Sep 15, 2017 – NOI for individual MS4 Permit applications due



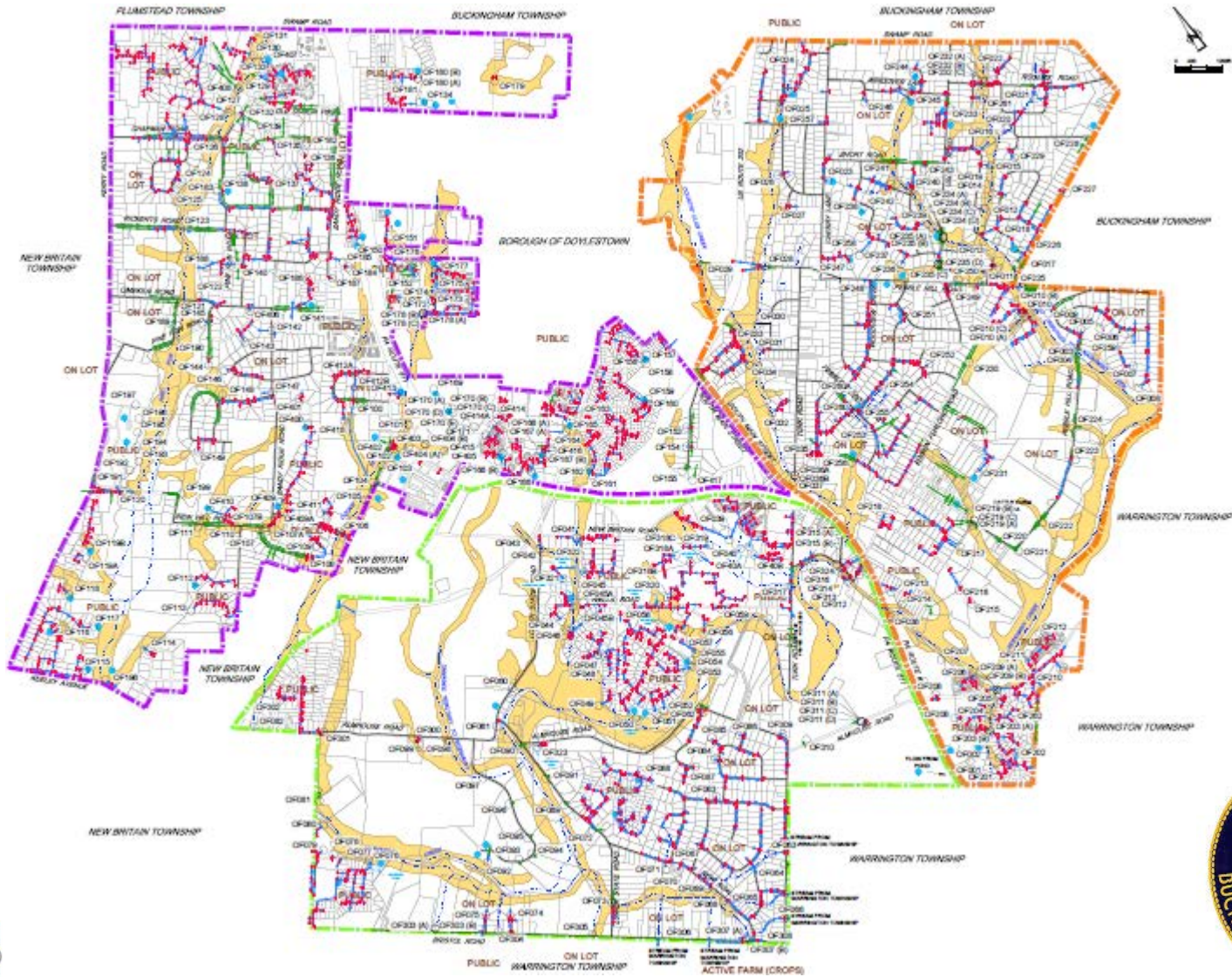
IDD&E – Dry Weather Inspection



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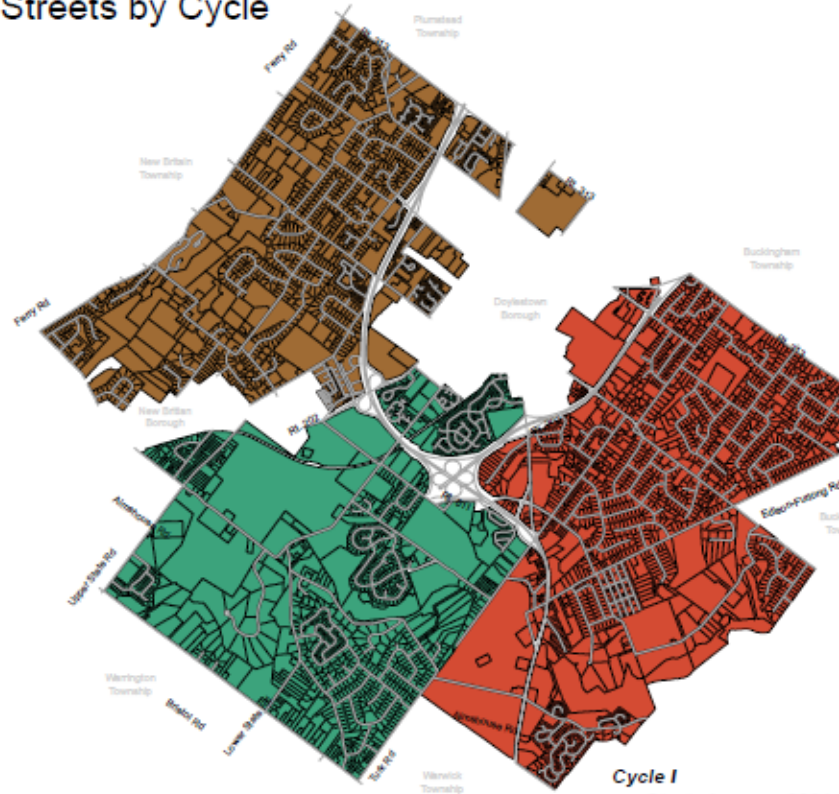


IDD&E - Dry Weather Inspection



IDD&E – Dry Weather Inspection

Doylestown Township Septage Management Program Streets by Cycle



Cycle I
Start: January 2004
End: December 2004

Cycle II
Start: January 2005
End: December 2005

Cycle III
Start: January 2006
End: December 2006



IDD&E Inspections, Sampling & Results - 2015

- Focused Inspections & Sampling
 - Historical Hot Spots (Areas 1, 2, and 3)
- Additional Inspections & Sampling requested by Township (Areas 1 & 2)
- Sample Analysis - Fecal coliform at all requested locations with flow
 - Area 1 – 11
 - Area 2 – 14
 - Area 3 – 3
- Data Review – Chose 5 locations (Areas 1 and 2) for DNA fingerprinting



Fecal Coliform Sources



DNA Fingerprinting

DNA Tests

- Goose
- Cow
- Ruminant
- Dog
- Human



IDD&E Sampling - 2015

Area 1

- 16 samples at 14 outfalls (2 samples collected for DNA testing)
- 6 samples FC > 200 col/100 ml
- Maximum FC = 1,900 col/100 ml
- DNA testing
 - 1 positive for human
 - 1 positive for dog



IDD&E Sampling - 2015

Area 2

- 14 samples at 11 outfalls (3 samples collected for DNA testing)
- 4 samples FC > 200 col/100 ml
- Maximum FC = >6,000 col/100 ml
- DNA testing
 - 2 positive for human
 - 1 positive for dog



IDD&E Sampling - 2015

Area 3

- 3 samples at 3 outfalls (No DNA samples collected)
- 0 samples FC > 200 col/100 ml



IDD&E Sampling - 2015

Area 1

FC levels somewhat decreased from 2014 (2 >6,000 col/ml).
In 2015, Max = 1,900.

Area 2

No significant changes. In 2015, Max = 1,200 col/ml.

Area 3

No FC > 200 col/ml.



IDD&E – Going Forward 2016

- Complete inspections/hot-spot sampling throughout Township ~25 locations
 - Historical Hot Spots (Areas 1, 2, and 3)
- Additional Inspections & Sampling requested by Township
- Comply with current permit PAG-13 (effective March 16, 2013)
- Additional source investigations as needed
 - Dye tracing
 - TV inspections
 - DNA testing



IDD&E – Takeaways

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





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