# 2013 Illicit Discharge Detection and Elimination Program Annual Report

Northeast Ohio Regional Sewer District

*Protecting Your Health and Environment*

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## INTRODUCTION

In 2013, the Northeast Ohio Regional Sewer District (NEORSD) began a more concerted effort to identify and eliminate illicit discharges within its service area (Table 1). According to the United States Environmental Protection Agency, an illicit discharge is "any discharge that is not composed entirely of storm water, except a discharge pursuant to another NPDES permit or a discharge resulting from fire fighting activities." Illicit discharges contribute high levels of pollutants including heavy metals, toxics, oil and grease, solvents, nutrients, and bacteria to receiving water bodies. Pollutant levels from these discharges may be high enough to significantly degrade the water quality of the receiving stream or waterway and threaten aquatic, wildlife, and human health.

| Table 1. Summary of 2013 Program Activities | |
|---|---|
| Number of Outfalls Sampled | 54 |
| Number of Investigations Completed | 29 |
| Number of Problems Remediated | 8 |
| Reduction in Sanitary Sewage Entering Streams | >101,280 gallons/day |
| Number of Spills Responded To | 4 |

The NEORSD Illicit Discharge Detection and Elimination program includes strategies for prioritizing, monitoring, and ultimately removing sources of illicit discharges by working with member communities. The Cuyahoga County Board of Health routinely samples storm sewer outfalls at the request of communities needing to fulfill Municipal Separate Storm Sewer System (MS4) permits. The results from this sampling were used to initiate additional sample collection at those outfalls with the highest *E. coli* densities in order to prioritize source tracking and remediation efforts. Sampling was also conducted in response to nuisance complaints conveyed to NEORSD.

Outfall prioritization was based on the combination of volume of flow coming from the outfall and *E. coli* densities. All outfalls with flows greater than 25,000 gallons per day (GPD) were automatically given the highest priority because this indicated a

significant issue. For all other flows, the method for prioritization was based on the amount of flow and the strength of the pollutants within that discharge. Additional consideration was given if the discharge was located within a park or other public use area or had a high visual impact or strong odor.

Outfall investigations included tracing all sources of flow during dry weather to determine where they were coming from. Generally, source tracking consisted of visual and video inspections of the sewer system, sample collection for bracketing high *E. coli* densities within the system, and dye testing to document improper connections to the storm sewer. In the case of water leaks, fluoride and chloride concentrations were also measured. Results from these investigations were then conveyed to the appropriate community for remediation.

A total of 54 outfalls were sampled in 2013, and 29 investigations on the highest priority outfalls were completed. Some of these investigations included following up with past issues to determine if they had been addressed. From the investigations that were completed in 2013, eight problems were remediated by working with the communities. Four of these problems included sanitary sewage blockages that had resulted in large quantities of sewage being discharged to the environment. The total volume of sewage eliminated from entering area streams was greater than 100,000 gallons per day. Due to the nature of some of the problems that were fixed, an exact volume could not be determined. In addition to these activities, Water Quality and Industrial Surveillance (WQIS) Division personnel also responded to a number of spills that entered local streams. Activities related to these spills included, where possible, determining a volume of material spilled and working with other agencies to minimize impacts to the receiving streams through the use of spill containment equipment.

The pages that follow detail the outfalls that were investigated and spills that WQIS personnel responded to in 2013. Included for each is a summary of current issues and further actions that are needed to help remediate the problem. For those outfalls that were sampled, but not investigated, a table is included showing the sampling results.

## ABRAM CREEK

### ACMB1354

**Receiving Water:** Abram Creek Main Branch

**Community:** Middleburg Heights

**Location:** Across from 7031 Fry Road

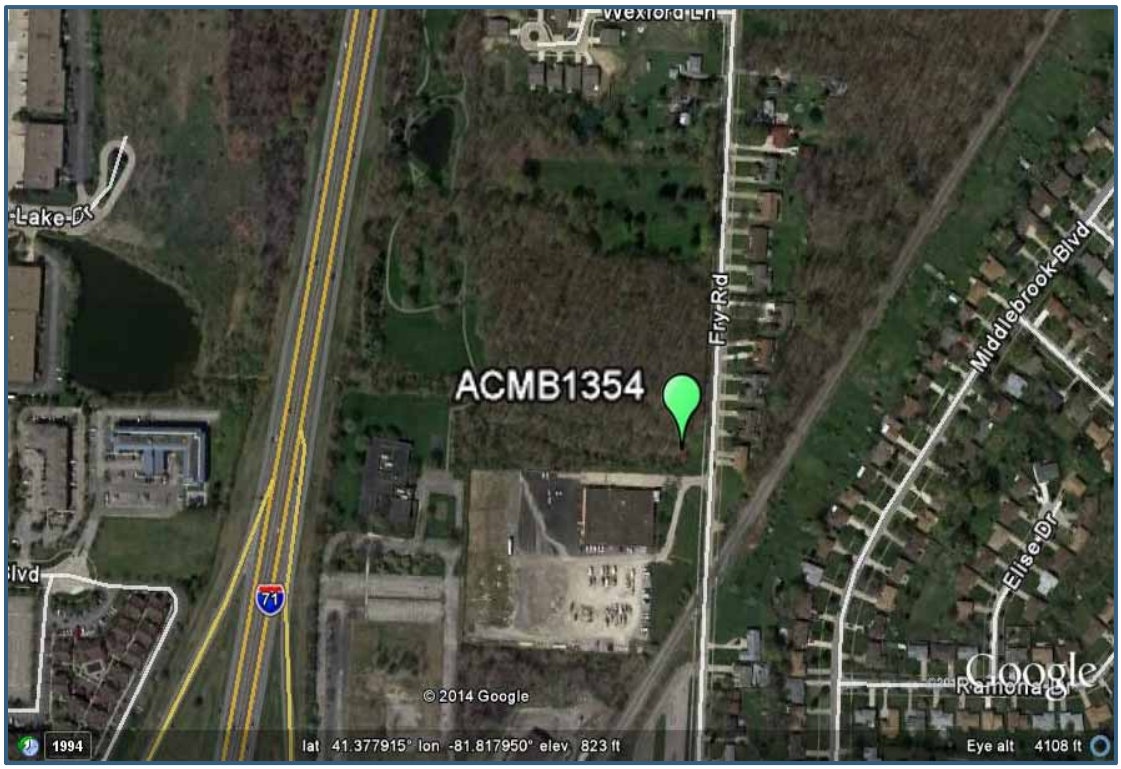
**Outfall conditions as of most recent sampling:**

*E. coli* Density: 11,778 Most Probable Number (MPN)/100mL

**Problem Summary:** Dry weather flow was traced to between 7031 and 6975 Fry Road. Improper connections between homes and storm sewer may be present. Dye testing should be conducted to determine all sources of sanitary sewage to the storm sewer.

**Community Notification:** A letter was sent to the City of Middleburg Heights on October 11, 2013, detailing need to conduct dye testing of homes.

**Status:** Community notified. Remediation pending.



## AMH10030

**Receiving Water:** Abrams Creek Middleburg Heights Tributary 1

**Community:** Middleburg Heights

**Location:** Behind 14400 Newton Road

**Outfall conditions as of most recent sampling:**

Flow: 26,000 gallons/day
*E. coli* Density: 5,400 Colony-Forming Units (CFU)/100mL

**Problem Summary:** Problem is intermittent. Dry weather flow was traced to between 14200 Newton Road and 14400 Newton Road. Improper connection between the home at 14223 Newton Road and the storm sewer has already been documented. Other possible improper connections may also be present in area; dye testing by the City of Middleburg Heights should be conducted to determine all sources of sanitary sewage to the storm sewer.

**Community Notification:** A letter was sent to the City of Middleburg Heights on February 6, 2014, detailing need to conduct dye testing of homes.

**Status:** Community notified. Remediation pending.

## BAKERS CREEK

### BKMB0006

**Receiving Water:** Bakers Creek Main Branch

**Community:** Strongsville

**Location:** 19445 Drake Road

**Outfall conditions as of most recent sampling:**

Flow: 2,000 gallons/day
*E. coli* Density: 2,150 CFU/100mL

**Problem Summary:** Homes in area have home sewage treatment systems. Problem could be due to a failing system.

**Community Notification:** A copy of the investigation report was sent to the Cuyahoga County Board of Health on January 24, 2014, detailing need to determine which systems are failing and take appropriate action to remediate them.

**Status:** Cuyahoga County Board of Health notified. Remediation pending.

## BKMB0007

**Receiving Water:** Bakers Creek Main Branch

**Community:** Strongsville

**Location:** 19445 Drake Road

**Outfall conditions as of most recent sampling:**

Flow: 70 gallons/day
*E. coli* Density: 9,333 CFU/100mL

**Problem Summary:** Homes in area have home sewage treatment systems. Problem could be due to a failing system.

**Community Notification:** A copy of the investigation report was sent to the Cuyahoga County Board of Health on January 24, 2014, detailing need to determine which systems are failing and take appropriate action to remediate them.

**Status:** Cuyahoga County Board of Health notified. Remediation pending.

## BKMB0008

**Receiving Water:** Bakers Creek Main Branch

**Community:** Strongsville

**Location:** 19445 Drake Road

**Outfall conditions as of most recent sampling:**

Flow: 5,000 gallons/day
*E. coli* Density: 1,000 CFU/100mL

**Problem Summary:** Homes in area have home sewage treatment systems. Problem could be due to a failing system.

**Community Notification:** A copy of the investigation report was sent to the Cuyahoga County Board of Health on January 24, 2014, detailing need to determine which systems are failing and take appropriate action to remediate them.

**Status:** Cuyahoga County Board of Health notified. Remediation pending.

## BKMB0009

**Receiving Water:** Bakers Creek Main Branch

**Community:** Strongsville

**Location:** 19445 Drake Road

**Outfall conditions as of most recent sampling:**

Flow: 400 gallons/day
*E. coli* Density: 212 CFU/100mL

**Problem Summary:** Previous sampling indicated elevated *E. coli* densities. Homes in area have home sewage treatment systems. Problem could be due to a failing system.

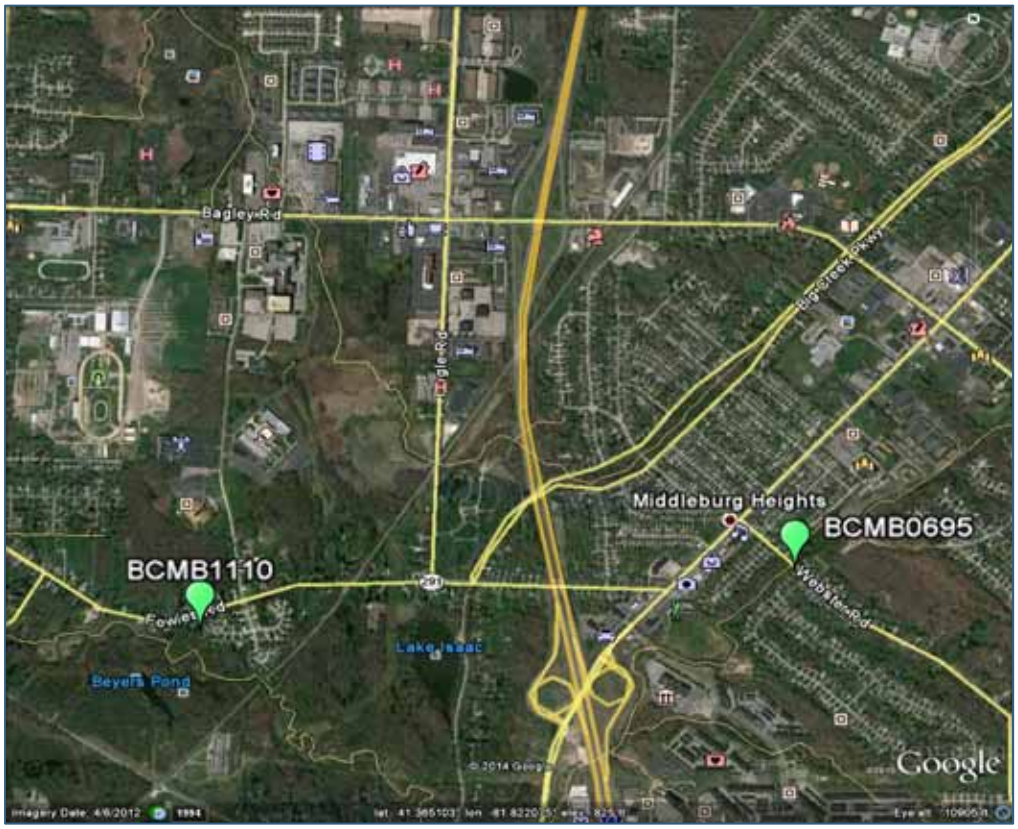
**Community Notification:** A copy of the investigation report was sent to the Cuyahoga County Board of Health on January 24, 2014, detailing need to determine which systems are failing and take appropriate action to remediate them.

**Status:** Cuyahoga County Board of Health notified. Remediation pending.

## BALDWIN CREEK

### OUTFALLS SAMPLED, NOT INVESTIGATED

| Outfall | Date | *E. coli* Density (CFU/100mL or MPN/100mL) | Flow (Gallons per day) |
|---|---|---|---|
| BCMB0695 | 9/11/13 | 46,400 | 600 |
| BCMB1250 | 9/11/13 | 3,500 | Standing water only |



## BEECHERS BROOK

### BBMB0025

**Receiving Water:** Beechers Brook Main Branch

**Community:** Mayfield

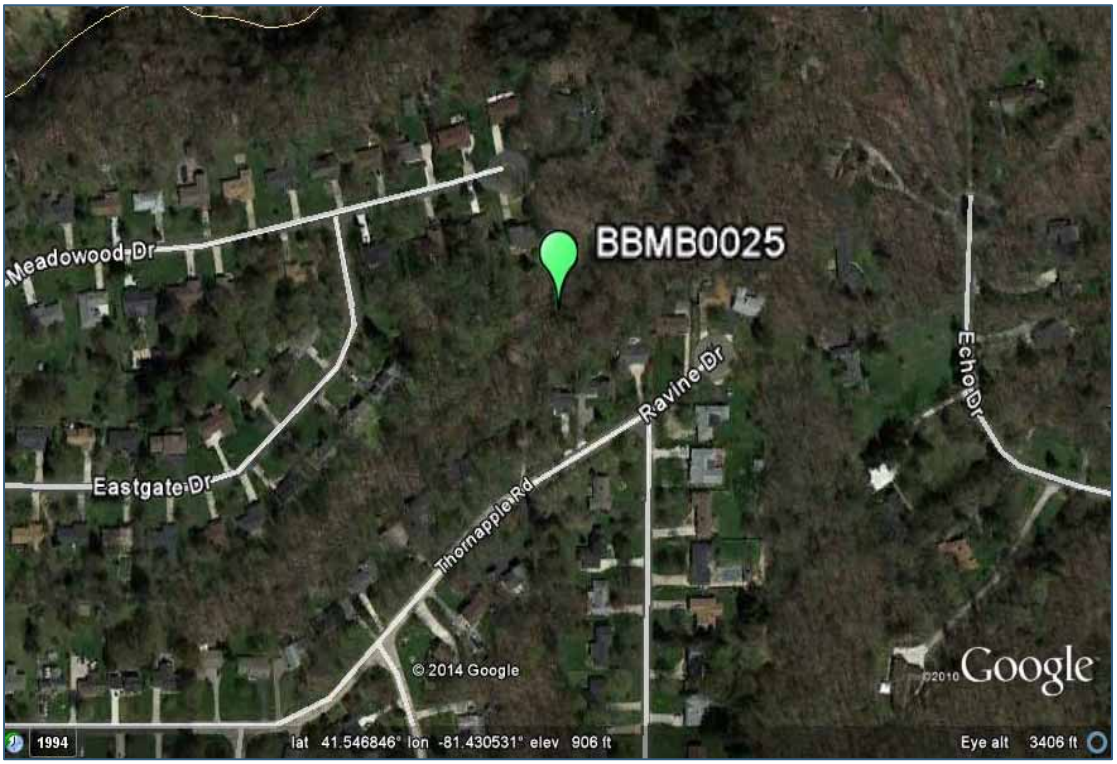
**Location:** Behind 6827 Thornapple Road

**Outfall conditions as of most recent sampling:**

Flow: 22,982 gallons/day
*E. coli* Density: 100,800 CFU/100mL

**Problem Summary:** Some homes in area have home sewage treatment systems. Problem could be due to failing systems.

**Status:** Investigation complete. Cuyahoga County Board of Health notification pending.



## BBMB0026

**Receiving Water:** Beechers Brook Main Branch

**Community:** Mayfield

**Location:** Behind 6827 Thornapple Road

**Outfall conditions as of most recent sampling:**

Flow: 20,377 gallons/day
*E. coli* Density: 6,800 CFU/100mL

**Problem Summary:** Some homes in area have home sewage treatment systems. Problem could be due to failing systems.

**Status:** Investigation complete. Cuyahoga County Board of Health notification pending.

## BIG CREEK

### BGMB0600

**Receiving Water:** Big Creek Main Branch

**Community:** Parma Heights

**Location:** Under Pearl Road Bridge

**Outfall conditions as of most recent sampling:**

Flow: 8,640 gallons/day
*E. coli* Density: 87,040 MPN/100mL

**Problem Summary:** Dry weather flow was traced to Sherborn Drive between Glendora Lane and Appleton Drive. Improper connections between homes and storm sewer may be present. Dye testing should be conducted to determine all sources of sanitary sewage to the storm sewer.

**Community Notification:** The City of Parma Heights was contacted via email on February 10, 2014, regarding status of the problem. They are conducting a video inspection of the storm sewer to determine improper connections in the area.

**Status:** Community notified. Remediation pending.

## BGMB0610

**Receiving Water:** Big Creek Main Branch

**Community:** Parma Heights

**Location:** Under Pearl Road Bridge

**Outfall conditions as of most recent sampling:**

Flow: 3,000 gallons/day
*E. coli* Density: 52,310 MPN/100mL

**Problem Summary:** Dry weather flow was traced to Manorford Drive and Alyesworth Drive. Improper connections between homes and storm sewer may be present. Dye testing should be conducted to determine all sources of sanitary sewage to the storm sewer.

**Status:** Investigation complete. Community notification pending.

## BGMB0810

**Receiving Water:** Big Creek Main Branch

**Community:** Parma

**Location:** Under Snow Road

**Outfall conditions as of most recent sampling:**

Flow: 108,000 gallons/day
*E. coli* Density: 1 MPN/100mL

**Problem Summary:** A water leak was traced to between 5846 and 5866 Royal Parkway Drive in Parma Heights.

**Community Notification:** The Cleveland Water Department was informed of the leak on 10/31/13.

**Status:** Cleveland Water Department notified. Remediation pending.

## BGMB0820

**Receiving Water:** Big Creek Main Branch

**Community:** Parma

**Location:** Under Snow Road

**Outfall conditions as of most recent sampling:**

Flow: 17,280 gallons/day
*E. coli* Density: 357,800 MPN/100mL

**Problem Summary:** Dry weather flow was traced to Clearview Drive between Lucy Drive and Eureka Parkway in Parma Heights. Improper connections between homes and storm sewer may be present. Dye testing should be conducted to determine all sources of sanitary sewage to the storm sewer.

**Community Notification:** A letter was sent to the City of Parma Heights on February 10, 2014, detailing need to conduct dye testing of homes.

**Status:** Community notified. Remediation pending.

## BGMB1420

**Receiving Water:** Big Creek Main Branch

**Community:** Cleveland

**Location:** Brookside Park / John Nagy Blvd

**Outfall conditions as of most recent sampling:**

Flow: 4,875 gallons/day
*E. coli* Density: 73,339 MPN/100mL

**Problem Summary:** A sanitary sewer was found leaking into the CSO 053 stormwater outlet near 4087 West 56th Street. Repairs to the sewer are needed.

**Community Notification:** The problem was discussed with the City of Cleveland on May 13, 2014.

**Status:** Community notified. Remediation pending.

## BGMB1550

**Receiving Water:** Big Creek Main Branch

**Community:** Cleveland

**Location:** Valley Road

**Outfall conditions as of most recent sampling:**

Flow: 4,392 gallons/day
*E. coli* Density: 193,650 CFU/100mL

**Problem Summary:** Verified that a previous sanitary sewer collapse near West 38th Street and Muriel Avenue had been remediated. Dry weather flow was traced to (1) between 4007 and 4109 Clybourne Avenue and (2) between intersection of West 35th and Memphis Avenue and 3521 Memphis Avenue. Improper connections between homes and storm sewer may be present. Dye testing should be conducted to determine all sources of sanitary sewage to the storm sewer.

**Community Notification:** A letter was sent to the City of Cleveland on February 11, 2010, detailing the need to conduct video inspections of areas where improper connections may be present.

**Status:** Community notified. Remediation pending.

## OUTFALL TO CSO 084

**Receiving Water:** Big Creek Main Branch

**Community:** Brooklyn

**Location:** East of Ridge Road and Associate Avenue

**Problem Summary:** During a past investigation, it was found that flow coming from a building owned by Cartruck Packaging at 7315 Associate Avenue was going to both the sanitary and storm sewer. Dye testing confirmed that this problem was still ongoing. An investigation into the apparent structural problems in the sewers at this location is needed so that they can be remediated.

**Status:** Investigation complete. Community notification pending.

## BIG CREEK CHEVY BRANCH

**Receiving Water:** Big Creek Chevy Branch

**Community:** Cleveland

**Location:** Culvert opening under GM Plant

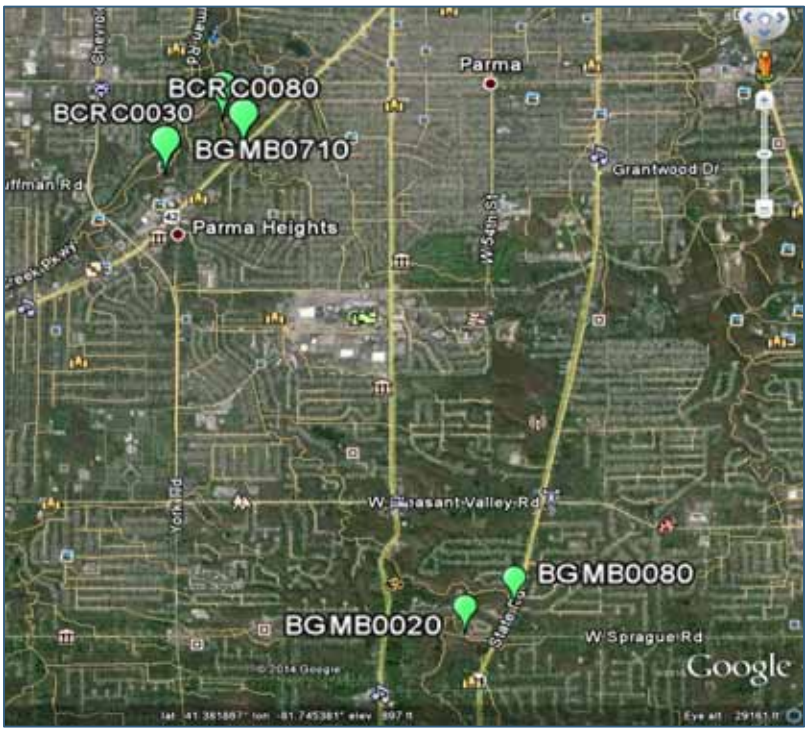
**Problem Summary:** A blocked sanitary sewer at the intersection of Snow Road and Calamie Drive was found and remediated. Dry weather flow was also traced to (1) between 5910 and 5949 Stumph Road and (2) the south end of Doxmere Drive. Improper connections between homes and storm sewer may be present. Dye testing should be conducted to determine all sources of sanitary sewage to the storm sewer.

**Community Notification:** A letter was sent to the City of Parma Heights on February 7, 2014, detailing need to conduct dye testing of homes.

**Status:** Community notified. Problem partially remediated.

## OUTFALLS SAMPLED, NOT INVESTIGATED

| Outfall | Date | *E. coli* Density (CFU/100mL or MPN/100mL) | Flow (Gallons per day) |
|---|---|---|---|
| BCRC0030 | 8/20/13 | 689,600 | 864 |
| BCRC0080 | 8/20/13 | 21,182 | 180 |
| BGMB0020 | 8/21/13 | 1 | 1376 |
| BGMB0080 | 8/21/13 | 124,450 | 11,232 |
| BGMB0710 | 8/20/13 | 2,326 | 120 |



## BRANDYWINE CREEK

### UNNAMED TRIBUTARY

**Receiving Water:** Unnamed tributary to Brandywine Creek

**Community:** Macedonia

**Location:** 8631 Lawton Drive

**Problem Summary:** A concrete slab fell onto a sanitary sewer pipe that crosses the stream, causing a rupture. A sample collected downstream of the discharge had an *E. coli* density of 2,173,980 MPN/100mL.

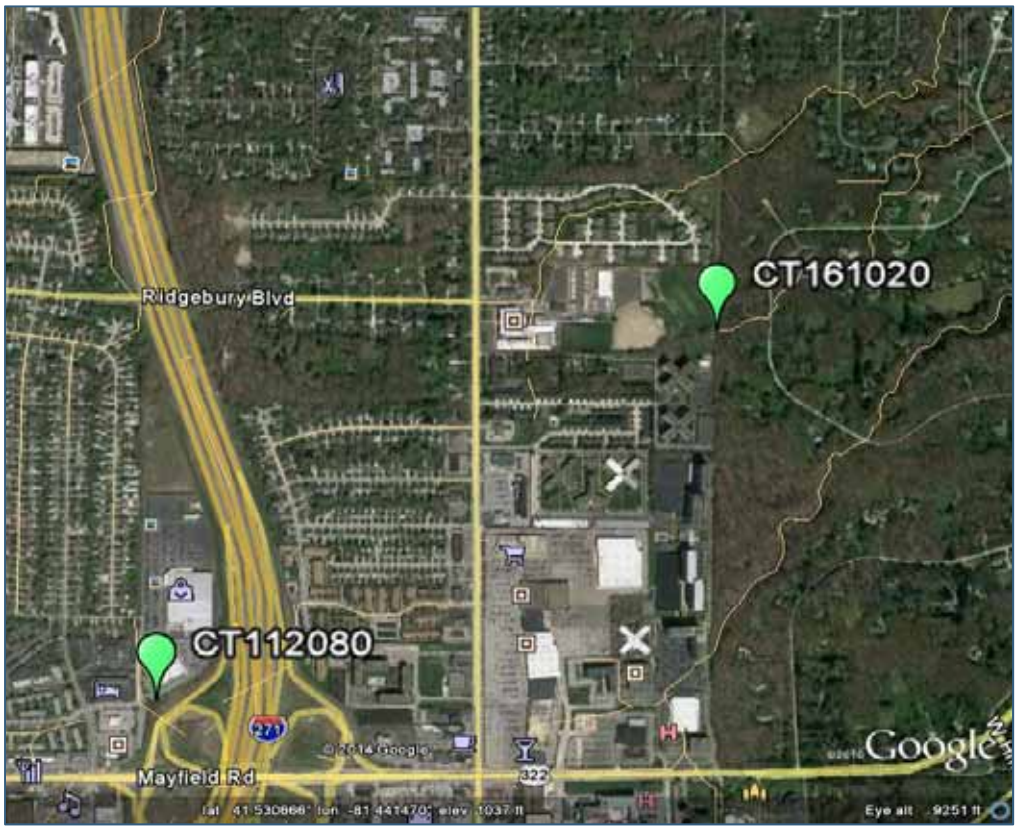
**Community Notification:** Summit County Environmental Services was notified of the problem via a phone call on September 20, 2013, and they fixed the problem.

**Status:** Problem remediated.

## CHAGRIN RIVER

### OUTFALLS SAMPLED, NOT INVESTIGATED

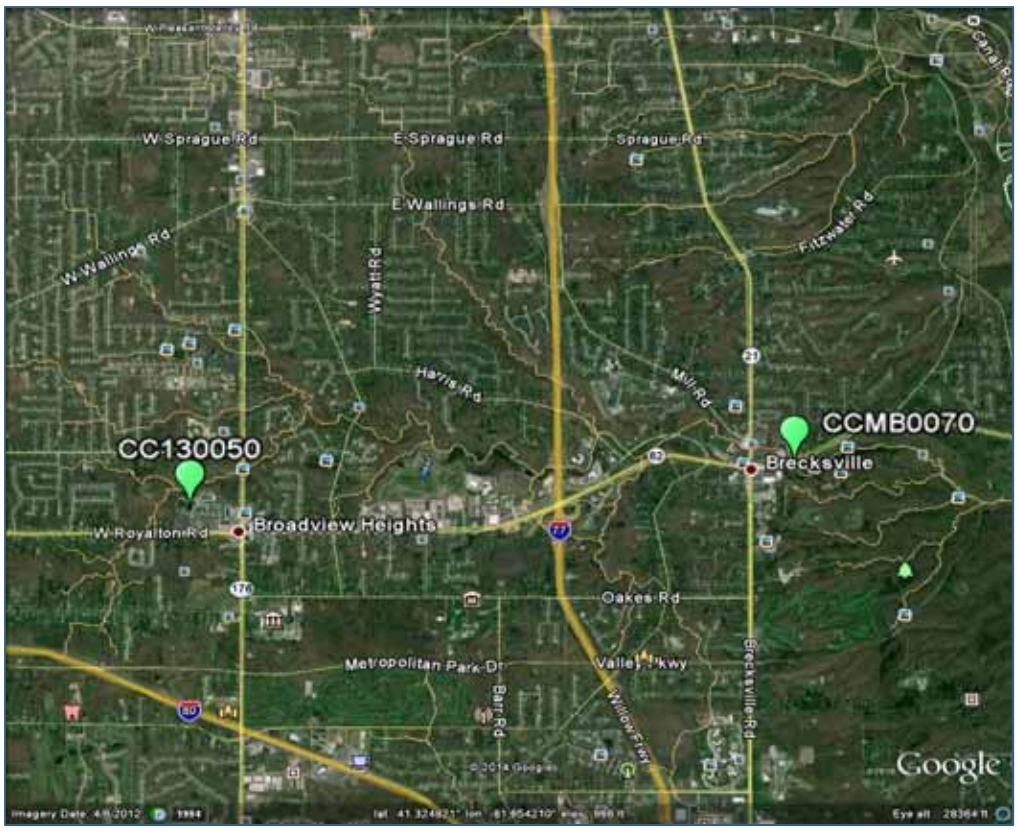
| Outfall | Date | *E. coli* Density (CFU/100mL or MPN/100mL) | Flow (Gallons per day) |
|---|---|---|---|
| CT112080 | 10/30/2013 | 26,833 | 320 |
| CT161020 | 10/30/2013 | 13 | 6,847 |



## CHIPPEWA CREEK

### OUTFALLS SAMPLED, NOT INVESTIGATED

| Outfall | Date | *E. coli* Density (CFU/100mL or MPN/100mL) | Flow (Gallons per day) |
|---|---|---|---|
| CC130050 | 8/21/13 | 2473 | 68 |
| CCMB0070 | 8/26/13 | 876 | 25 |



## CUYAHOGA RIVER

### CSO 092

**Receiving Water:** Cuyahoga River

**Community:** Cleveland

**Location:** Western end of Front Avenue

**Problem Summary:** A blocked sanitary sewer on Front Avenue resulted in sewage going to the CSO 092 stormwater outlet and, eventually, the Cuyahoga River.

**Community Notification:** The City of Cleveland Division of Water Pollution Control was notified of the problem and they cleared the blockage.

**Status:** Problem remediated.

## DUGWAY BROOK

### STORM SEWER ON EUCLID HEIGHTS BOULEVARD

**Receiving Water:** Dugway Brook Main Branch

**Community:** Cleveland Heights

**Location:** Euclid Heights Boulevard

**Problem Summary:** A blocked sanitary sewer near the intersection of Wilton Road and Somerton Road resulted in sewage going to the storm sewer, and eventually, Dugway Brook.

**Community Notification:** The City of Cleveland Heights was notified of the problem on August 22, 2013, and they cleared the blockage.

**Status:** Problem remediated.

## EUCLID CREEK

### ECMB0050


**Receiving Water:** Euclid Creek Main Branch

**Community:** Cleveland

**Location:** Western end of Hoover Road

**Outfall conditions as of most recent sampling:**

*E. coli* Density: 4,080 CFU/100mL

**Problem Summary:** An improper connection between the basement of a home at 817 Hoover Avenue and the storm sewer still needs to be remediated.

**Community Notification:** The problem was discussed with the City of Cleveland at an in-person meeting on April 8, 2014.

**Status:** Community notified. Remediation pending.

## ECMB0060

**Receiving Water:** Euclid Creek Main Branch

**Community:** Cleveland

**Location:** Western end of Lakeport Avenue

**Outfall conditions as of most recent sampling:**

*E. coli* Density: 5,200 CFU/100mL

**Problem Summary:** A sanitary sewer connection to storm sewer near 17506 Lakeport Boulevard still needs to be remediated. Other possible improper connections may be present on Brazil Road and at 17515 and 17516 Lakeport Boulevard. Dye testing should be conducted to determine all sources of sanitary sewage to the storm sewer.

**Community Notification:** The problem was discussed with the City of Cleveland at an in-person meeting on April 8, 2014.

**Status:** Community notified. Remediation pending.

## ECMB0120

**Receiving Water:** Euclid Creek Main Branch

**Community:** Cleveland

**Location:** Under Lakeshore Boulevard

**Outfall conditions as of most recent sampling:**

Flow: 6,000 gallons/day
*E. coli* Density: 230,550 MPN/100mL

**Problem Summary:** An improper connection between the apartment building at 17530 Lake Shore Boulevard and the storm sewer still needs to be remediated.

**Community Notification:** The problem was discussed with the City of Cleveland at an in-person meeting on April 8, 2014.

**Status:** Community notified. Remediation pending.

## ECMB0150

**Receiving Water:** Euclid Creek Main Branch

**Community:** Cleveland

**Location:** 17805 Brian Avenue

**Outfall conditions as of most recent sampling:**

Flow: Trickle
*E. coli* Density: 11,550 MPN/100ml.

**Problem Summary:** A sanitary sewer overflow located at 959 E. 178th Street has not been remediated.

**Community Notification:** The problem was discussed with the City of Cleveland at an in-person meeting on April 8, 2014.

**Status:** Community notified. Remediation pending.

## ECMB0300

**Receiving Water:** Euclid Creek Main Branch

**Community:** Euclid

**Location:** 1464 Dille Road

**Outfall conditions as of most recent sampling:**

Flow: 57,600 gallons/day
*E. coli* Density: 20,530 MPN/100mL

**Problem Summary:** Improper connections were found between two of the buildings at Indian Hills Apartments and the storm sewer.

**Community Notification:** On September 6, 2013, WQIS Investigators met with the City of Euclid to discuss current problems and what needed to be fixed. One of the improper connections was remediated; the other is scheduled to be fixed in 2014.

**Status:** Community notified. Remediation pending.

## ECMB0350

**Receiving Water:** Euclid Creek Main Branch


**Community:** Euclid

**Location:** 20611 Euclid Avenue

**Outfall conditions as of most recent sampling:**

Flow: 3,000 gallons/day
*E. coli* Density: 13,619 CFU/100mL

**Problem Summary:** Flow with elevated *E. coli* densities was traced along Euclid Avenue to Grand Boulevard. A video inspection of the indicated improper connections between the apartment buildings located at 20200 and 20240 Grand Boulevard and the storm sewer. The City of Euclid needs to conduct dye testing to verify improper connections.

**Status:** Investigation complete. Community notification pending.

## ECWB3170

**Receiving Water:** Euclid Creek West Branch

**Community:** South Euclid

**Location:** Between Tellhurst Road & Liberty Road

**Outfall conditions as of most recent sampling:**

Flow: 14,400 gallons/day
*E. coli* Density: 456 MPN/100mL

**Problem Summary:** Previous investigations traced dry-weather flow with elevated *E. coli* densities to between Lilac Road and the outfall. The results from the most recent sampling indicate that the problem potentially may have been remediated.

**Community Notification:** The City of South Euclid Service Director was contacted to determine the status of any remediation efforts, but no response was received.

**Status:** Community notified. Remediation unknown.

## ECWB3250

**Receiving Water:** Euclid Creek West Branch

**Community:** South Euclid

**Location:** Under Green Road

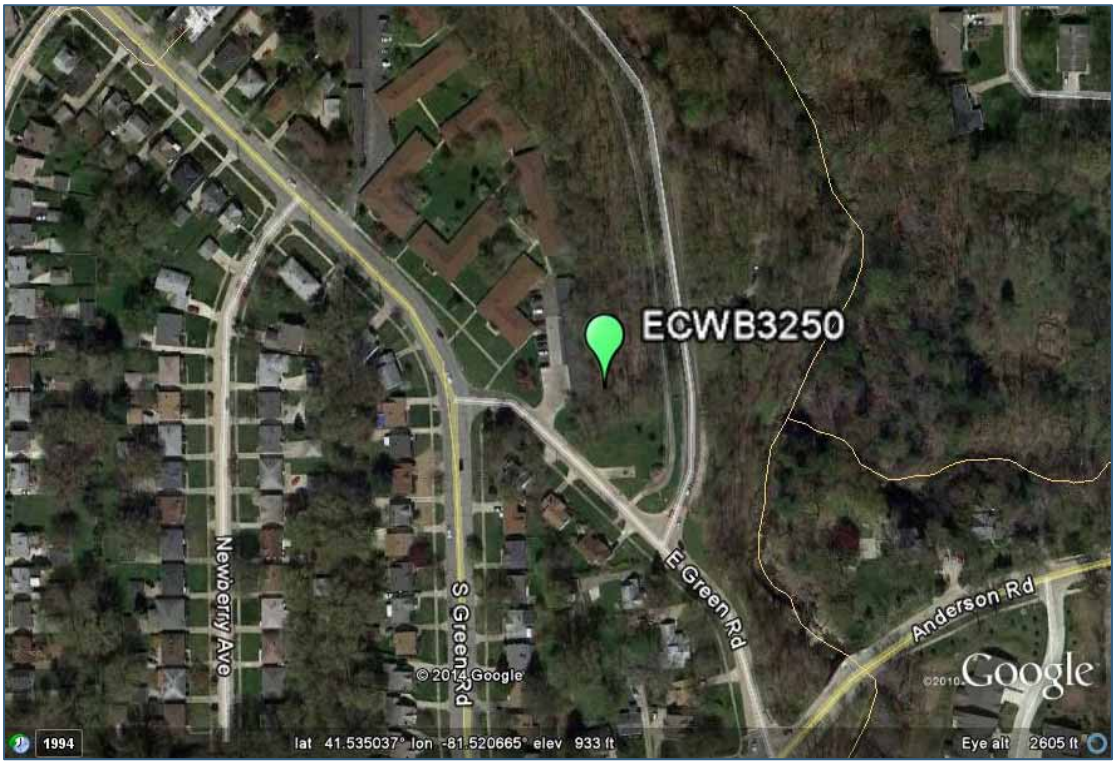
**Outfall conditions as of most recent sampling:**

Flow: 22,979 gallons/day
*E. coli* Density: 4,540 MPN/100mL

**Problem Summary:** Dry weather flow with elevated *E. coli* densities was traced to Adrian Road. Improper connections between homes and the storm sewer may be present. Dye testing should be conducted to determine all sources of sanitary sewage to the storm sewer.

**Community Notification:** A letter was sent to the City of South Euclid on February 14, 2014, detailing need to conduct dye testing of homes.

**Status:** Community notified. Remediation pending.



## ECE20030

**Receiving Water:** Euclid Creek East Branch Tributary 2

**Community:** Richmond Heights

**Location:** 436 Dumbarton Boulevard

**Outfall conditions as of most recent sampling:**

*E. coli* Density: 1 MPN/100mL

**Problem Summary:** During a previous investigation, dry weather flow with elevated *E. coli* densities was traced to Foxwynde Trail. The City of Richmond Heights has conducted a series of dye tests in the area and found some improper connections between homes and the storm sewer.

**Community Notification:** The City of Richmond Heights engineer was contacted on July 9, 2013; he indicated that all issues were addressed.

**Status:** Problem remediated.

## OUTFALL AT 4982 CLUBSIDE ROAD

**Receiving Water:** Euclid Creek Tributary

**Community:** Lyndhurst

**Location:** 4982 Clubside Road

**Outfall conditions as of most recent sampling:**

*E. coli* Density: 1,967 MPN/100mL

**Problem Summary:** During a previous investigation, it was found that the presence of an over/under sewer system in the area had resulted in intermittent discharges of sanitary sewage to the outfall. Plans for separation of the sewers are intended to remediate this problem.

**Community Notification:** The problem was discussed with the Lyndhurst Service Director on August 5, 2010.

**Status:** Community notified. Remediation pending.

## OUTFALL AT 5235 THORNBURY ROAD

**Receiving Water:** Euclid Creek West Tributary 2

**Community:** Lyndhurst

**Location:** 5235 Thornbury Road

**Outfall conditions as of most recent sampling:**

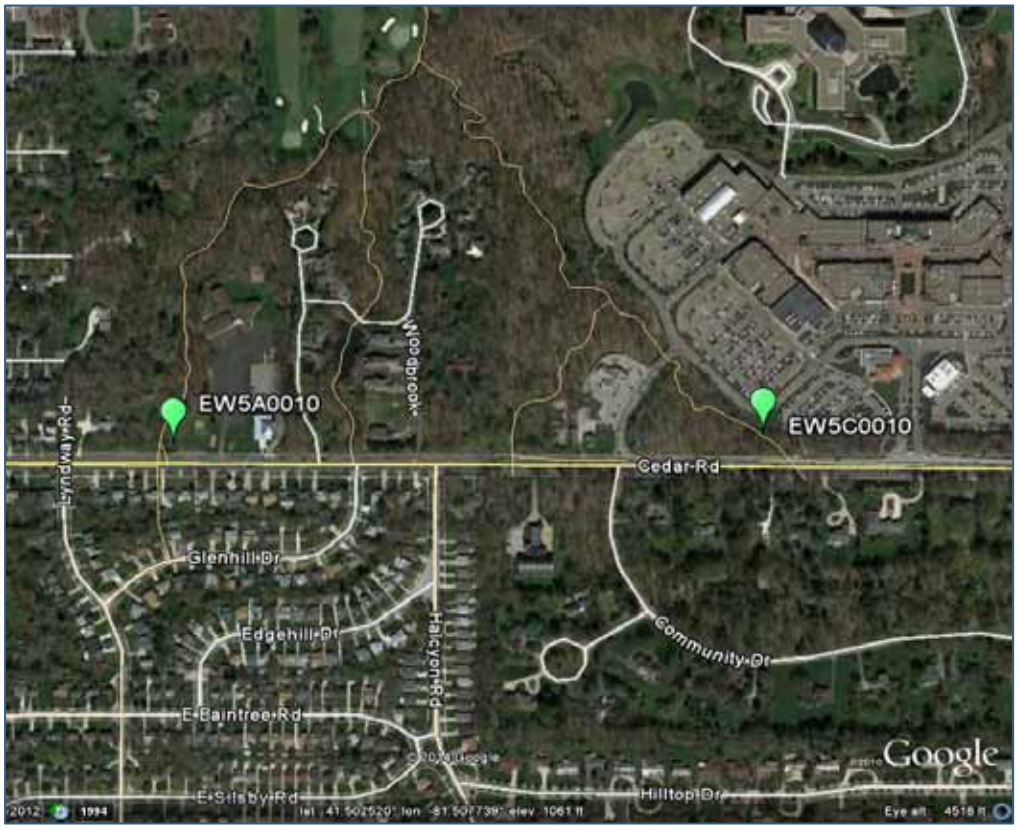
Flow: 32 gallons/day
*E. coli* Density: 146,800 MPN/100mL

**Problem Summary:** During a previous investigation, dry weather flow with elevated *E. coli* densities was traced to between 5138 and 5235 Thornbury Road. Improper connections between homes and the storm sewer may be present. Dye testing should be conducted to determine all sources of sanitary sewage to the storm sewer in that area.

**Status:** Investigation complete. Community notification pending.

## OUTFALLS SAMPLED, NOT INVESTIGATED

| Outfall | Date | *E. coli* Density (CFU/100mL or MPN/100mL) | Flow (Gallons per day) |
|---|---|---|---|
| EW5A0010 | 9/6/2013 | 121,000 | 100 GPD |
| EW5C0010 | 9/6/2013 | 47 | 100 GPD |



## LAKE ERIE

### CSO 093

**Receiving Water:** Lake Erie

**Community:** Cleveland

**Location:** West 3rd Street and Lakeside Road

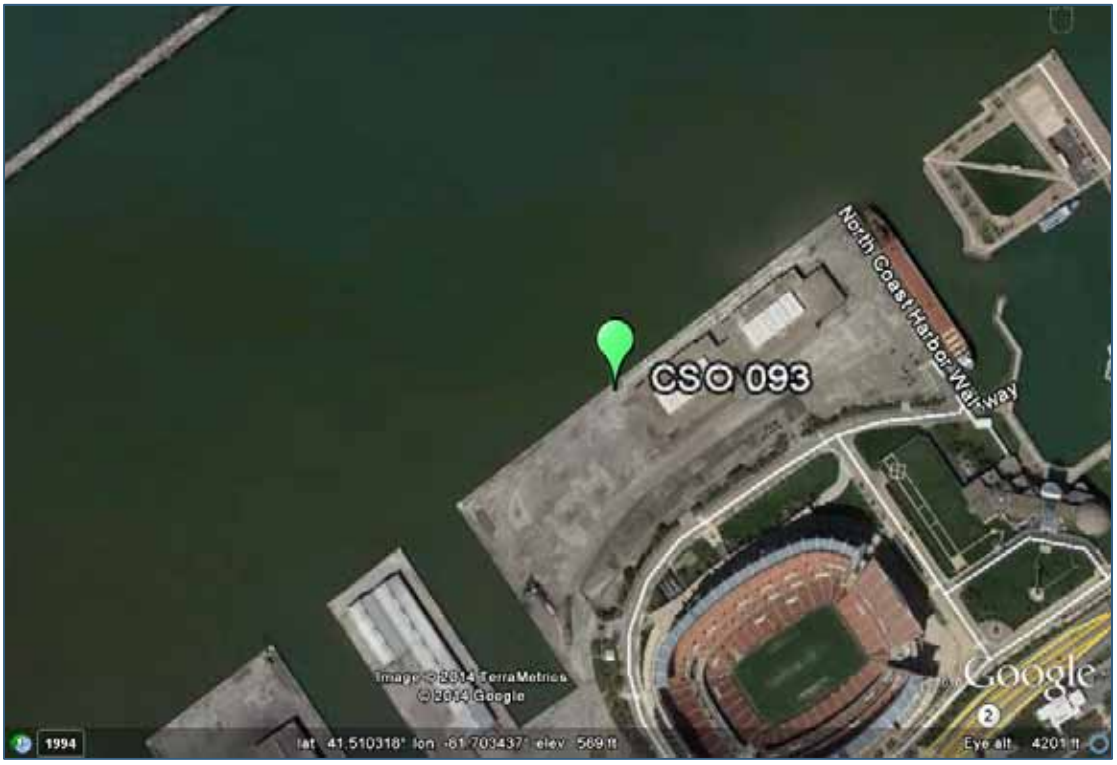
**Outfall conditions as of most recent sampling:**

*E. coli* Density: 460,400 MPN/100mL

**Problem Summary:** Buildings at 1150 West 3rd Street and 310 Lakeside Avenue are improperly connected to the CSO 093 stormwater outlet.

**Community Notification:** A letter was sent to the City of Cleveland on November 8, 2007, detailing problem and the need to have the buildings properly connected to the sanitary sewer.

**Status:** Community notified. Remediation pending.



## CSO 099

**Receiving Water:** Lake Erie

**Community:** Cleveland

**Location:** West 3rd Street and Lakeside Road

**Problem Summary**: An improper connection exists between Par-One Golf Specialties located at 3807 King Avenue and the CSO 099 stormwater outlet.

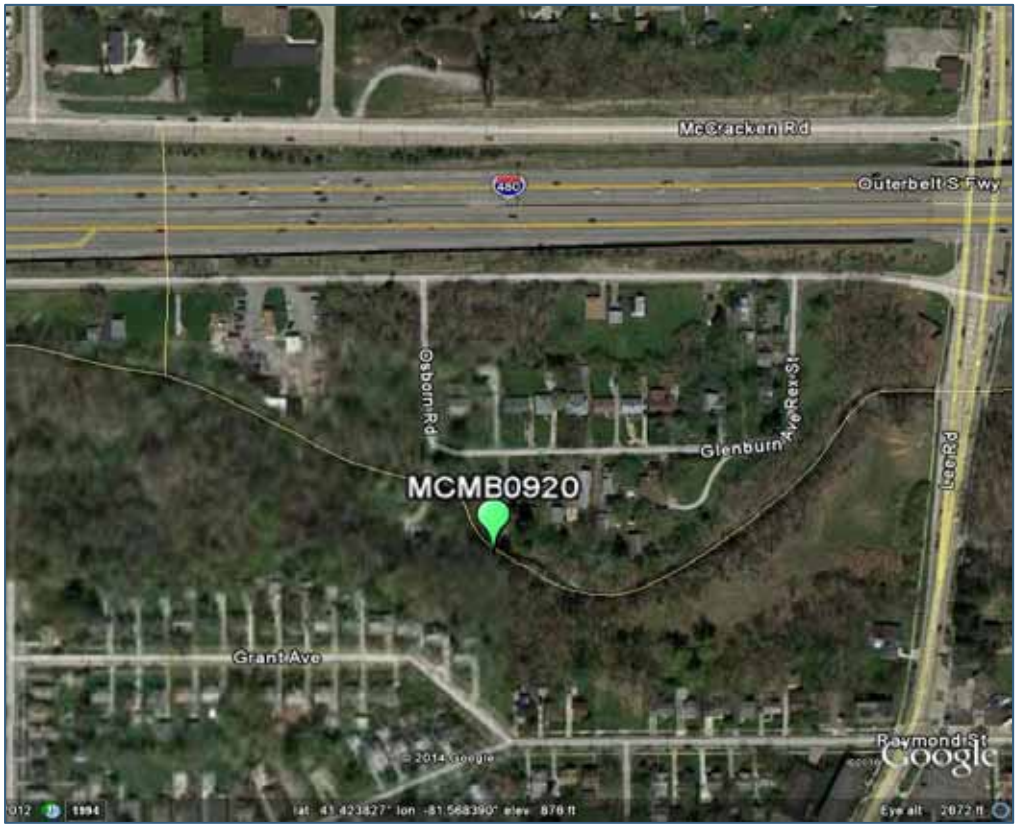
**Community Notification:** A letter was sent to the City of Cleveland on May 28, 2004, detailing the problem and the need to have the building properly connected to the sanitary sewer.

**Status:** Community notified. Remediation pending.

## MILL CREEK

### OUTFALLS SAMPLED, NOT INVESTIGATED

| Outfall | Date | *E. coli* Density (CFU/100mL or MPN/100mL) | Flow (Gallons per day) |
|---|---|---|---|
| MCMB0920 | 10/29/13 | 3,886 | 338 |



## ROCKY RIVER

### RRMB0100

**Receiving Water:** Rocky River Main Branch

**Community:** Cleveland

**Location:** Hogsback Lane and Rocky River Drive

**Outfall conditions as of most recent sampling:**

Flow: 200,000 gallons/day
*E. coli* Density: 6,822 MPN/100mL

**Problem Summary:** Dry weather flow with elevated *E. coli* densities was traced to Montrose Avenue and upstream locations. Improper connections between homes and the storm sewer may be present. Dye testing should be conducted to determine all sources of sanitary sewage to the storm sewer in that area.

**Community Notification:** A letter was sent to the City of Cleveland on February 6, 2009, detailing the need to conduct dye testing in the area.

**Status:** Community notified. Remediation pending.

## RRMB0340


**Receiving Water:** Albers Creek

**Community:** Cleveland

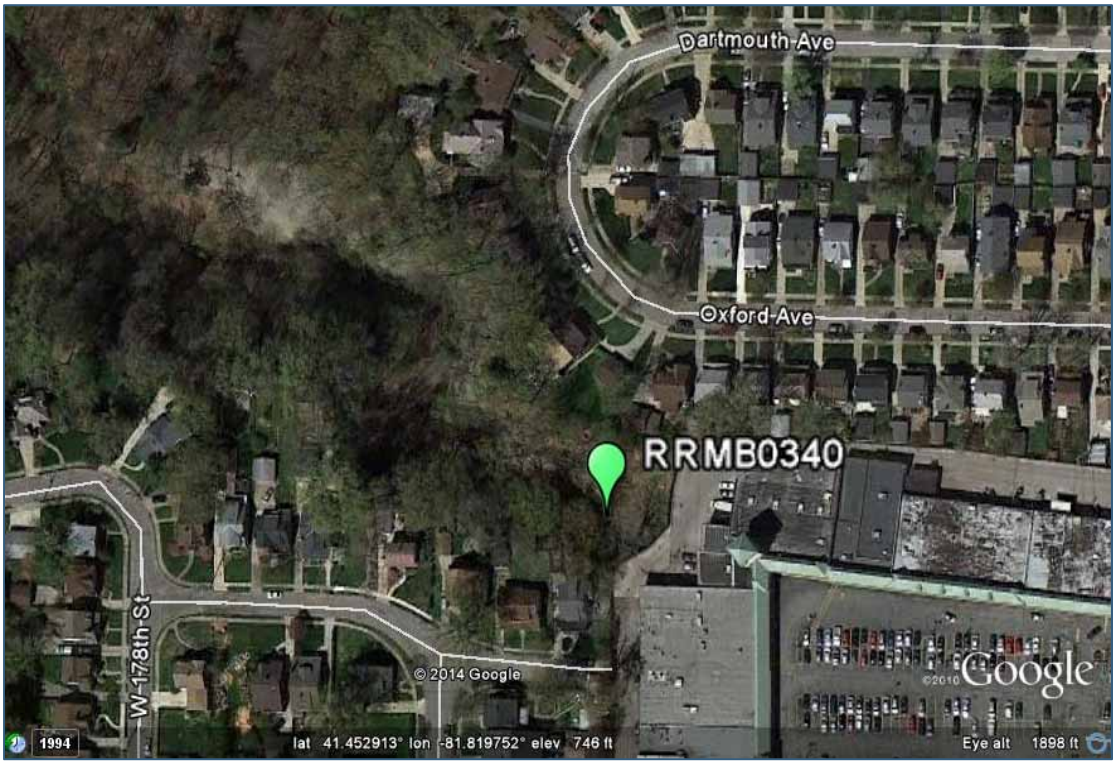
**Location:** Rocky River Drive and Lorain Avenue

**Outfall conditions as of most recent sampling:**

Flow: 30,000 gallons/day
*E. coli* Density: 44,000 MPN/100mL

**Problem Summary:** During a previous investigation, an improper connection between the Abbeyshire Apartments located at 4037 and the storm sewer was found. This improper connection still needs to be remediated.

**Status:** Investigation complete. Community notification pending.



## RRMB0630

**Receiving Water:** Rocky River Main Branch

**Community:** Cleveland

**Location:** Valley Road

**Outfall conditions as of most recent sampling:**

Flow: 8,000 gallons/day
*E. coli* Density: 190,000 CFU/100mL

**Problem Summary:** A collapsed sanitary was discovered on Rocky River Drive near Sedalia Avenue and fixed. Dry weather flow with elevated *E. coli* densities was also traced to Valleyview Avenue and upstream locations and from 4370 Rocky River Drive to the intersection of Rocky River Drive and Elsienna Avenue. Improper connections between homes and the storm sewer may be present. Dye testing should be conducted to determine all sources of sanitary sewage to the storm sewer in this area.

**Reduction in Sanitary Sewage Entering Stream:** 92,000 gallons/day

**Status:** Problem partially remediated. Investigation not complete.

## RRMB0790

**Receiving Water:** Rocky River Main Branch

**Community:** Cleveland

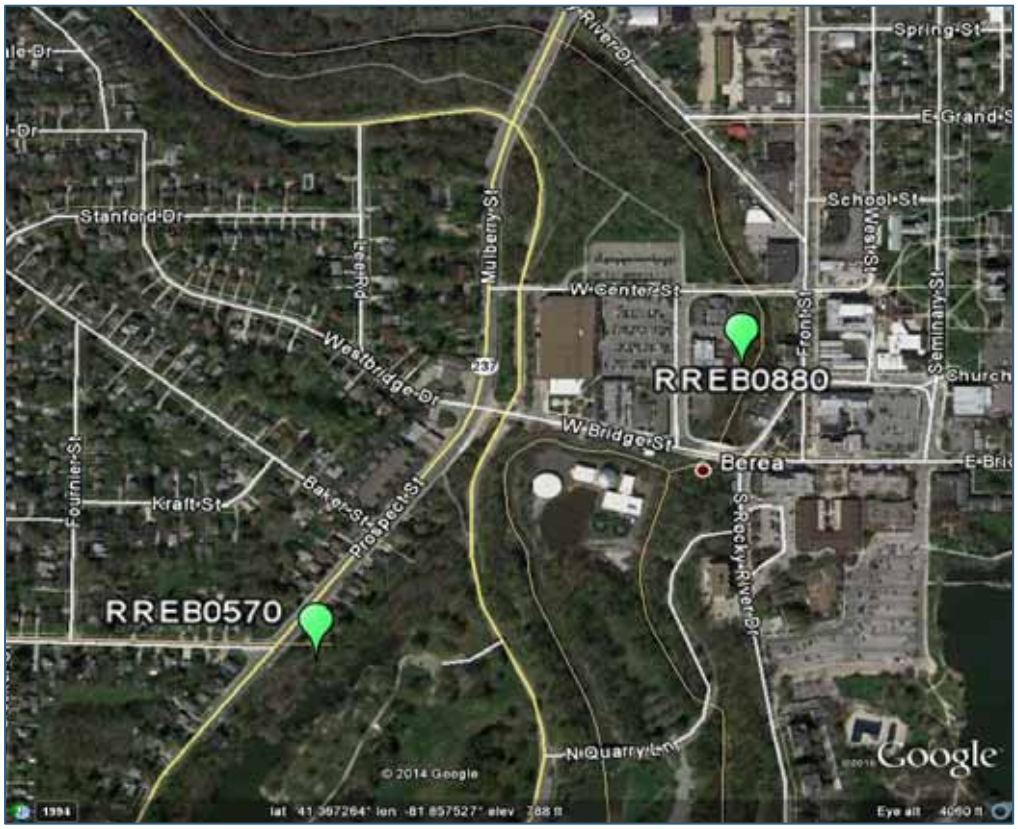
**Location:** Valley Parkway

**Problem Summary:** The Clara Westropp School, located at 19101 Puritas Road, was found to be improperly connected to the storm sewer. The City of Cleveland Division of Water Pollution control was notified and the school was connected to the sanitary sewer.

**Status:** Problem remediated.

## OUTFALLS SAMPLED, NOT INVESTIGATED

| Outfall | Date | *E. coli* Density (CFU/100mL or MPN/100mL) | Flow (Gallons per day) |
|---|---|---|---|
| RREB0570 | 8/19/13 | 3,268 | 21,600 |
| RREB0880 | 8/19/13 | 49,225 | 2,716 |



## STICKNEY CREEK

### SKMB0040

**Receiving Water:** Stickney Creek Main Branch

**Community:** Brooklyn

**Location:** Valley Road

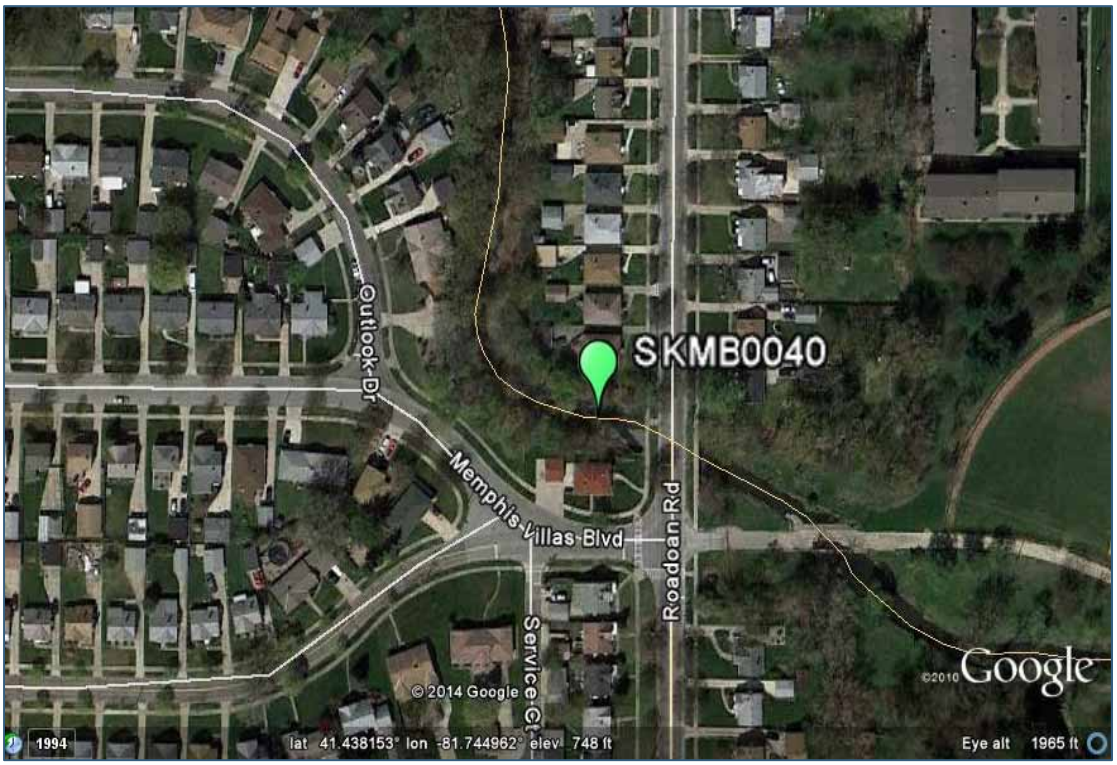
**Outfall conditions as of most recent sampling:**

*E. coli* Density: 120,980 CFU/100mL

**Problem Summary:** Dry weather flow was traced to Outlook Drive, Memphis Villas Boulevard, Roadoan Road, Forest Edge Drive, and Northlane Drive. Improper connections between homes and the storm sewer may be present. Dye testing should be conducted to determine all sources of sanitary sewage to the storm sewer.

**Community Notification:** A letter was sent to the City of Brooklyn on February 10, 2014, detailing the need to dye test homes.

**Status:** Community notified. Remediation pending.



## TINKERS CREEK

### OUTFALLS SAMPLED, NOT INVESTIGATED

| Outfall | Date | *E. coli* Density (CFU/100mL or MPN/100mL) | Flow (Gallons per day) |
|---|---|---|---|
| TMH10020 | 10/29/2013 | 25,400 | 5400 |
| TMH10030 | 10/29/2013 | 1,733 | 428 |

## WEST CREEK

### WCMB0700

**Receiving Water:** West Creek Main Branch

**Community:** Parma

**Location:** Broadview Road

**Outfall conditions as of most recent sampling:**

Flow: 6,000 gallons/day
*E. coli* Density: 9 CFU/100mL

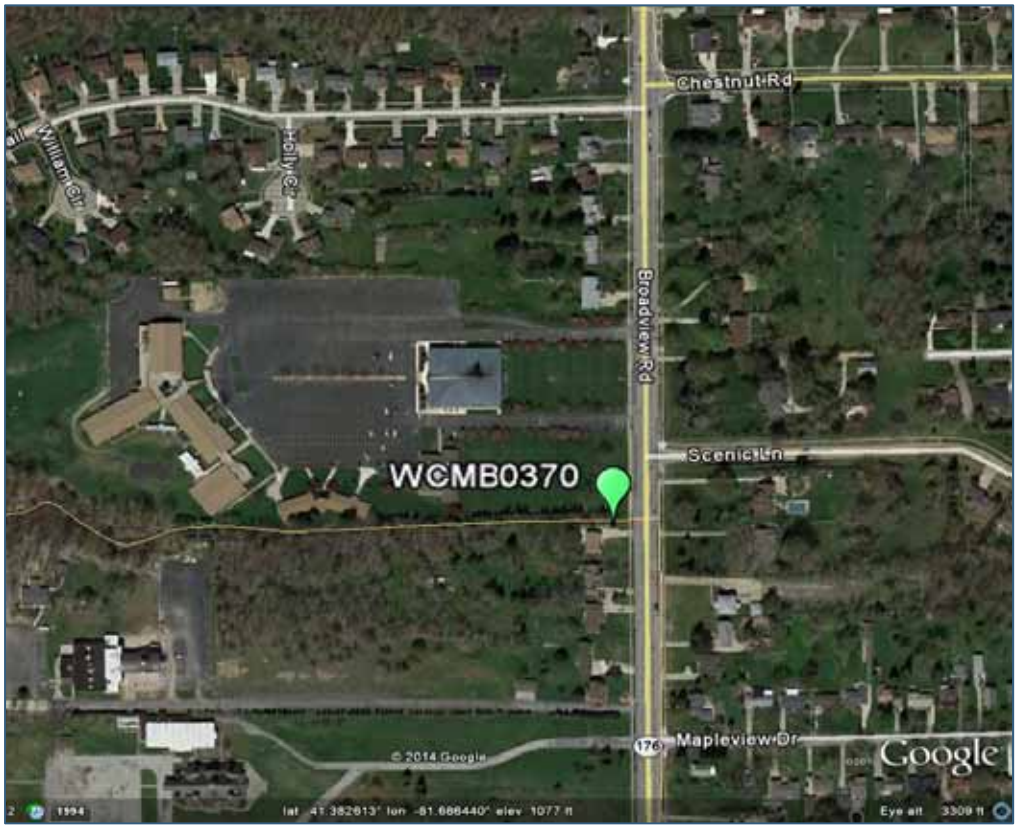
**Problem Summary:** A sanitary sewer blockage was found at the intersection of Broadview Road and Broadrock Court. The City of Parma was notified and the blockage was cleared. Repairs to the storm sewer are needed to prevent future discharges to the outfall.

**Reduction in Sanitary Sewage Entering Stream:** 9,280 gallons/day

**Status:** Investigation complete. Community notification pending. Problem partially remediated.

## OUTFALLS SAMPLED, NOT INVESTIGATED

| Outfall | Date | *E. coli* Density (CFU/100mL or MPN/100mL) | Flow (Gallons per day) |
|---|---|---|---|
| WCMB0370 | 8/21/2013 | 831 | 483,920 |



## WOLF CREEK

### WMMB0040

**Receiving Water:** Wolf Creek Main Branch

**Community:** Garfield Heights

**Location:** North of McCracken Road

**Outfall conditions as of most recent sampling:**

Flow: 16 gallons/day
*E. coli* Density: 7,719 CFU/100mL

**Problem Summary:** A previous investigation at the outfall in 2007 resulted in the discovery of numerous improper connections between homes in the area and the CSO 245 stormwater outlet. As a result of the Phase 3 Mill Creek Tunnel project, all flows due to these improper connections are now diverted to the Mill Creek Tunnel. The small amount of flow present is a result of leakages through stop logs installed upstream of the CSO.

**Status:** Investigation complete. Problem partially remediated.

## WMMB0060

**Receiving Water:** Wolf Creek Main Branch

**Community:** Garfield Heights

**Location:** South of Andover Boulevard & north of McCracken Road

**Outfall conditions as of most recent sampling:**

Flow: 2,440 gallons/day
*E. coli* Density: 119,100 CFU/100mL

**Problem Summary:** During a previous investigation in 2010, dry weather flow with elevated *E. coli* densities was traced to between 4931 Henry Street and the intersection of Henry Street and Crest Avenue. Improper connections between homes and the storm sewer may be present. Dye testing should be conducted to determine all sources of sanitary sewage to the storm sewer in the area.

**Status:** Investigation complete. Community notification pending.

## SPILLS

### OUTFALL TO BIG CREEK (MILK)

**Receiving Water:** Tributary to Big Creek Main Branch

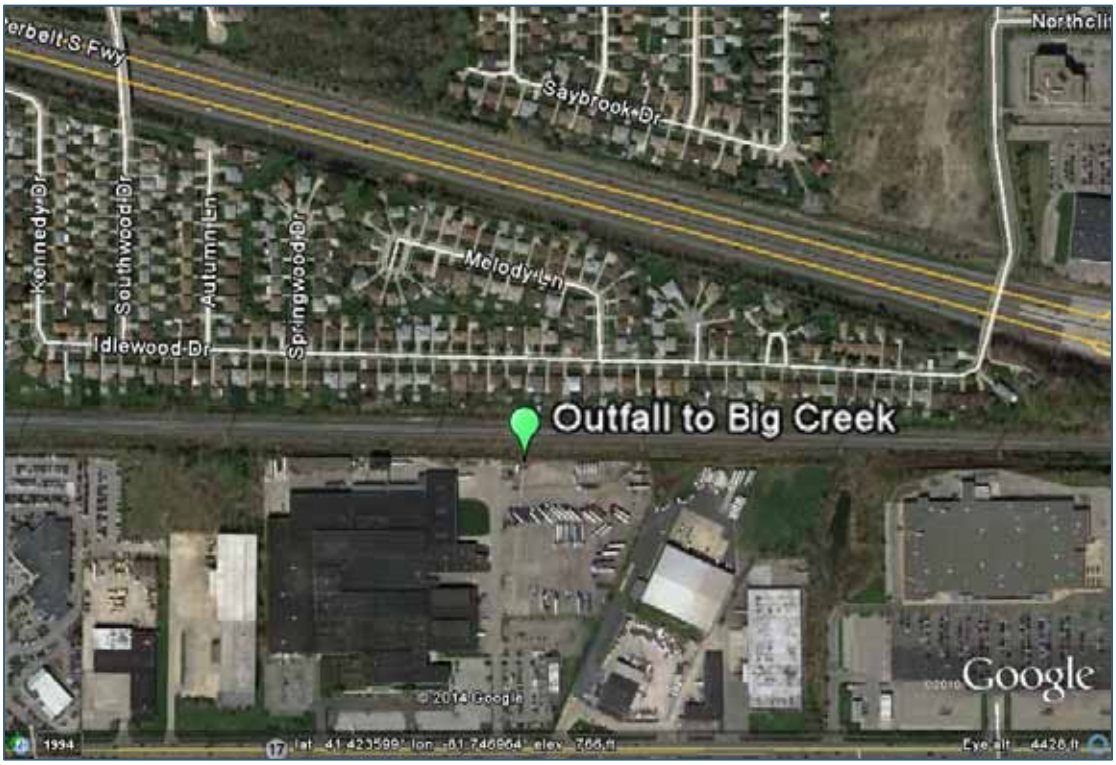
**Community:** Cleveland

**Location:** 8700 Brookpark Road

**Volume Spilled:** Unknown

**Problem Summary:** On January 9, 2013, the Ohio EPA alerted WQIS to a white substance present in catch basins in a parking lot at 8700 Brookpark Road that was discharging to the tributary. It was unknown what quantity of material was present. The source of the material also could not be determined. The Ohio EPA later determined that the substance was milk. The parking lot is used by truck drivers as a rest stop, so it may have come from a delivery truck.

**Status:** Problem remediated.



## CSO 089 (TURBINE OIL)

**Receiving Water:** Cuyahoga River Main Branch

**Community:** Cleveland

**Location:** ArcelorMittal Property

**Volume Spilled:** 20 gallons

**Problem Summary:** On July 14, 2013, the United States Coast Guard requested NEORSD assist them in determining the source of an oil discharge to the Cuyahoga River. It was found that the oil was coming from CSO-089, located on the ArcelorMittal property. After discovery of the discharge, absorbent booms were installed in front of the CSO to capture any remaining discharge. According to ArcelorMittal employees, a leaking heat exchanger on a generator was the source of the light turbine oil that had been discharged.

**Status:** Problem remediated.

## MCMB0980 (DIESEL FUEL)

**Receiving Water:** Mill Creek Main Branch

**Community:** Maple Heights

**Location:** Intersection of Lee Road and McCracken Road

**Volume Spilled:** 200 gallons

**Problem Summary:** As a result of a motor vehicle accident on August 28, 2013, diesel fuel was released to Lee Road. Absorbent material was used to help contain the spill, but an unknown amount went to the storm sewer and Mill Creek. Absorbent booms were installed across Mill Creek downstream of the outfall to help collect fuel present in the stream.

**Status:** Problem remediated.

## CSO 035 (DIESEL FUEL)

**Receiving Water:** Cuyahoga River

**Community:** Cleveland

**Location:** ArcelorMittal Property

**Volume Spilled:** 60 gallons

**Problem Summary:** On December 6, 2013, a diesel fuel spill occurred following a coil tractor fire. Most of the fuel that was released was contained on the asphalt near the spill, but an unknown volume went to CSO 035 and the Cuyahoga River. Inland Waters was contracted for cleanup of the fuel present in the river.

**Status:** Problem remediated.

## CONCLUSIONS

The illicit discharge and spill investigations detailed in this report highlight the need for continued efforts in reducing the amount of sanitary sewage and other pollutants that are entering local streams. In 2013, more than 100,000 gallons per day of raw sewage discharging to the environment was eliminated as a result of the 29 source tracking and follow-up investigations that were completed. However, a much greater than acceptable percentage of outfalls in the NEORSD service area still have high levels of bacteria discharging from them. The elimination of these high-priority discharges requires a collaborative effort between NEORSD and the community in which the outfall is located to effectively remediate them. Continued work on these problems in upcoming years, along with prevention of spills and quick containment and mitigation of spills that do occur, will help in improving conditions in each of the waterbodies that these outfalls discharge to.