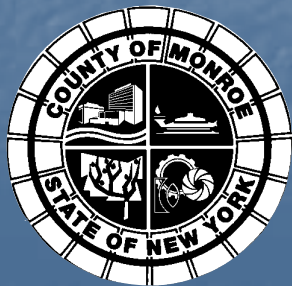


# Strategies for Elimination of Illicit Discharges to Storm Sewers



Andy Sansone  
Monroe County  
Department of Environmental Services

# Clean Water Act - Two Phase General Permits

## Phase I 1990s

1. "Industrial Permit"
2. Medium and Large Municipalities (>100,000pop.)- "MS4s Permit"
3. Construction Activities over 5 acres- "construction permit"

## Phase II 2003

1. Some changes to the Industrial Permit
2. Small Municipalities (~50,000 )
3. One or more acres of disturbance from construction activities

# MS4 SPDES Permit - SWMP

- Permit requires that regulated MS4s (communities) develop a Stormwater Management Program (SWMP).



# Requirements of Phase II MS4 Permits

---

## Six Minimum Control Measures:

1. Public Education and Outreach
2. Public Involvement and Participation
3. **Illicit Discharge Detection and Elimination**
4. Construction Site Runoff Control
5. Post-Construction Stormwater Management
6. Pollution Prevention/Good Housekeeping

# Minimum Control Measure 3: Illicit Discharge Detection and Elimination (IDDE)

**The Regulated MS4  
Must:** Find What's  
Entering the Water  
that Should Not Be  
There and Stop it from  
Entering in the Future



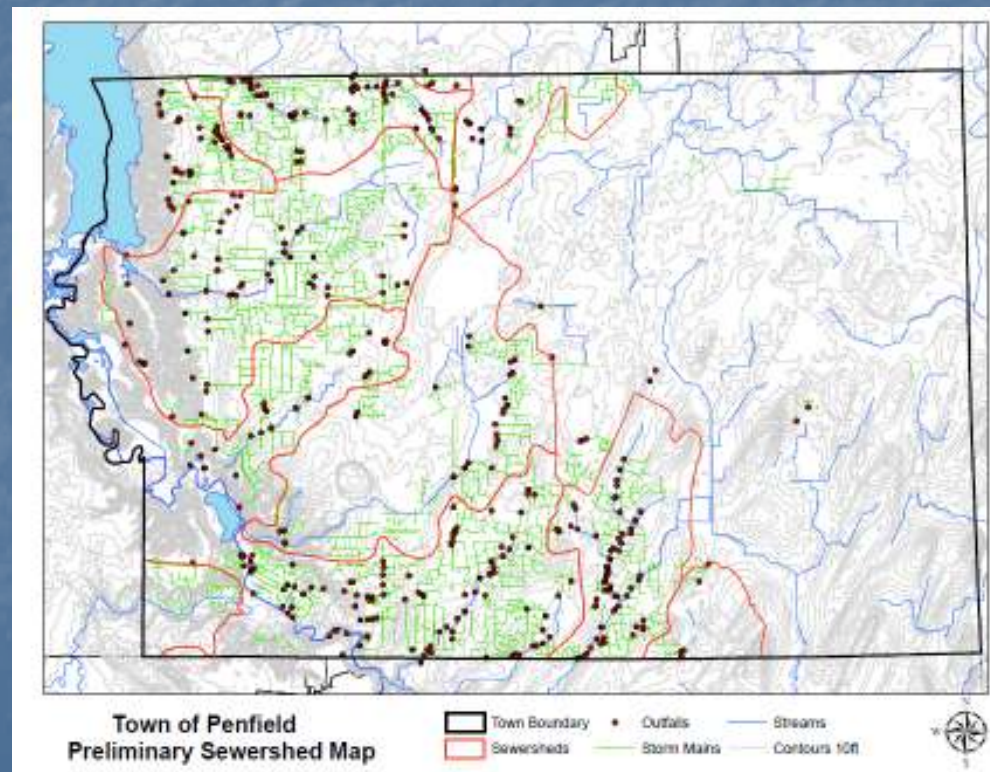
# IDDE Requirements

- **Develop and implement a program to detect and eliminate illicit discharges into the MS4**



# IDDE Requirements

- Develop and maintain a map showing the location of all outfalls (discharge points from the MS4 to surface waters) and sewersheds



# IDDE Requirements

- Create local laws that prohibit illicit discharges into the MS4
- Establish appropriate enforcement actions

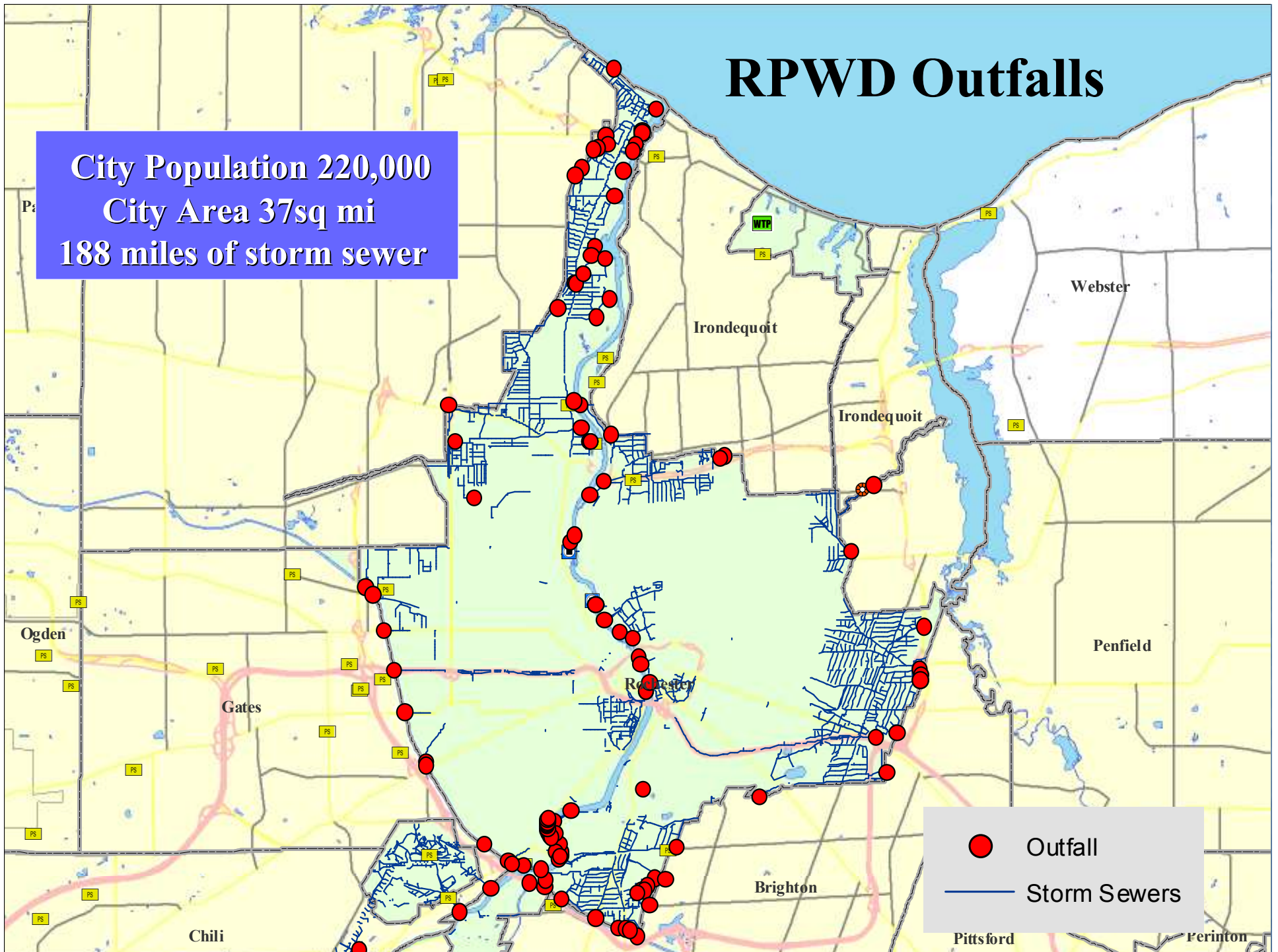


# **Sources of Illicit Discharges**

- Sanitary wastewater**
- Effluent from septic tanks**
- Car wash wastewater's**
- Improper oil disposal**
- Radiator flushing disposal**
- Laundry wastewater's**
- Spills from roadway accidents**
- Improper disposal of auto and household toxics**
- Swimming Pools**

# RPWD Outfalls

City Population 220,000  
City Area 37sq mi  
188 miles of storm sewer





A worker wearing an orange short-sleeved shirt, a blue hard hat, and blue work boots is kneeling on a paved surface. The worker is leaning over a circular manhole opening. In their hands, they are holding a red, cylindrical device, likely a gas detector or a sampling tool, which is positioned near the edge of the manhole. The worker's left hand is resting on the ground for support. The background shows a grey asphalt surface and a portion of a red traffic cone.

# **Outfall Inspection Techniques**

- **Visual Inspection**
- **Sampling**

# Outfall Inspections

- Odors
- Stains
- Color
- Foam
- Oily Sheen
- Floatables
- Impacted Vegetation
- Dry Weather Flows

***Follow the Water !!!***

## Outfall Monitoring Observation Sheet

Outfall Number/Address \_\_\_\_\_

Observers Name \_\_\_\_\_ Town \_\_\_\_\_

Date \_\_\_\_\_ Time \_\_\_\_\_

Weather Conditions:\*\*

Date of last rainfall or significant snow melt (if known) \_\_\_\_\_

Or, Circle the one that applies

1. No Rain/Snow Melt in past 72 hrs
2. No Rain/Snow Melt in past 48 hrs
3. Recent Rain/Snow Melt within 24 hrs
4. Currently Raining or Snow Melt

Approximate Pipe Diameter \_\_\_\_\_ Name of Receiving Stream \_\_\_\_\_

Adjacent Land Use: (circle one)

Residential, Commercial, Industrial, Agricultural, Parkland/Open Space

At the time of the observation, is the outfall pipe: discharging? Yes / No Visible/Submerged

Please describe the outfall by circling the appropriate condition(s) within each category:

Odor: Chemical, Chlorine, Musty, Harsh, Sewage, Rotten Eggs, None  
Color: Muddy, Cloudy, Grey, Green, Brown, Blue, Red, Clear, Other \_\_\_\_\_  
Floatables: Oily, Rainbow, Trash, Foam, Toilet Paper, None, Other \_\_\_\_\_  
Vegetation: Excessive Growth, Inhibited Growth, Dead Plants, Looks Normal  
Structural Damage: Cracks, Deterioration, Peeling Paint, Other \_\_\_\_\_  
Deposits/Stains: Dark Staining, White Deposit, Other \_\_\_\_\_

Estimate the depth of flow in the outfall pipe (inches) \_\_\_\_\_

Other Observations:

Sample Data Collection:

Overall Outfall Characterization:

\_\_\_ Unlikely \_\_\_ Suspect (one strong indicator) \_\_\_ Potential (two or more indicators) \_\_\_ Obvious

**Visual inspection can  
be an efficient method**





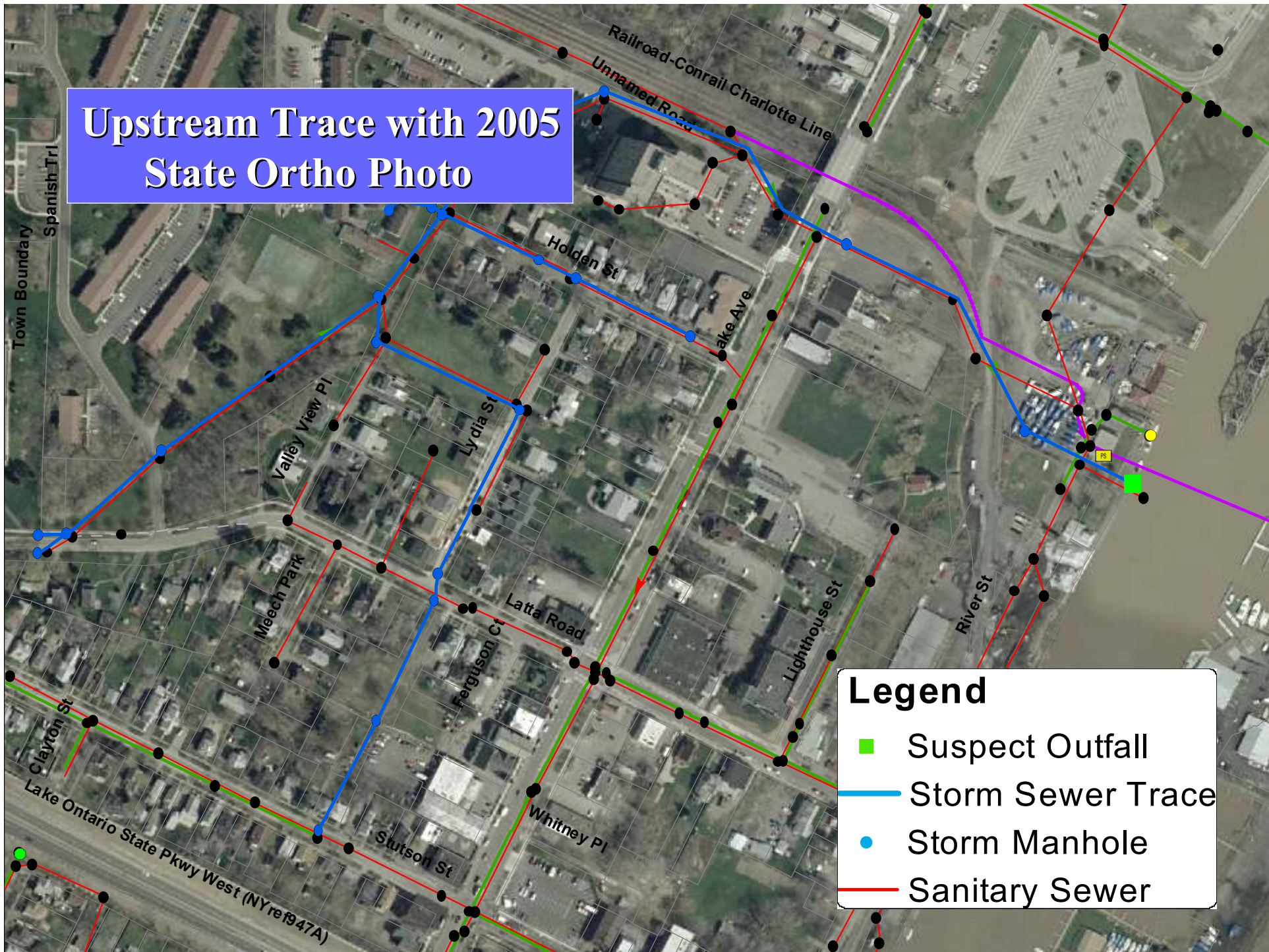


# Sampling

Once an outfall is identified as having a high priority through visual inspection there are a few easy chemical tests that may help find the source of the problem.

- **Chlorine Residual**
- **E. Coli**
- **Optical Brightener Trap**
- **Ammonia**

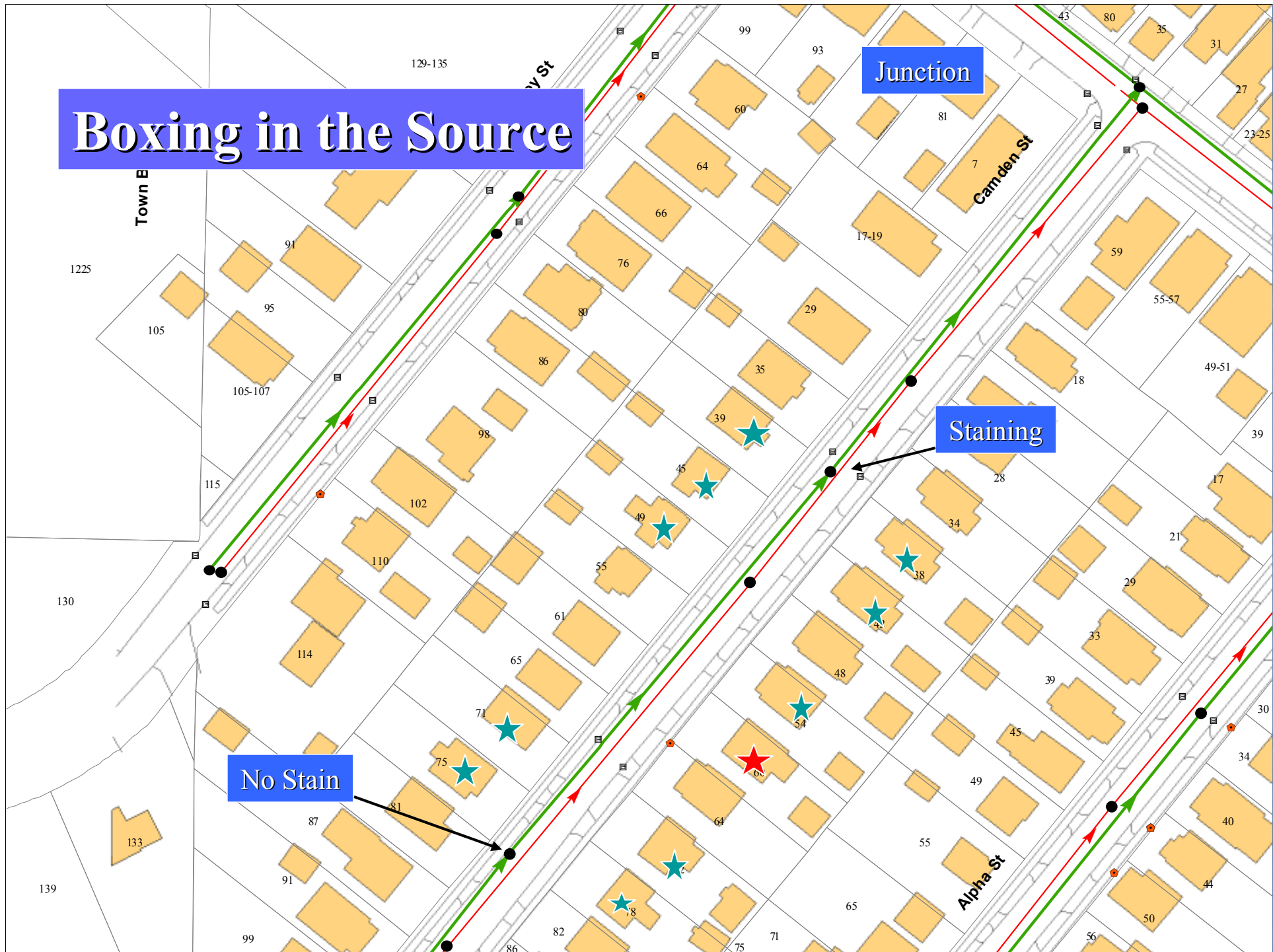
# Upstream Trace with 2005 State Ortho Photo



### Legend

- Suspect Outfall
- Storm Sewer Trace
- Storm Manhole
- Sanitary Sewer

# Boxing in the Source



Junction

Staining

No Stain

Town B

Camden St

Alpha St

129-135

1225

105

91

95

105-107

115

130

114

139

99

99

93

60

64

66

76

80

86

98

102

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17-19

7

81

93

99

# Dye Testing



*Over 200 dye tests  
performed since 2003*



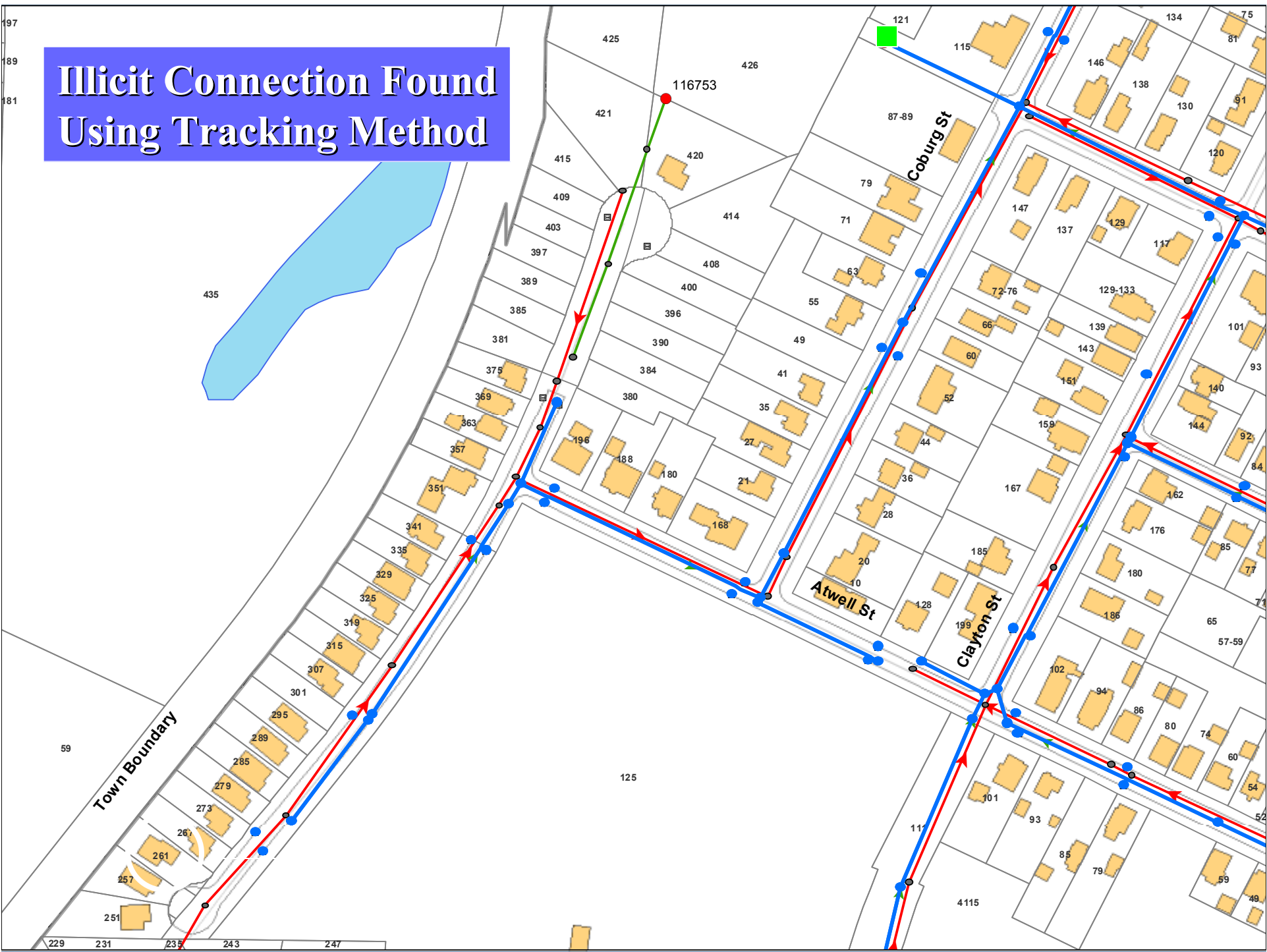
# Televising



## An Illicit Discharge



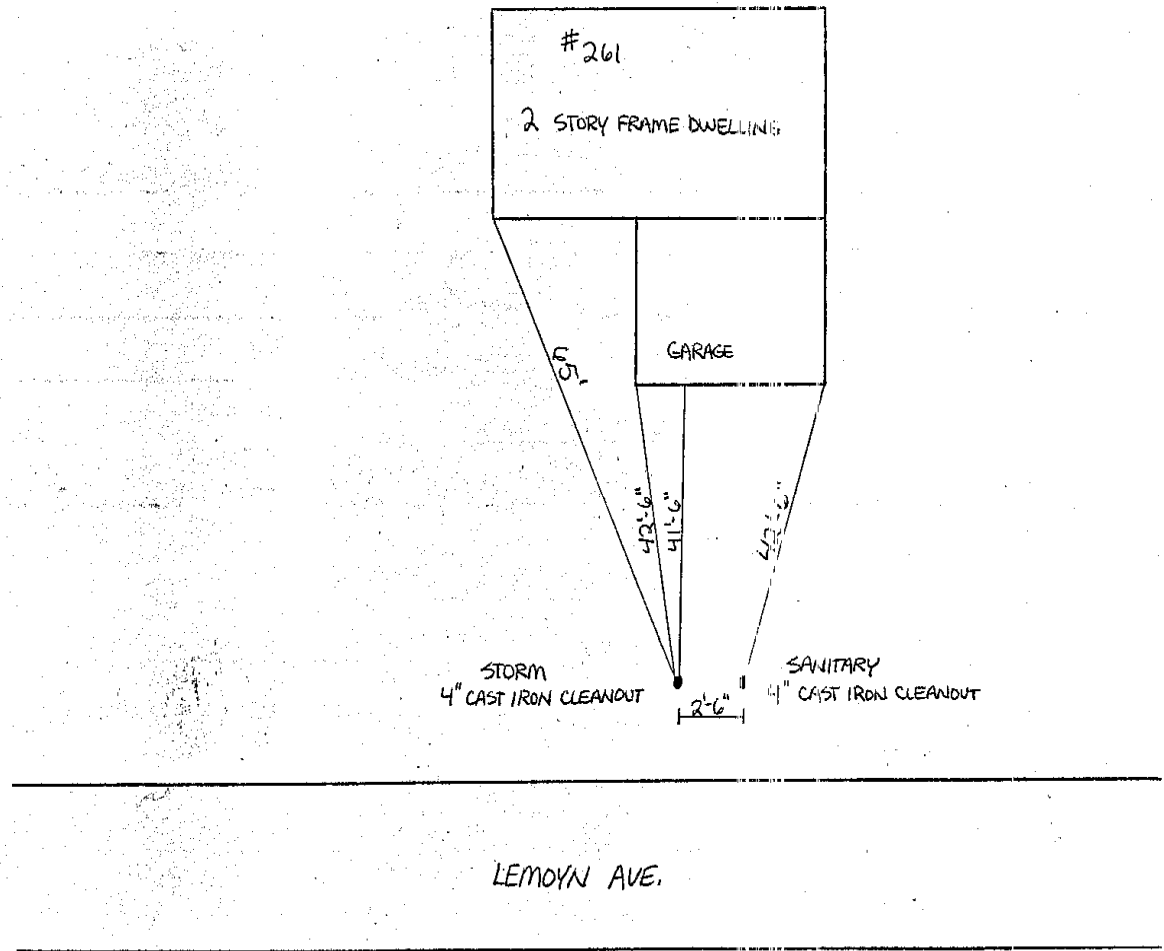
# Illicit Connection Found Using Tracking Method



# Sewer Connection Records

Cleanouts  
with  
4 inch Laterals

DISTRICT OWNED					PRIVATE OWNED				
Comb.	<input type="checkbox"/>	Mat	Size	Depth @	Comb.	<input type="checkbox"/>	Mat	Size	Depth @
San.	<input type="checkbox"/>	Mat	Size	Depth @	San.	<input type="checkbox"/>	Mat	Size	Depth @
Storm	<input type="checkbox"/>	Mat	Size	Depth @	Storm	<input type="checkbox"/>	Mat	Size	Depth @
C.O. INSTALLED					SAN. 3/9/88      CAST IRON DATE STORM 3/9/88      MAT. CAST IRON      SIZE 4"      DEPTH 4' ±				





## New Subdivision Built in 2004

2 of 7 Homes  
Cross-Connected



Sanitary waste pipe

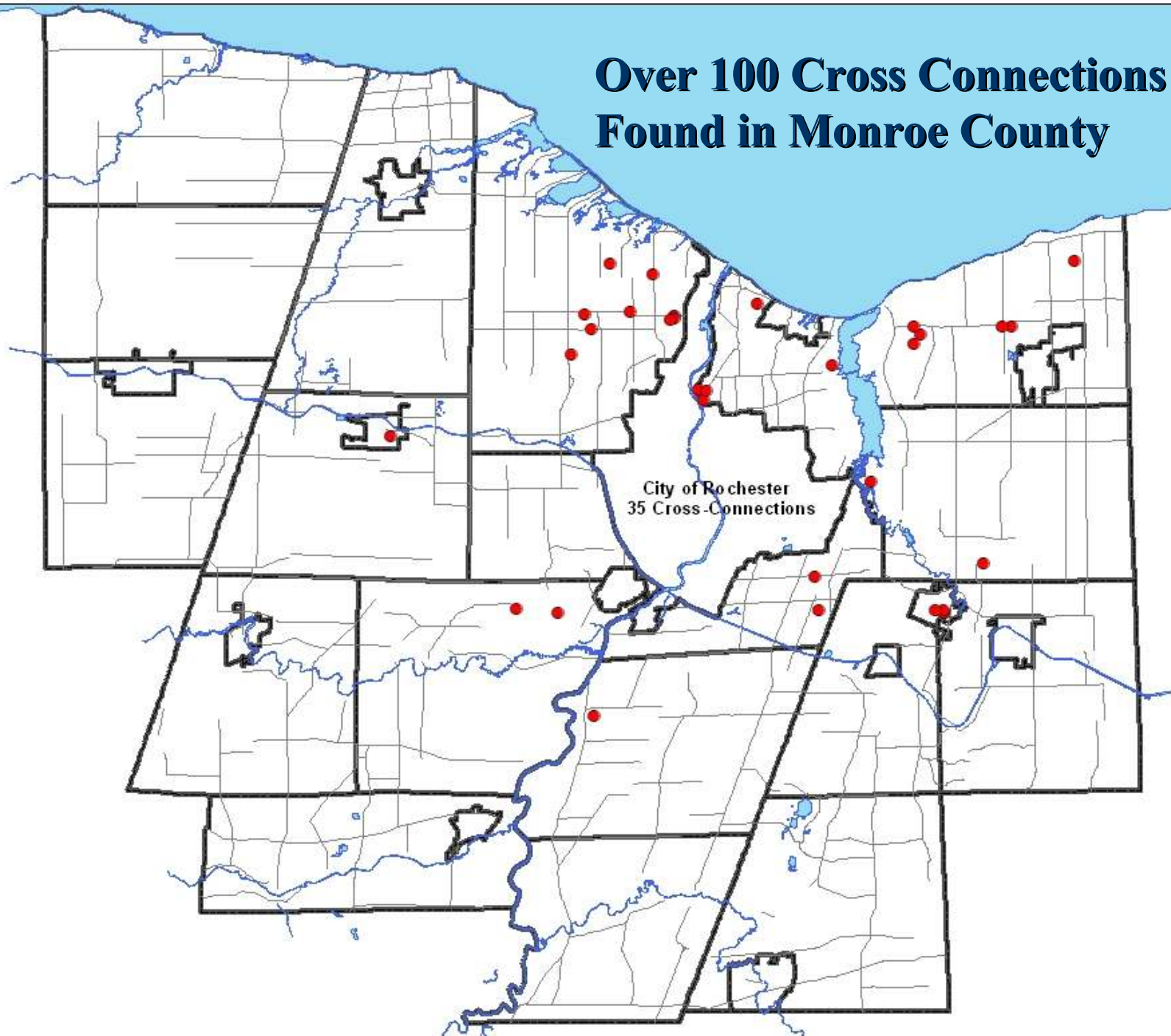
Sump Pump Line

Sanitary Cleanout

Storm Cleanout

2007/08/21 11:59

# Over 100 Cross Connections Found in Monroe County



**37,000 Gallons  
of  
Wastewater / Day**

# Illicit Discharge Authority/Ordinance

- Current Sewer Use Law
- County Sanitary Code  
“Deleterious Material”
- IDDE Ordinance .....





# *Transitory Discharges*



# Carpet Cleaner Discharge to CB



# Concrete Dumping





# Salt Pile



# Overflowing Grease Interceptor



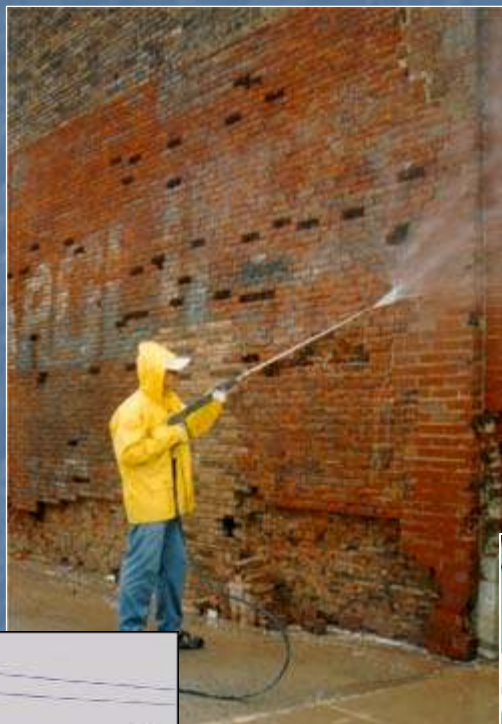








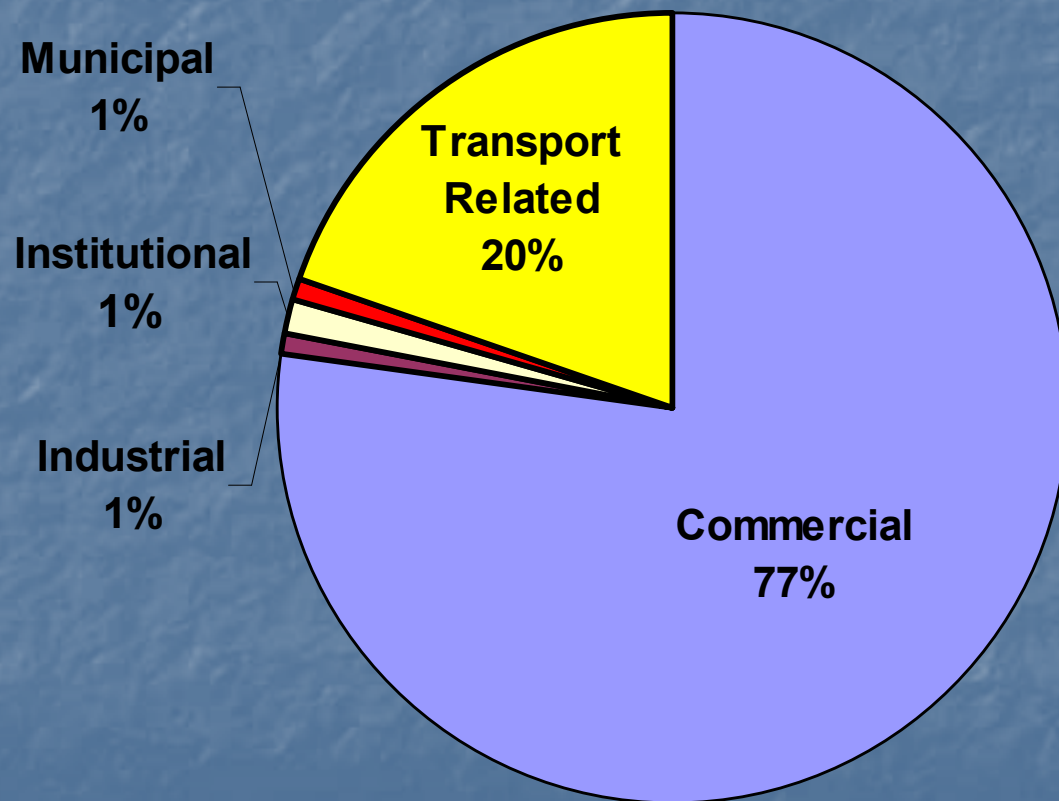
# Source Control...Urban Hotspots



# Stormwater Hotspots

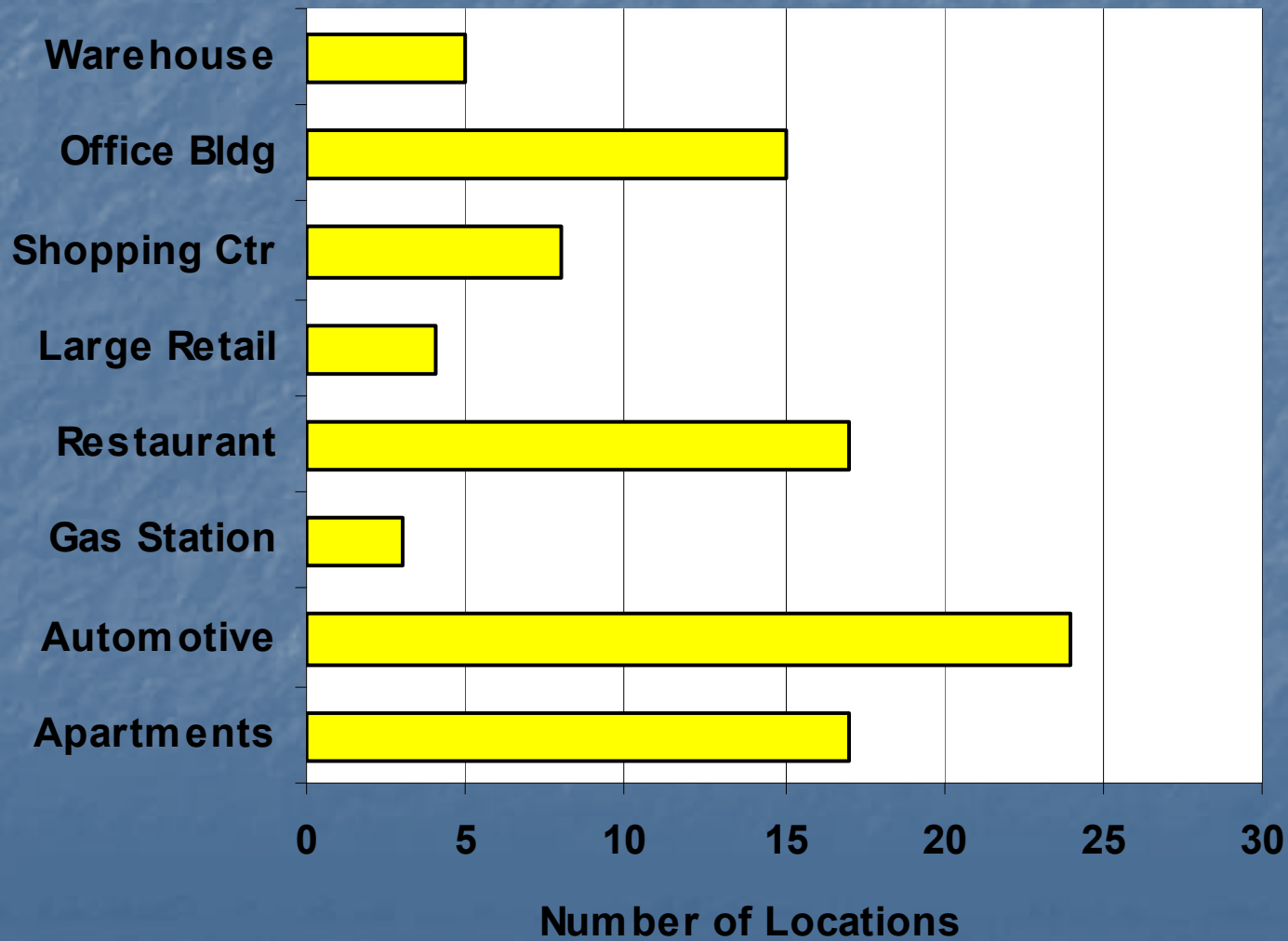
Shipbuilders Creek  
Assessment

Hotspot Types



# Shipbuilders Creek Assessment

## Potential Hotspots



# Implications of the Illicit Discharge Ordinance

---

- Enforcement by MS4
- Specific language prohibiting illicit connections, and illegal discharges
- Ensures access for inspection and monitoring
- BMP's
- May require septic system inspections?
- Penalties for non-compliance

# **Section I. Definitions**

**Illicit Connection/Discharge**

**What's a Pollutant**

## **Section VII. Authority of Inspectors**

**Access to property to inspect,  
examine records, observation,  
measurements, sampling and testing**

## **Section VIII. Discharge Prohibitions**

- **Prohibition of Illegal Discharges**
- **Prohibition of Illicit Connections**
- **Prohibition Exceptions**
- **Failing Septic Systems**

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ROCHESTER, NEW YORK

DemocratandChronicle.com

WEDNESDAY, FEBRUARY 3, 2010

**NEWS BEAT**

## Powerball joins lottery lineup

Starting today, 33 jurisdictions — including New York — will participate in both Powerball and Mega Millions. New York has been part of the 12-state Mega Millions lottery, but gamblers had been forced to head to neighboring states to play Powerball.

New York anticipates \$19 million in revenue from Powerball for the remainder of the 2009-10 fiscal year, which ends March 31, and \$134 million in the 2010-11 year.

Mega Millions is played on Tuesdays and Fridays. Powerball is played Wednesdays and Saturdays.

# DEC charges restaurateur

■ **Dakota Grill manager accused of dumping waste in storm sewer.**

**JOHN BOCCACINO**  
STAFF WRITER

When neighbors of the Dakota Grill, a restaurant in Hamlin, started smelling strong sewage odors in the area last fall, the state's Department of Environmental Conservation responded.

Investigators allege the restaurant's manager, Da-

vid W. Danzig, 62, of 1366 Walker Lake Ontario Road in Hamlin, had been disposing the restaurant's sewage from the septic tanks into a storm water system that flowed into a nearby creek, the state Department of Environmental Conservation announced Tuesday.

Danzig has been

charged with two felonies and a misdemeanor in connection with the alleged illegal discharge of sewage, which was discovered Sept. 18, 2009.

Danzig is accused of unlawfully making or causing a sewage discharge without a permit, a felony, following the construction and operation of an illegal sewage disposal system at the restaurant, the DEC said.

Danzig declined com-

ment. He said his wife, Sherry, owns the Dakota Grill.

The restaurant, located at 913 Roosevelt Highway, was still open on Tuesday.

A roughly 60- to 80-foot PVC pipe was "intentionally installed" from the restaurant's septic system in the direction of the storm water system, said Lt. Richard Thomas, with the DEC in charge of Re-



SCOTT SHELLS staff artist

DEC, PAGE 3B

## WINTER ADVENTURE SERIES CONTINUES

## County

## **Section XII. Best Management Practices**

**Implement structural or non-structural  
BMP's to prevent discharge of pollutants**

## **Section XIII. Watercourse Protection**


**Maintain watercourse within the property in a manner that prevents illicit discharges and keeps watercourse free of trash, debris or other items that would pollute, contaminate, retard flow**



## **Section XV. Enforcement**

- **Notice of Violation**
- **Monitoring**
- **Elimination of Connection**
- **Cease and Desist**
- **Abatement/Remediation**
- **Fine**
- **Source Control BMPs**

# Education and Outreach





## Stormwater Pollution Found in Your Area!



**This is not a citation.**

This is to inform you that our staff found the following pollutants in the storm sewer system in your area. This storm sewer system leads directly to

- Motor oil
- Oil filters
- Antifreeze/transmission fluid
- Paint
- Solvent/degreaser
- Cooling grease
- Detergent
- Home improvement waste (concrete, mortar)
- Pet waste
- Yard waste (leaves, grass, mulch)
- Excessive dirt and gravel
- Trash
- Construction debris
- Pesticides and fertilizers
- Other

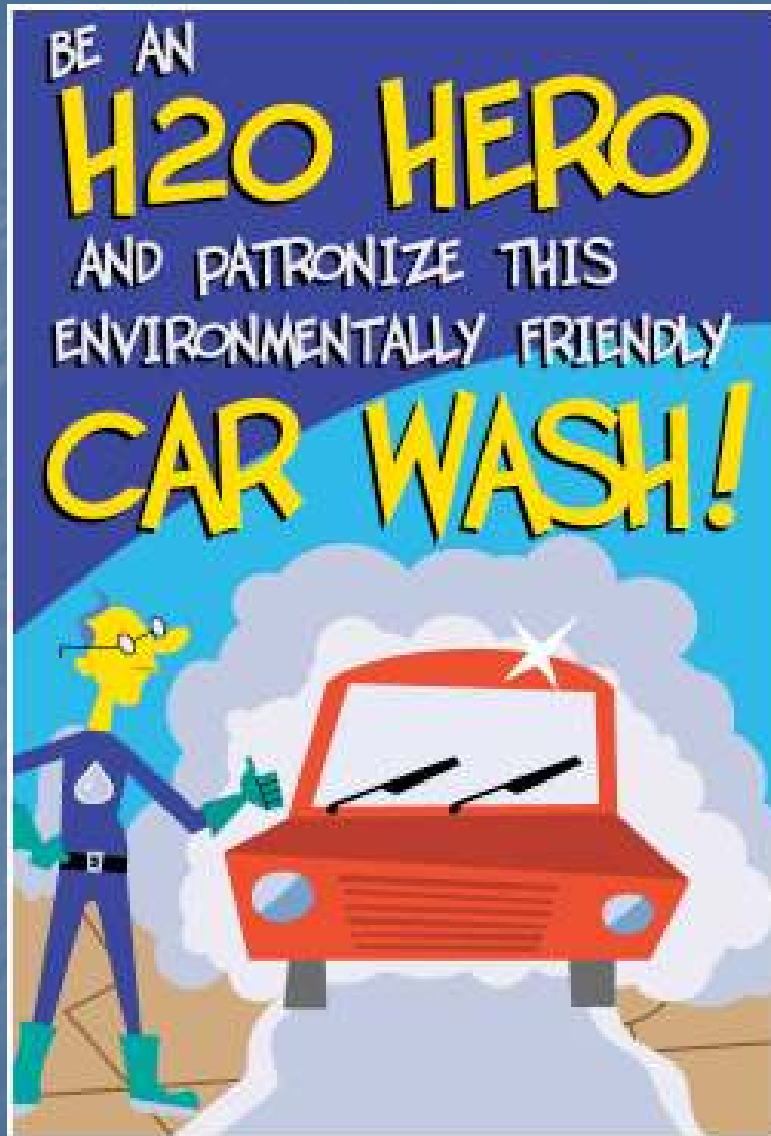


For more information or to report an illegal discharge of pollutants, please call:



[www.epa.gov/pfa/stormwater](http://www.epa.gov/pfa/stormwater)  
EPA 833-F-03-002  
April 2003





**Illicit Discharges.....**

**.....They're Out There**

Andy Sansone  
Monroe County  
Environmental Services  
585-753-7684

[asansone@monroecounty.gov](mailto:asansone@monroecounty.gov)

