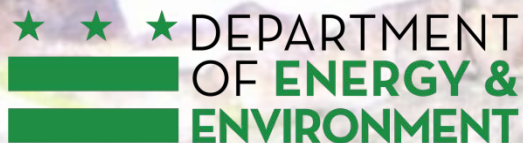


7 APR

# Executing a Successful Illicit Discharge Investigation

Where to start, what tools to use and which ones can  
you leave at home.

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@DOEE\_DC

# Investigation Objectives

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- Identifying the Discharge
- Locate the Source
- Eliminate the Source
- Enforcement

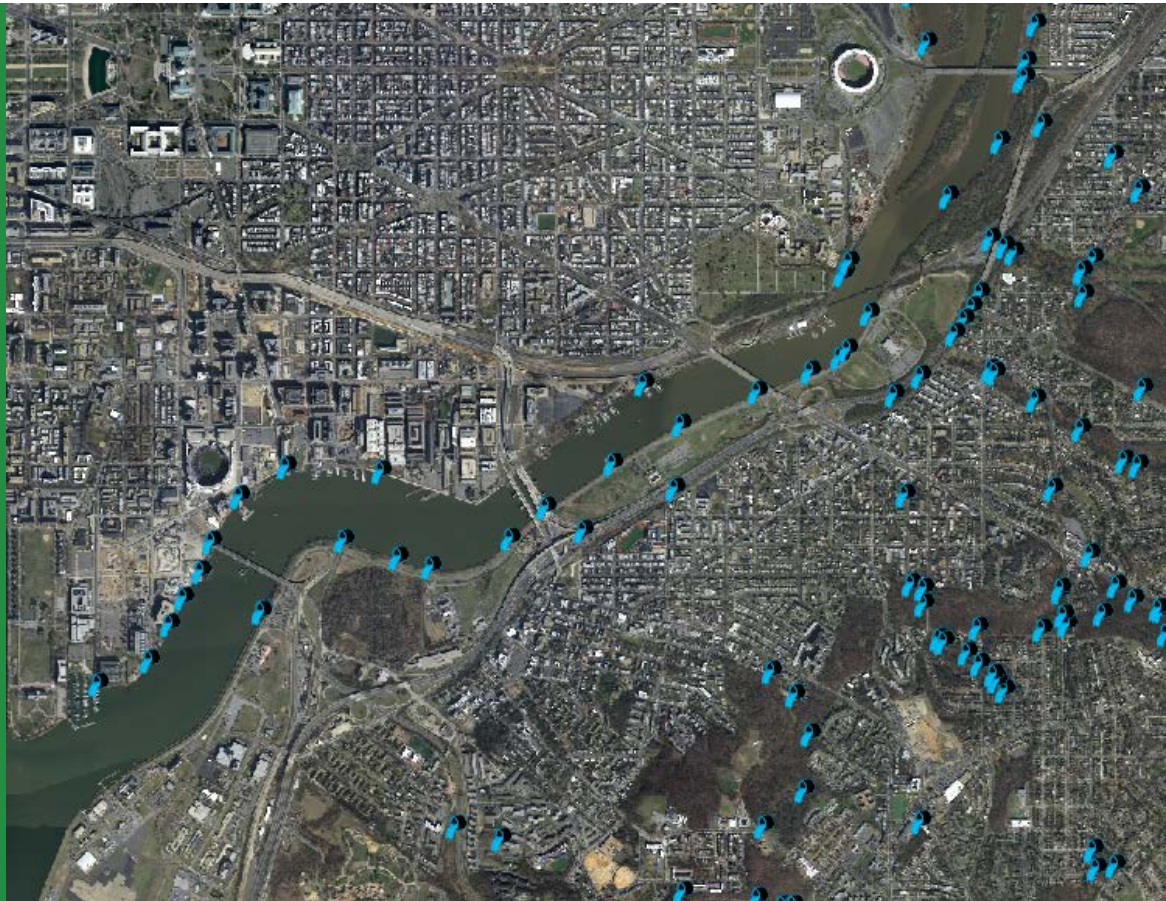


# Identifying the Discharge

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## IDDE PROGRAM OR OTHER MS4 PERMIT REQUIREMENTS

- Dry Weather Screening and outfall inspections
- Report or complaint response



# Identifying the Discharge

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## EMERGENCY RESPONSE / SPILL RESPONSE

- HSEMA
- Fire or Hazmat
- LEPC
- 311

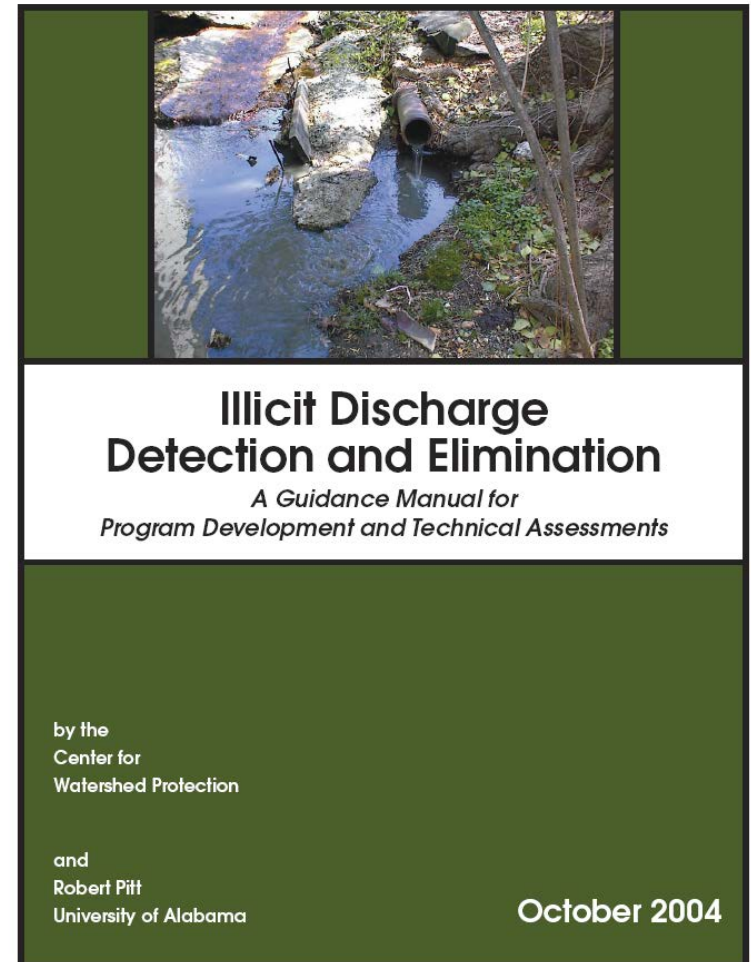


# Locate the Source

---

“An up-to-date and comprehensive manual on techniques to detect and correct discharges in municipal storm drains has been unavailable until now.”

- The Center for Watershed Protection and Mr. Robert Pitt (2004)



# Locate the Source

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## Scaled and Measured Response





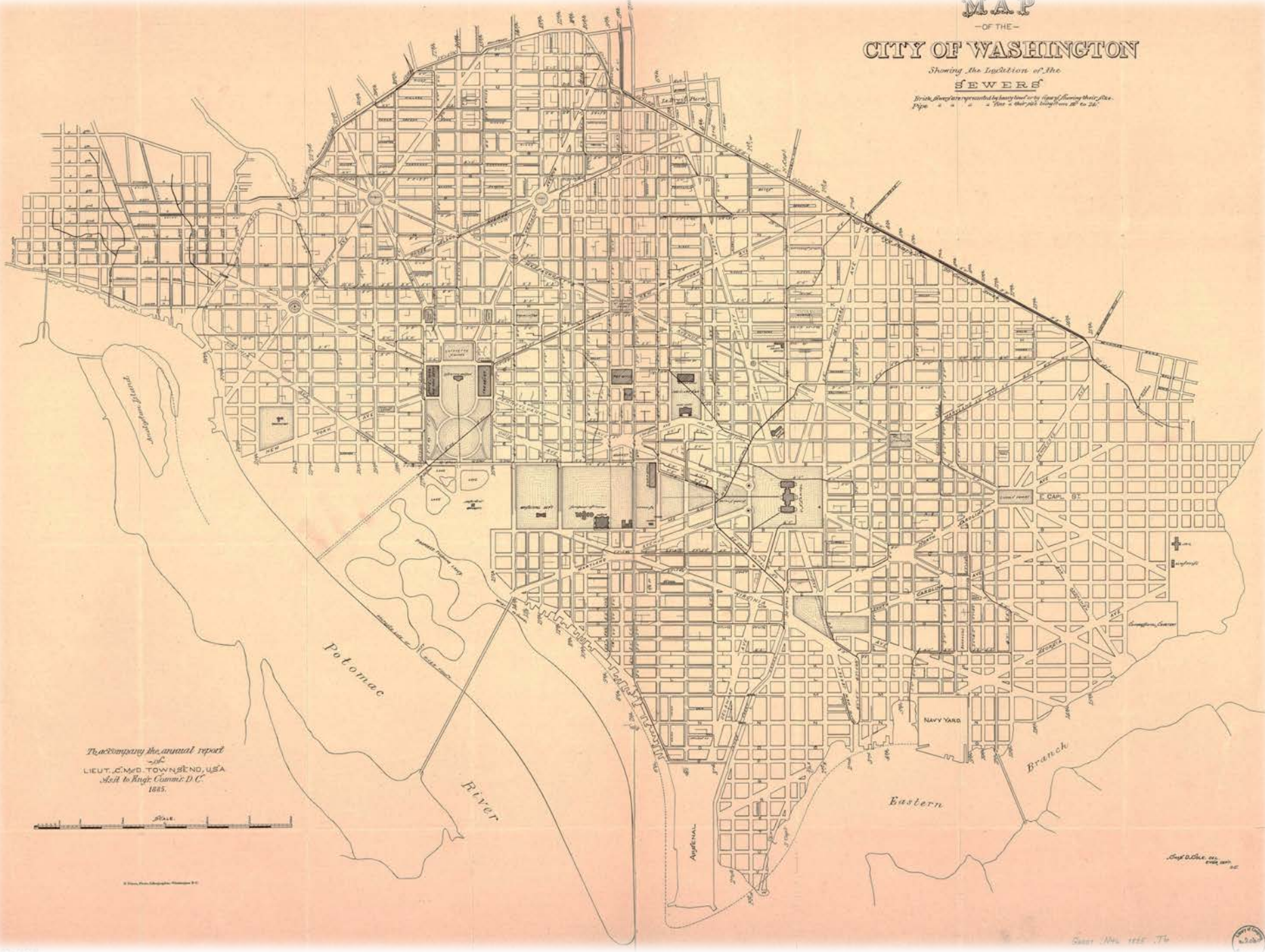
MAP

-OF THE-

# CITY OF WASHINGTON

Showing the Location of the  
**SEWERS**

*Sewer pipes are represented by lines and by signs showing their size.  
Pipe 4" 6" 8" 10" 12" 14" 16" 18" 20" 22" 24" 26" 28" 30" 32" 34" 36" 38" 40" 42" 44" 46" 48" 50" 52" 54" 56" 58" 60" 62" 64" 66" 68" 70" 72" 74" 76" 78" 80" 82" 84" 86" 88" 90" 92" 94" 96" 98" 100"*



*Accompanying the annual report  
of  
LIEUT. COL. TOWNSEND, U.S.A.  
Sent to King Commr. D.C.  
1885.*



© 1885, Wm. H. Burleigh, Washington D.C.

*Copy D.C. 1885  
1885 1885*

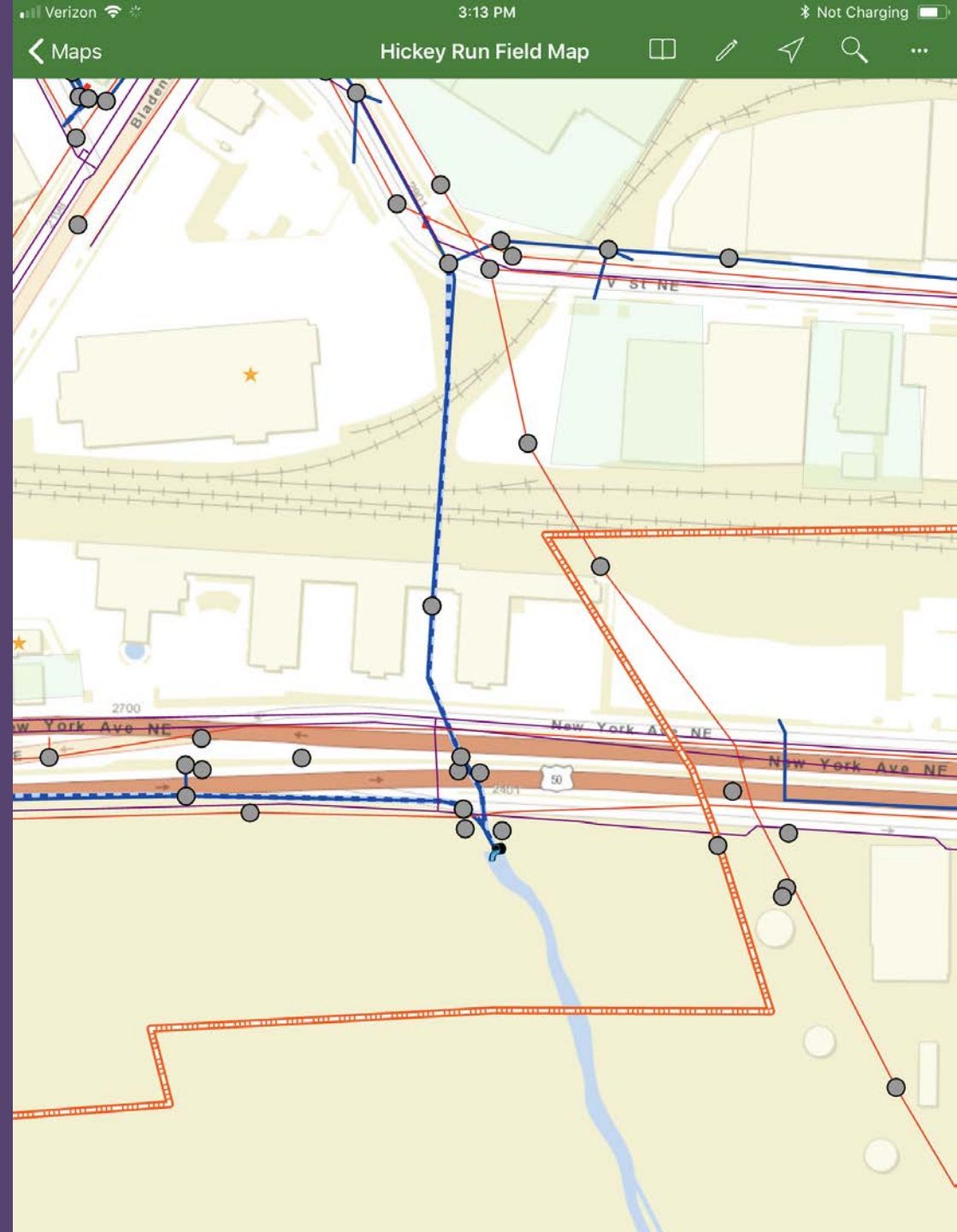
Copy 1885 1885 1885



# In the Field

## Digitized and Mobile Sewershed

- Sewer lines
- Manhole locations and nomenclature details;
- Inlet locations and nomenclature details;
- High priority or suspect facility identification







# In the Field

## Physical Investigations

- Dye Tests
- CCTV
- Outfall Screening
- Sample Collection

# Documenting Visual Observations

- Standardized and completed forms
- Standard Operating Procedures
- Chain of Custody (Physical Evidence Collection)

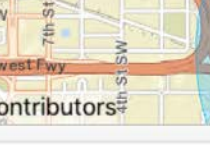
Hickey Run Manhole Survey

Manhole Location ID

M-45307

Location

38.883°N 76.999°W ± 1182.42 m



Survey Location Description

Enter cross streets or landmarks

Date

February 9, 2018

Time

3:14 PM

Surveyor 1 Name

Surveyor 2 Name

Weather

☐ dry

☐ light rain

☐ heavy rain

Depth to Manhole Sump Invert (feet)

Is there water present in the manhole or structure?

☐ Yes

☒ No

Flow

☐ No Flow

☐ Light Flow

☐ Moderate Flow

☒ Heavy Flow

Hickey Run Manhole Survey

▼ Indicator Ratings

For the parameters below, rate each on a 5 point scale. 0 = pollution not present or conditions look good, 5 = high level of pollution

Dry Weather Flow

Observed flows are considered non-stormwater related; flow may or may not be illicit discharge and may be groundwater

☐ 0

☐ 1

☐ 2

☐ 3

☐ 4

☐ 5

Debris

examples: trash, lawn clippings, leaves, branches, construction material

☐ 0

☐ 1

☐ 2

☐ 3

☐ 4

☐ 5

Staining or Deposits

examples: petroleum, rust, mineral, concrete, algae

☐ 0

☐ 1

☐ 2

☐ 3

☐ 4

☒ 5

>



# Locate the Source

---

## Illegal Plumbing



# Locate the Source

---

## Improper Use or Maintenance of BMPs





# Locate the Source

---

Illicit disposal



# Locate the Source

---

## Fats Oils and Grease





# Locate the Source

---

## Legacy and Unknown Sources



# Locate the Source

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## Groundwater Sources





# Locate the Source

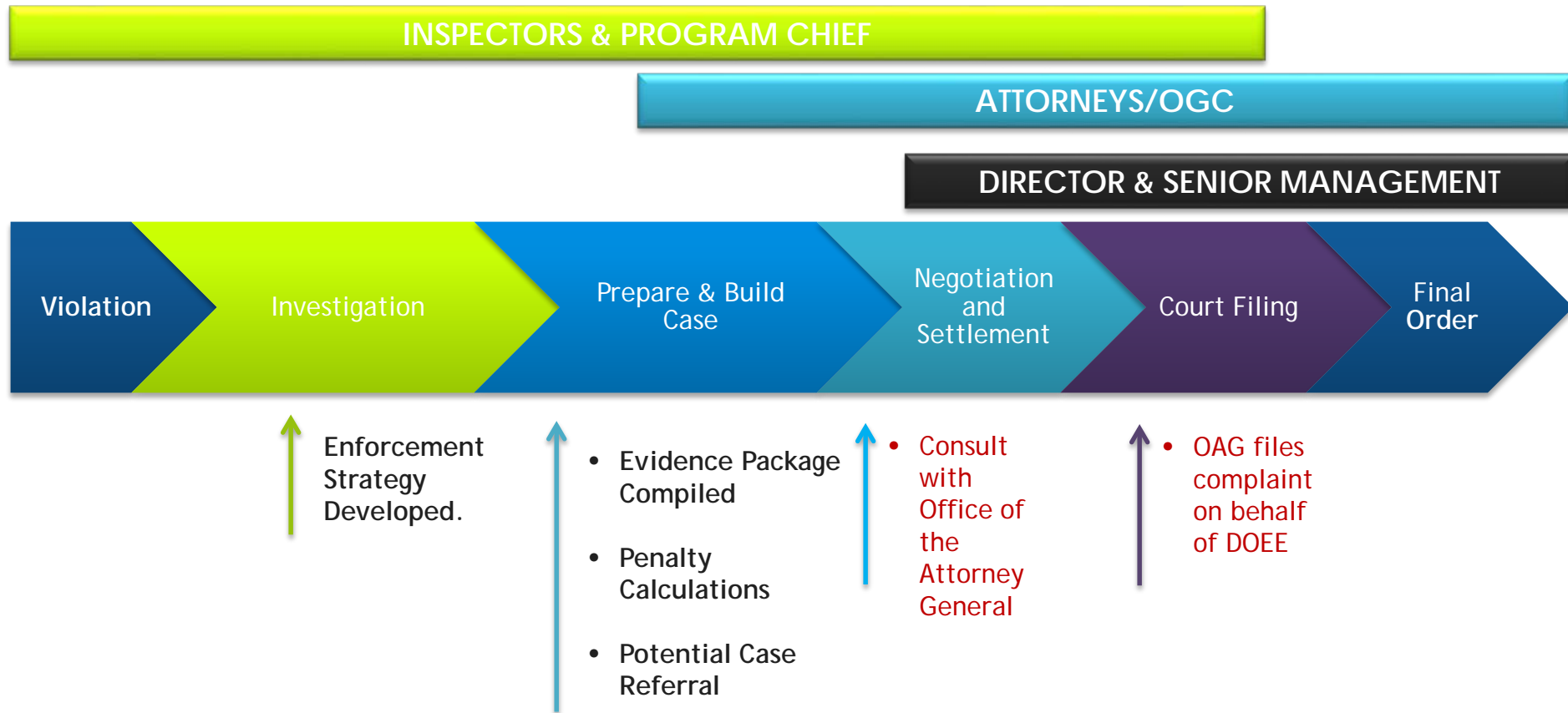
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## Emergencies and Spills



# Enforcement

## Path & Strategy





# Enforcement

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## Compliance vs. Penalty



# Questions and Comments

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Joshua Rodriguez  
Chief, NPDES and Illicit  
Discharge Branch  
Inspection and Enforcement  
Division  
District Department of Energy  
and Environment

