

**Department of Regulatory and Economic Resources (RER)  
Division of Environmental Resources Management (DERM)**

# **RER-DERM SmartCover Pilot Study**



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Monday, January 6<sup>th</sup>, 2025



# RER - DERM SmartCover Pilot Study

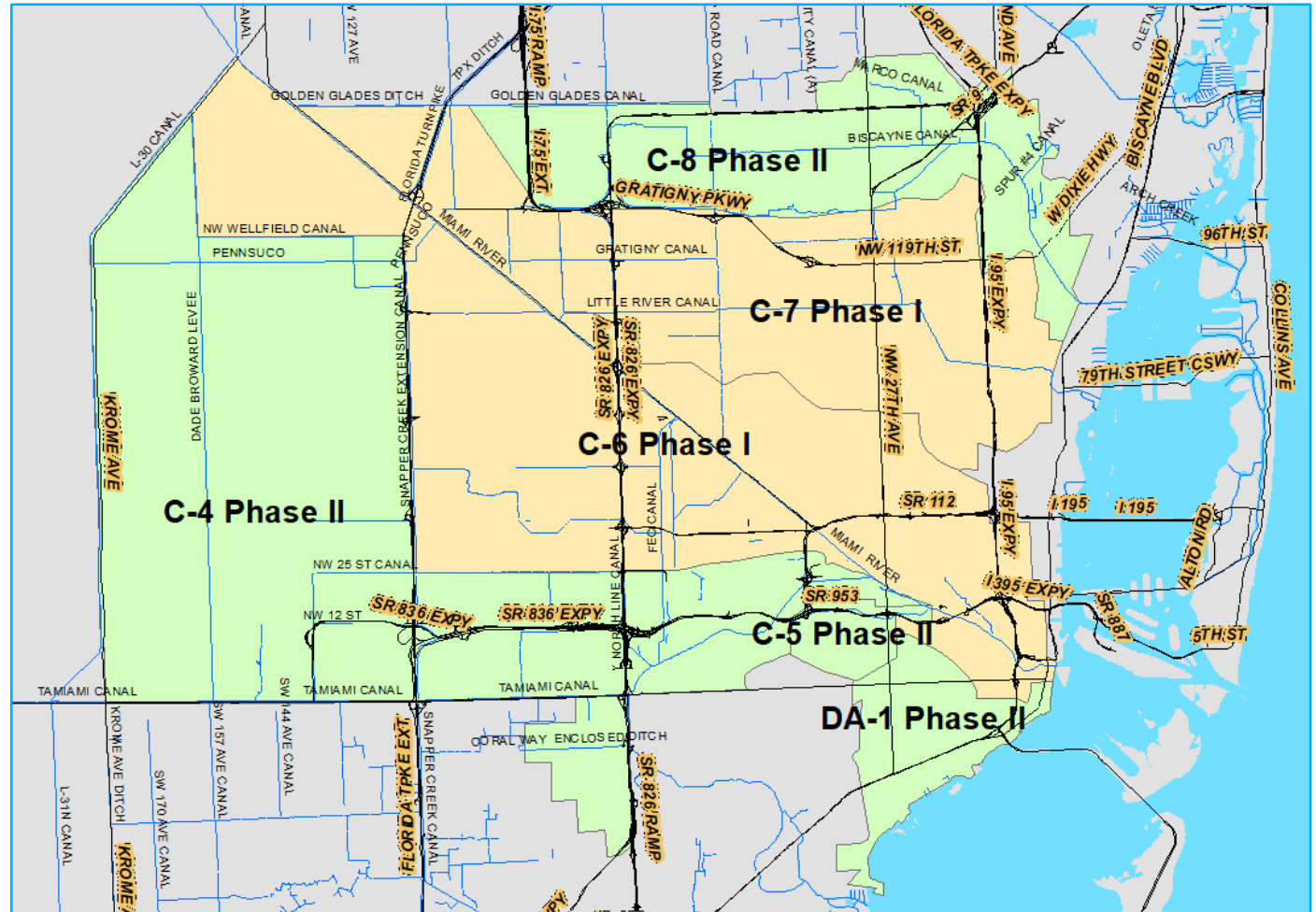


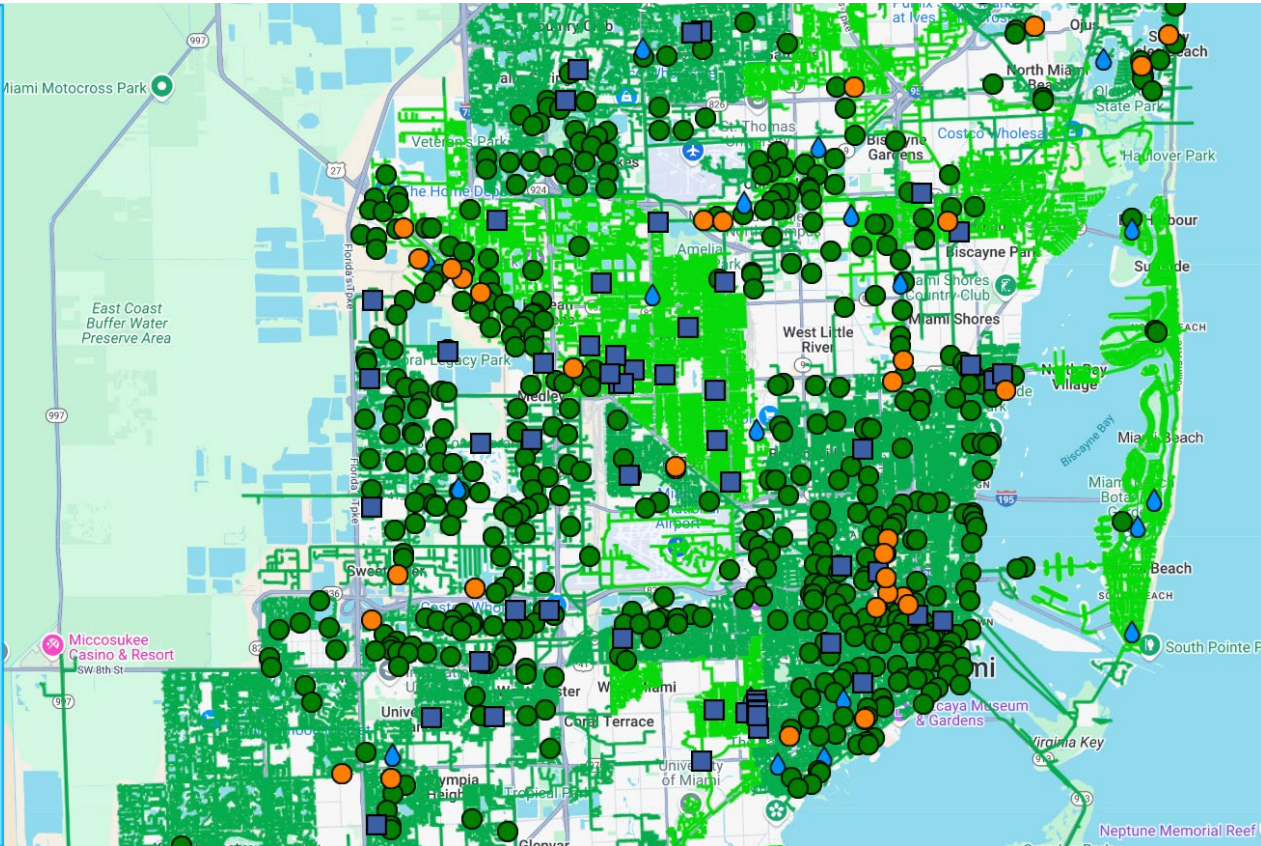
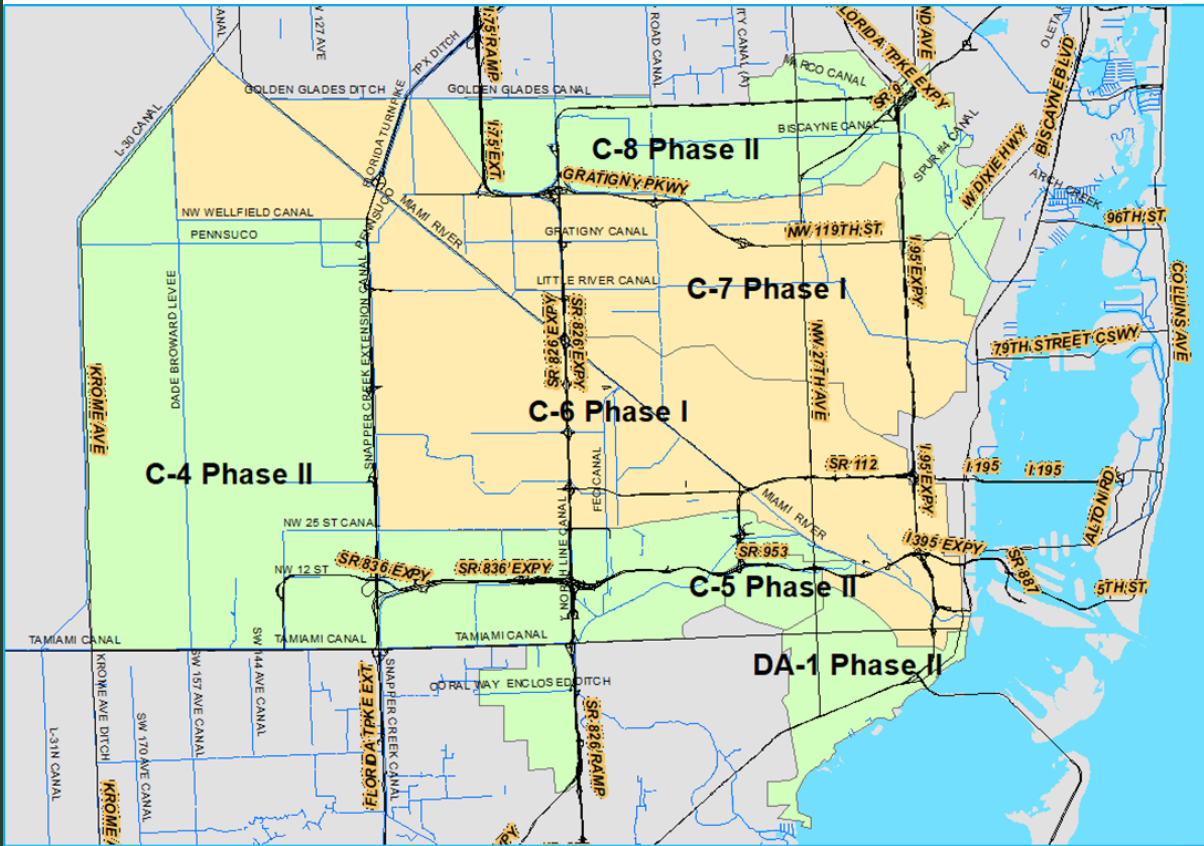
**Total Units installed: 426**

- Units Installed under Phase I: 192 (May 2023)
- Units Installed in Phase II: 234 (October 2024)

Utilities	Units Quantity (PH1)	Units Quantity (PH2)
Bay Harbour Island	1	
Opa-Locka	4	5
CNM	6	11
Hialeah Gardens	20	
Medley	33	
WASD	128	218
<b>Total</b>	<b>192</b>	<b>234</b>

- **Criteria:** Key manholes and pump stations, Historical SSOs, Citizen complaints, Sanitary Sewer Basin Moratoria.
- Real-time collection system monitoring, reporting and spill prevention
- Analysis of Inflow & Infiltration (I&I)
- Participating utilities receive the alarms and have access to dashboard

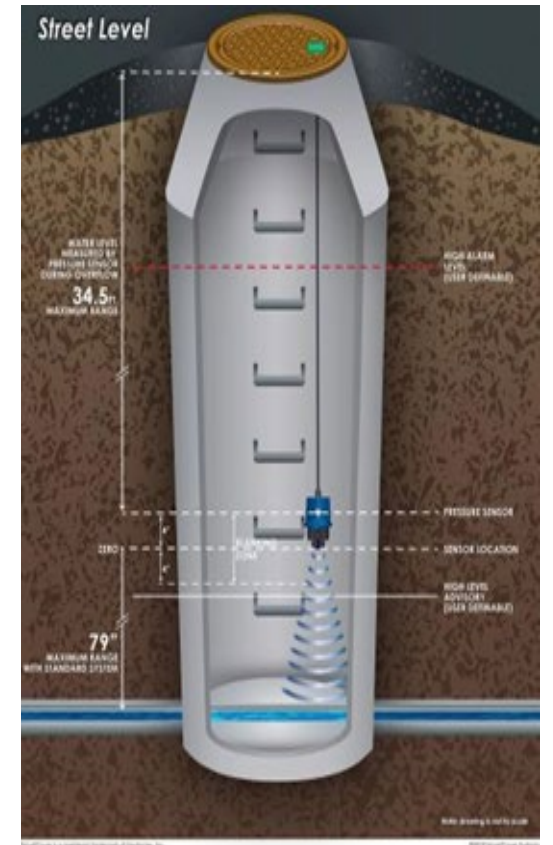




# SUBSONIC DUAL SENSOR



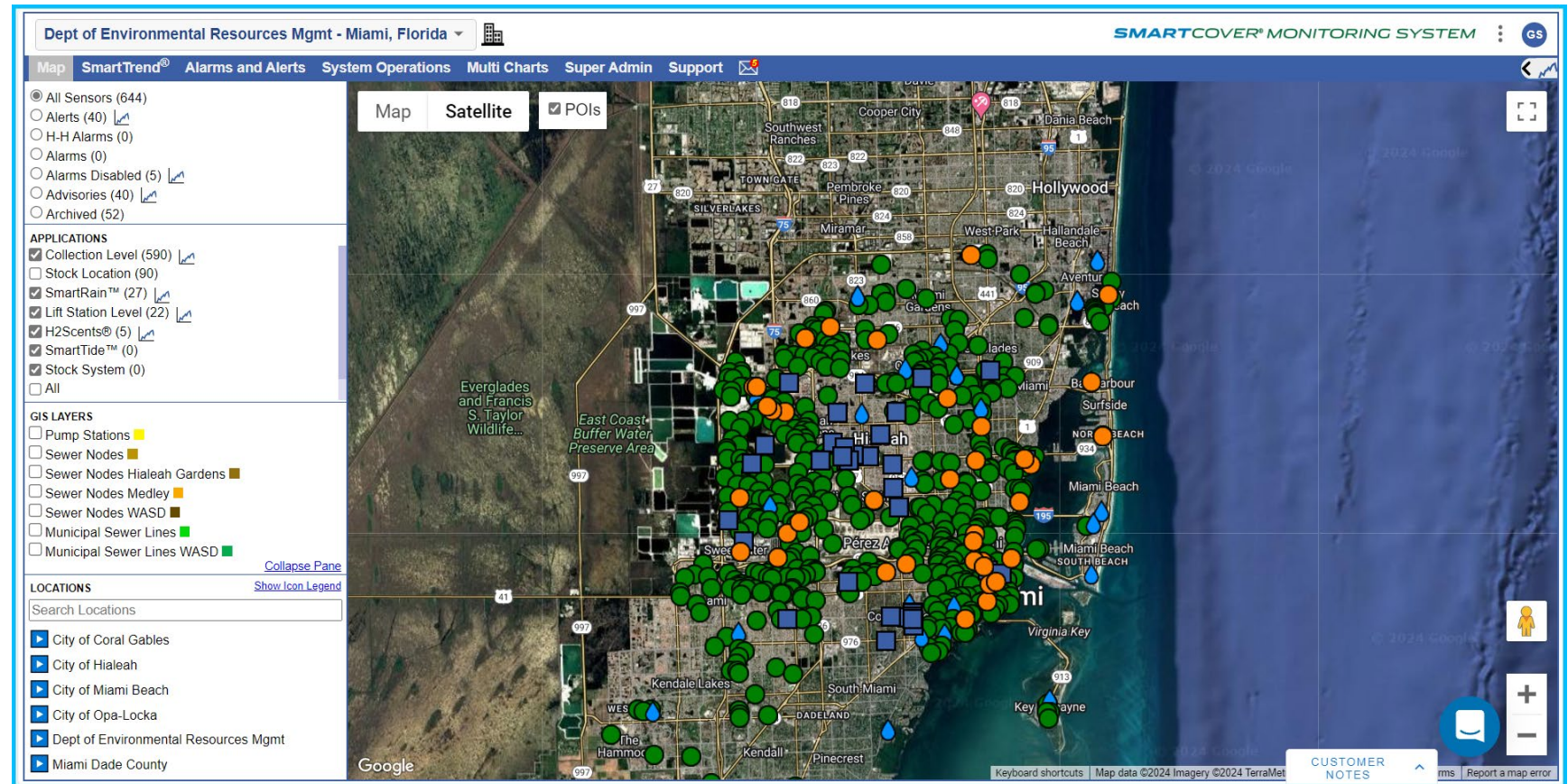
- ❖ Highest accuracy on narrow inverts
- ❖ Drop lowest & closest to the channel
- ❖ Reliable during surcharges
- ❖ Real-time trend analysis
- ❖ Satellite communications impervious to power or cell outages
- ❖ No confined space entry
- ❖ Low maintenance
- ❖ Ideal for remote locations Integration with rain, river, tidal data

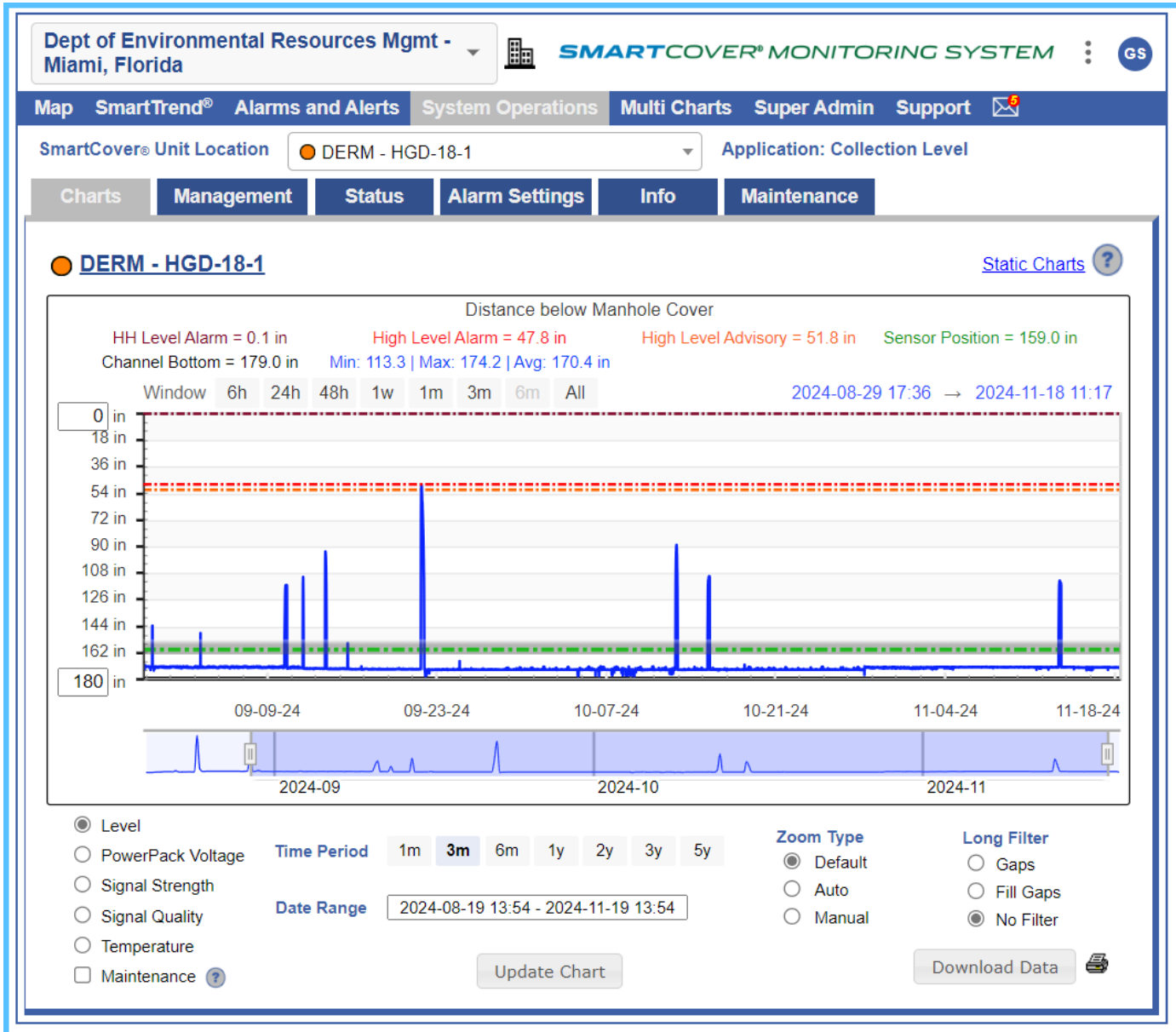


# CLOUD BASED WEB PORTAL

[www.mysmartcover.com](http://www.mysmartcover.com)

- ❖ *SmartCover Dashboard*
- ❖ *DERM SmartCover units in the Utilities Dashboard*
- ❖ *SmartCover units for Utilities without a Dashboard are included in the DERM Dashboard*
- ❖ *All utilities have access to the units installed within their jurisdiction*
- ❖ *Utilities respond to the alarms and take actions to prevent SSOs.*
- ❖ *The utilities and DERM received the alarms via text message and via email.*



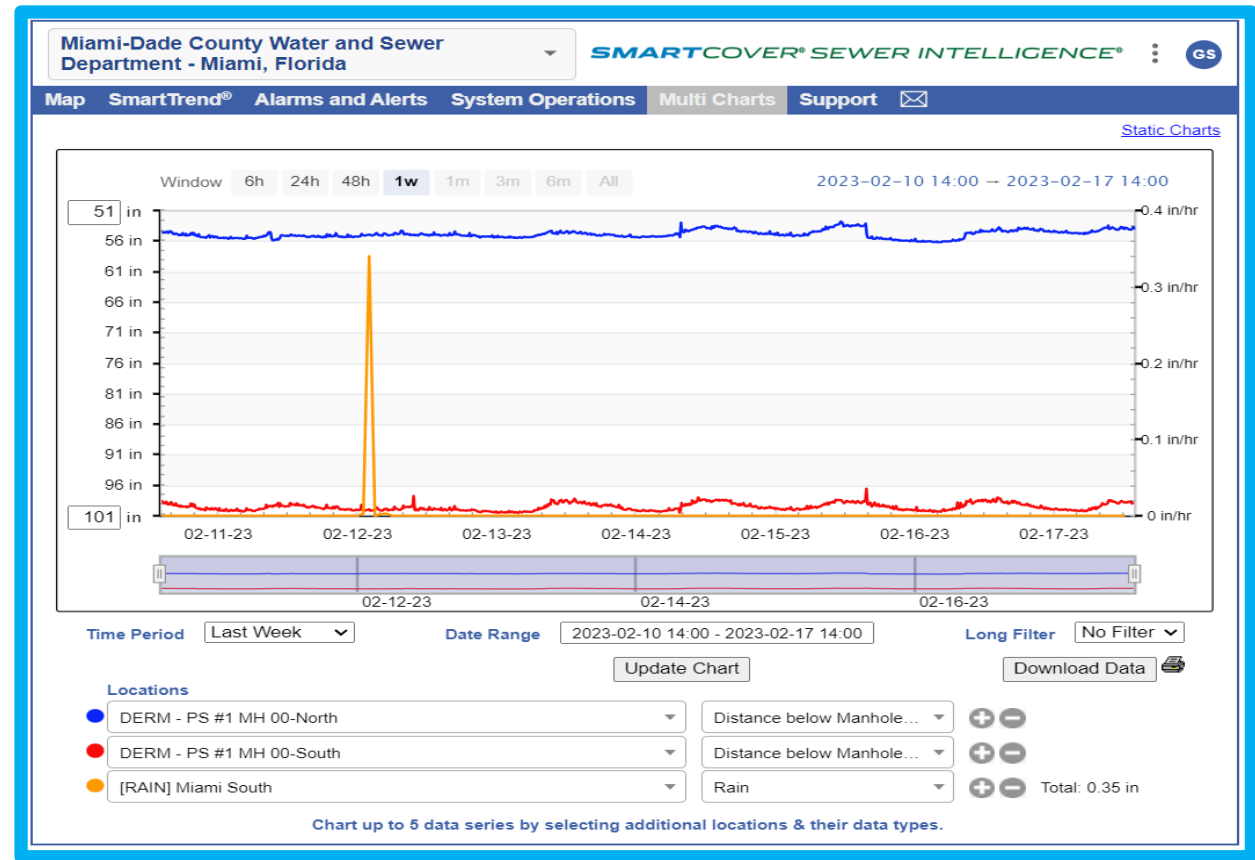
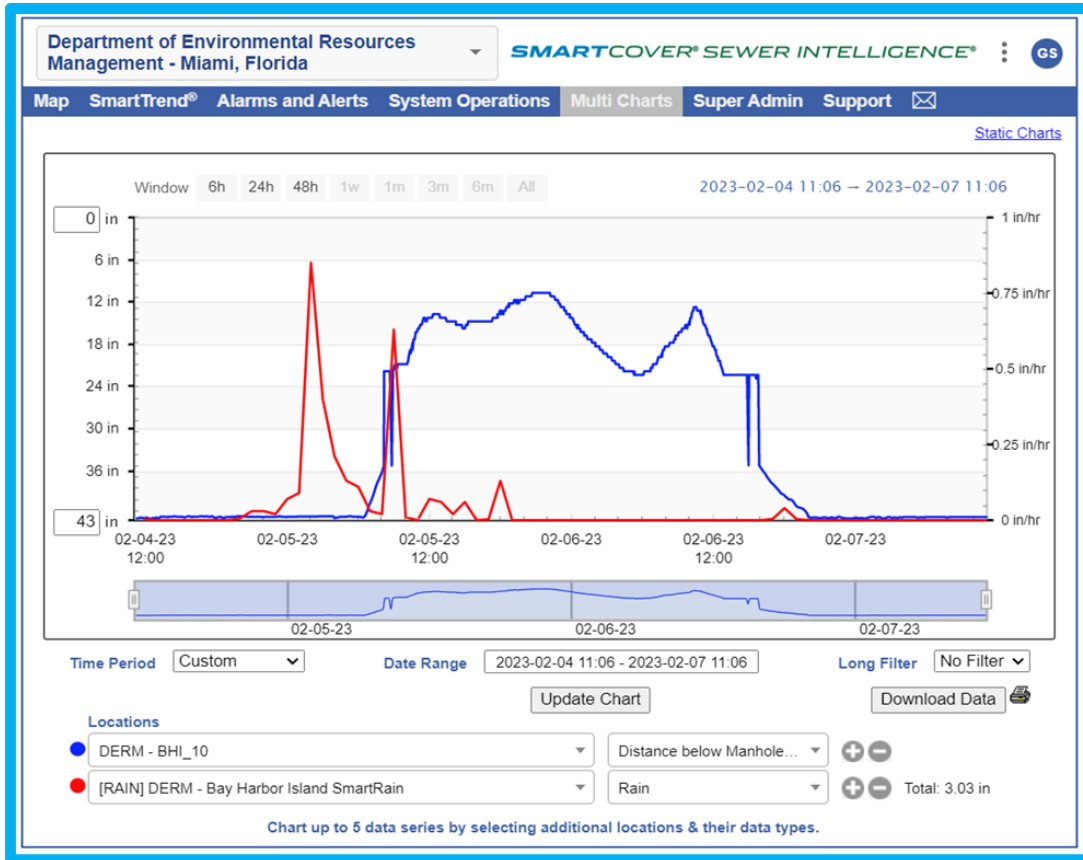


## SmartCover Units Chart

Description of the dash lines shown in the graph

- ❖ Green = Sensor Position
- ❖ Orange line = High level Advisory
- ❖ Red line = High level Alarm
- ❖ Dark Red line = H-H level Alarm

# Multi Charts Selection



Inflow and Infiltration Report

Create New Report ?

Reports

I & I Impact Filter: 0% to 100% (54 / 60 shown)

Advanced Settings

Download CSV

Search:

Report from 2023-10-09 to 2023-10-15 - Gloria Suarez Mendez

Location	Rain Site	Chart	I & I Impact
<a href="#">DERM - HGD-18-1</a>	<a href="#">DERM - Medley_SmartRain</a>		60%
<a href="#">DERM - MED -MH-100-D</a>	<a href="#">DERM - Medley_SmartRain</a>		60%
<a href="#">DERM - HGD-2-1</a>	<a href="#">DERM - Medley_SmartRain</a>		59%
<a href="#">DERM - MED -MH-200</a>	<a href="#">DERM - Medley_SmartRain</a>		52%
<a href="#">DERM - HGD-13-1</a>	<a href="#">DERM - Medley_SmartRain</a>		47%
<a href="#">DERM - MED -MH-11-D</a>	<a href="#">DERM - Medley_SmartRain</a>		39%
<a href="#">DERM - MED -MH-600-1</a>	<a href="#">DERM - Medley_SmartRain</a>		34%
<a href="#">DERM - HGD-10-1</a>	<a href="#">DERM - Medley_SmartRain</a>		34%
<a href="#">DERM - MED -MH-300</a>	<a href="#">DERM - Medley_SmartRain</a>		30%
<a href="#">DERM - MED -MH-205</a>	<a href="#">DERM - Medley_SmartRain</a>		30%
<a href="#">DERM - MED -MH-105-1</a>	<a href="#">DERM - Medley_SmartRain</a>		29%
<a href="#">DERM - HGD-10-34</a>	<a href="#">DERM - Medley_SmartRain</a>		24%
<a href="#">DERM - MED -MH-500</a>	<a href="#">DERM - Medley_SmartRain</a>		15%
<a href="#">DERM - MED -MH-700</a>	<a href="#">DERM - Medley_SmartRain</a>		14%
<a href="#">DERM - HGD-11-1</a>	<a href="#">DERM - Medley_SmartRain</a>		12%

Location

Rain Site

I & I Impact

Show 15 entries

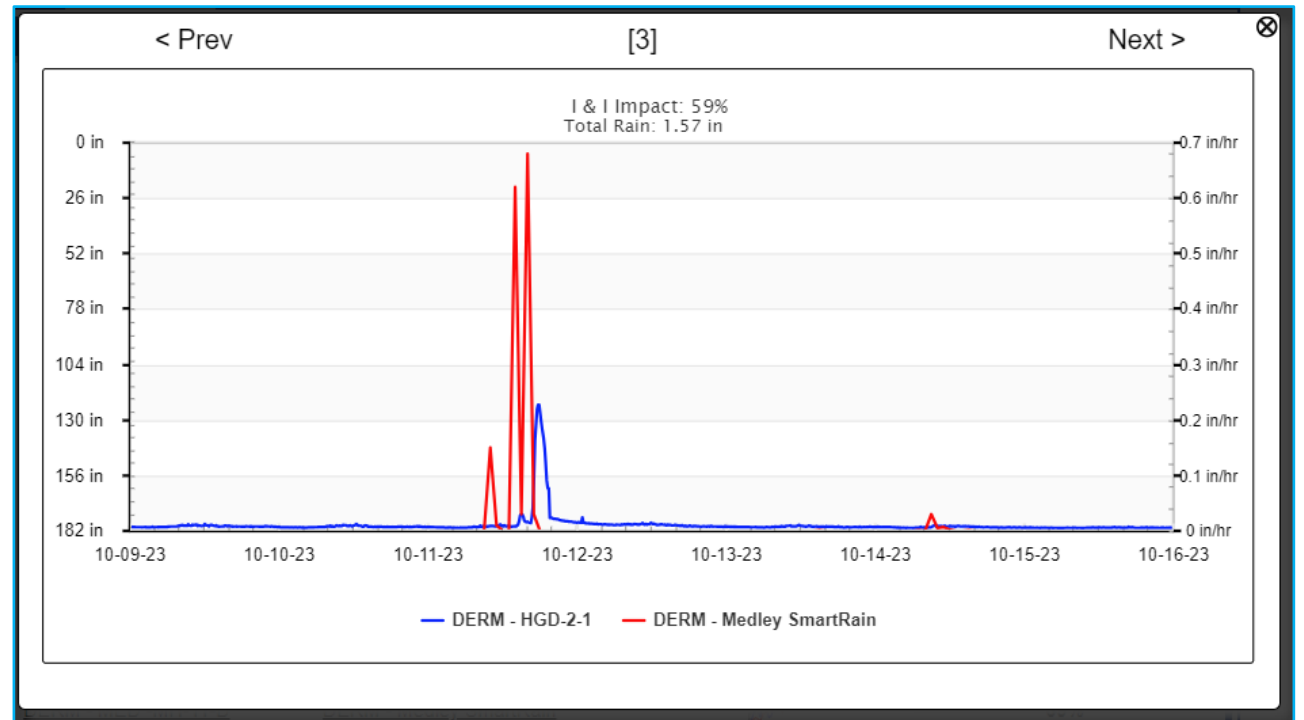
Showing 1 to 15 of 54 entries (filtered from 60 total entries)

Previous 1 2 3 4 Next

# I/I Impact



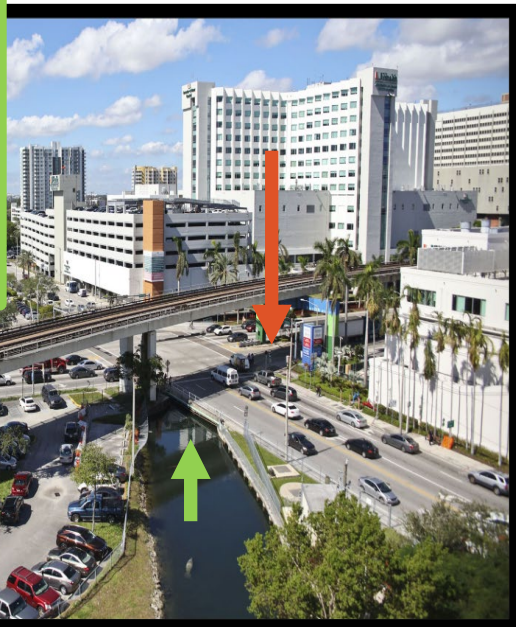
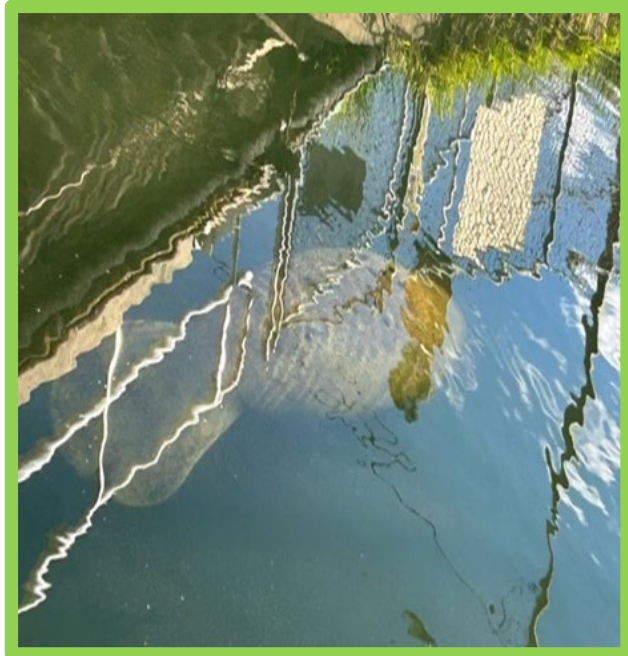
- ❖ Identify, in priority order, the SmartCover sites at high risk for significant I/I
- ❖ Utilize time series data from the SmartCover site and the closest SmartRain to calculate a cross-correlation score (Pearson Coefficient)





# Preventing SSOs, Contamination of Surface Waters and Protecting Wildlife

- Previous SSOs in the corner of NW 14 ST and NW 12 AVE
- DERM W&WWD and WASD team coordinated the installation of a SmartCover
- Prevented a significant SSO into **Wagner Creek!**



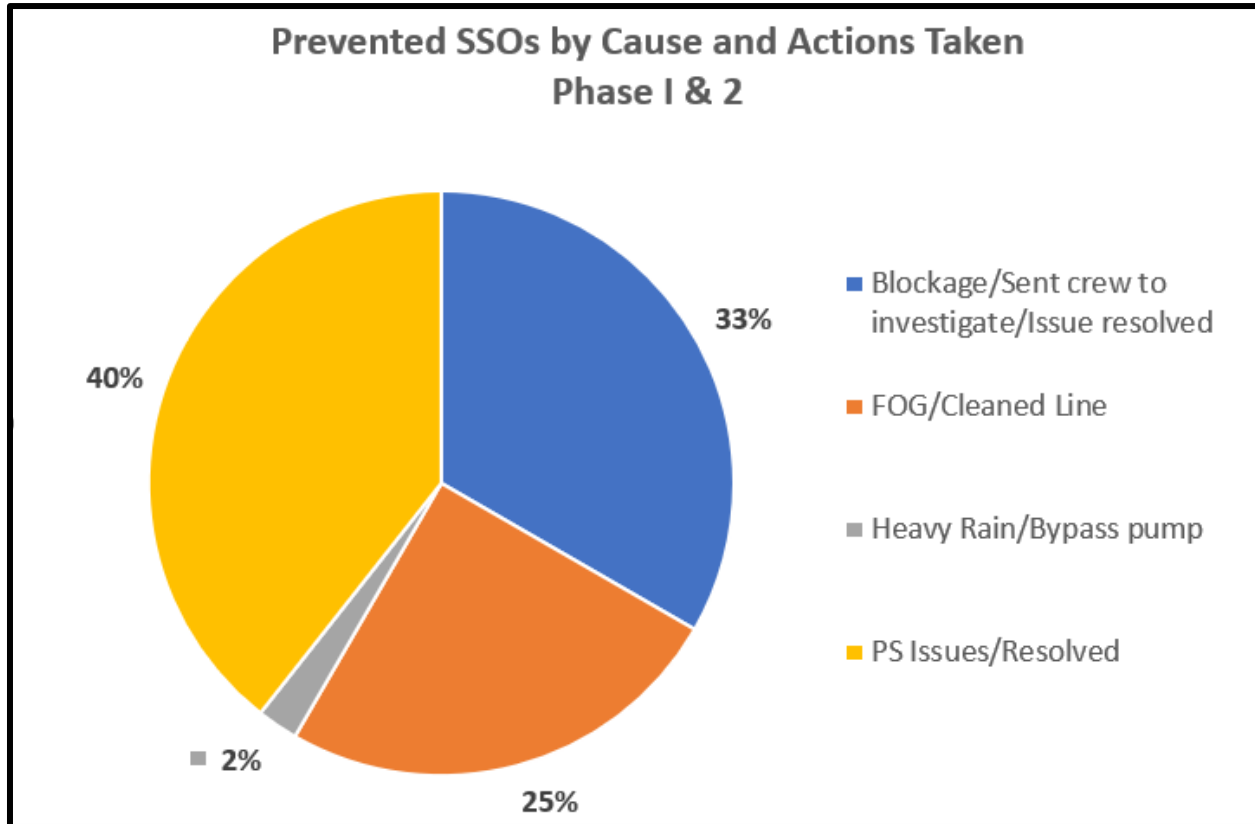
The RER-DERM SmartCover Pilot Study has helped to **PREVENT 150 SSOs** from January 2023 to October 2024

99 PREVENTED SSOs during Phase 1 (January 2023 – March 2024)  
51 PREVENTED SSOs during Phase 2 (April 2024- October 2024)



The system has also helped to identify :

- **Illegal Discharges**
- **RDII**
- **Changes on the operation of the sewer system due to force main breaks.**





# RER-DERM SmartCover Pilot Study

## Questions



ENVIRONMENTAL  
RESOURCES



# **RER-DERM Efforts to Eliminate Septic Systems Impacting the Miami River and Tributaries**



# RER-DERM NORC Program Sanitary Sewer Systems

WATER AND WASTEWATER DIVISION

# RER-DERM NORC Code Requirements

## Section 24.43.1 (7)

- ▶ A sanitary sewer Gravity Main or Force Main Should Be **Abutting**, **Available**, and **Operative**.
- ▶ All Pump Stations Down Stream must be in OK or AC Status, or equivalent.

**METROPOLITAN  
DADE COUNTY  
FLORIDA**

**ENVIRONMENTAL  
PROTECTION**

# Septic Tank Areas in Miami-Dade County

Non-Vacant & Not-Connected  
Properties

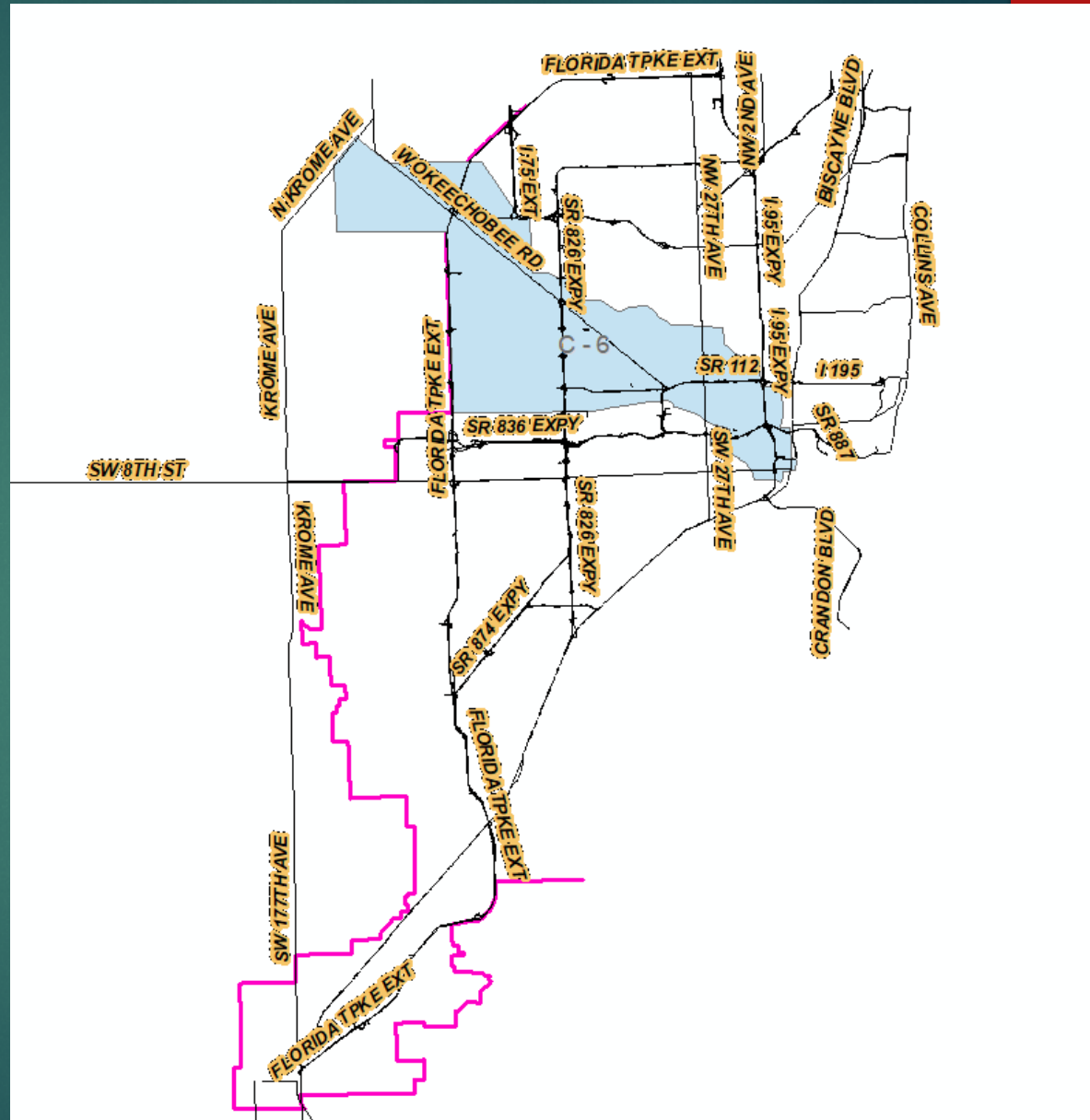
June 1, 2024 - Utility Reports

**POTENTIAL NORCs**



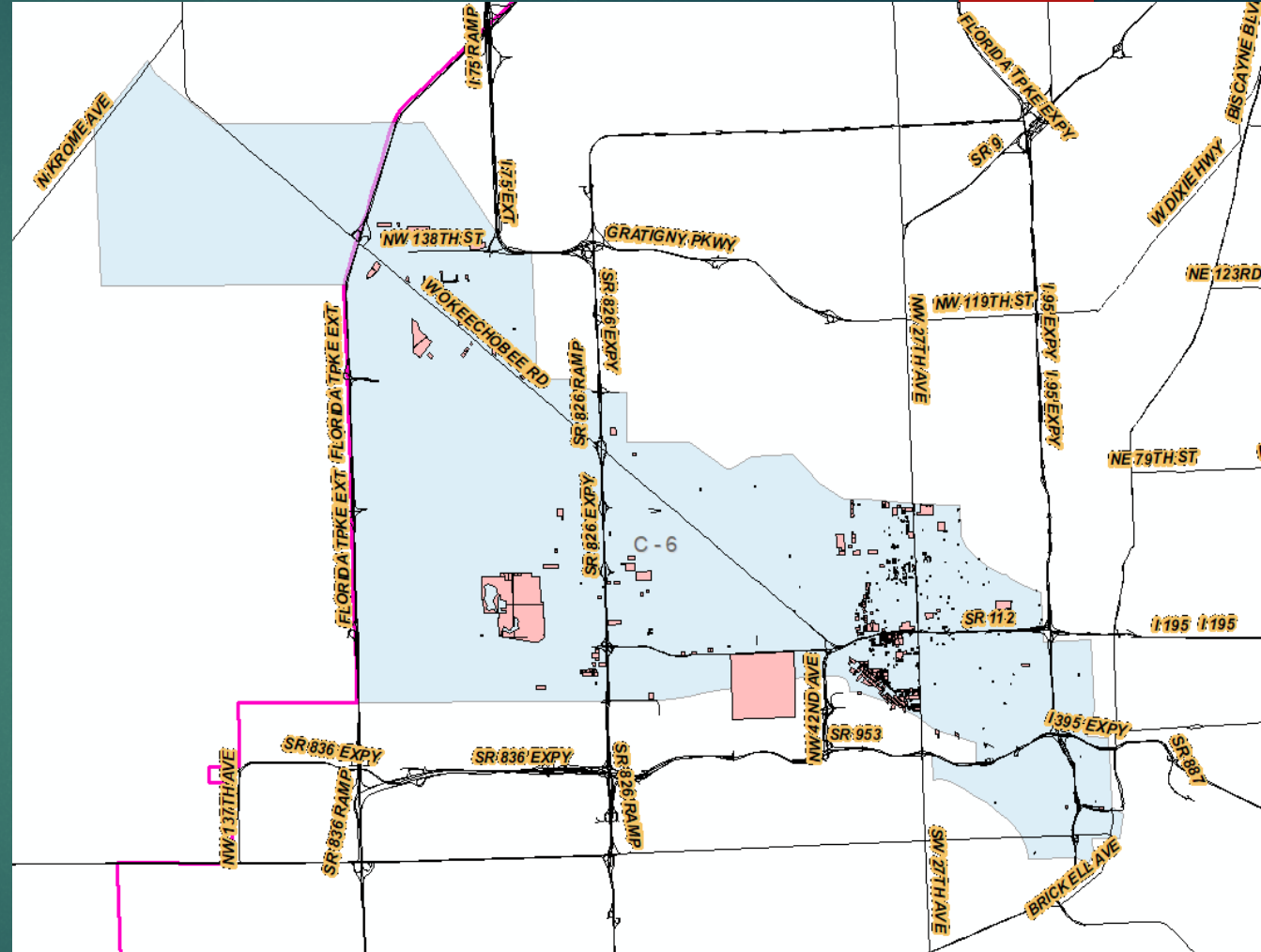


# Miami River Primary Canal Basin C-6





# RER-DERM Active NORCs Within Basin C-6



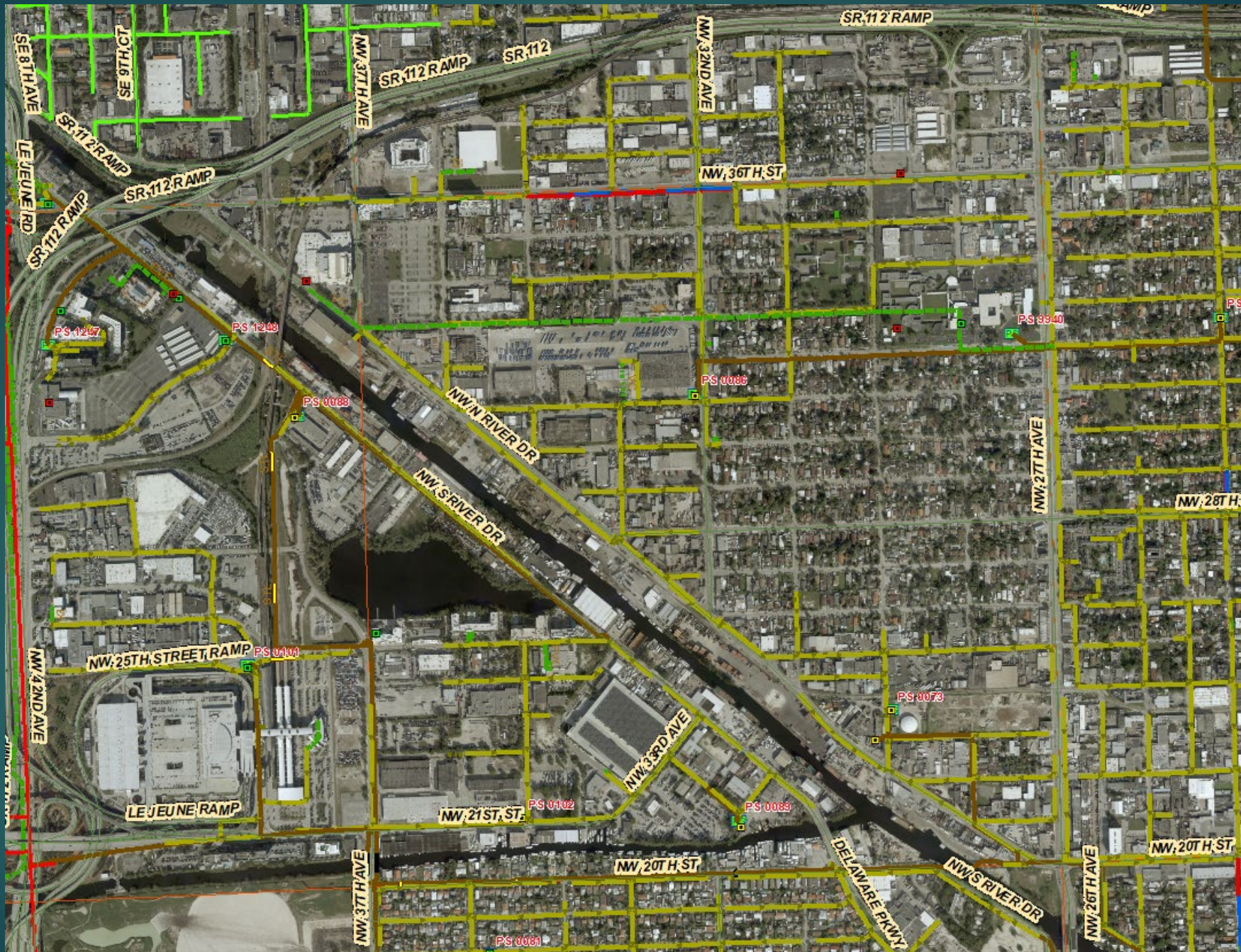
# Summary of NORCs and Non-Vacant and Non-Connected Properties Within C-6

Number of potential septic systems in C-6	3,683
Properties with Abutting Sewers	2,039
Properties with Sewer Laterals	247
Number of active NORCs for sewer connection in C-6 (Issued, In-Progress, EQCB & Enforcement)	369
Number of NORCs connected in C-6	308



# **Sewer Connection Efforts within the Melrose Area**















# Questions



**Thank you!**



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