



# Fortify Lauderdale

Building a Resilient Future  
in Fort Lauderdale



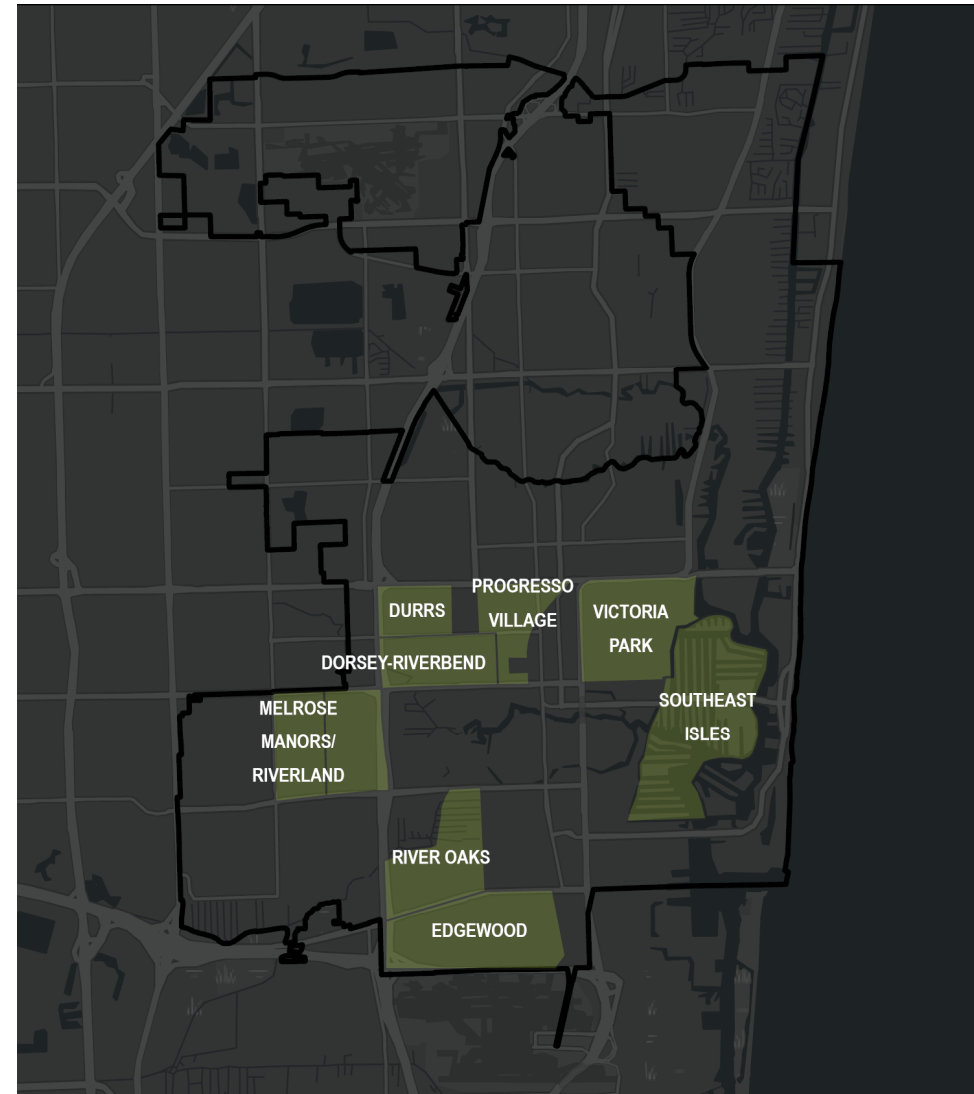
Tranche 2 Neighborhoods  
Stormwater Management Improvements  
City Project No. 12852  
Infrastructure Task Force Advisory  
Committee Meeting  
October 7, 2024

# Meeting Agenda




- **Original Eight Neighborhoods**
- **Tranche 2 Neighborhoods**
- **Data Collection**
- **Conceptual Approach**
- **Private Resilience Program**
- **Project Schedule**
- **Public Outreach**
- **Questions**

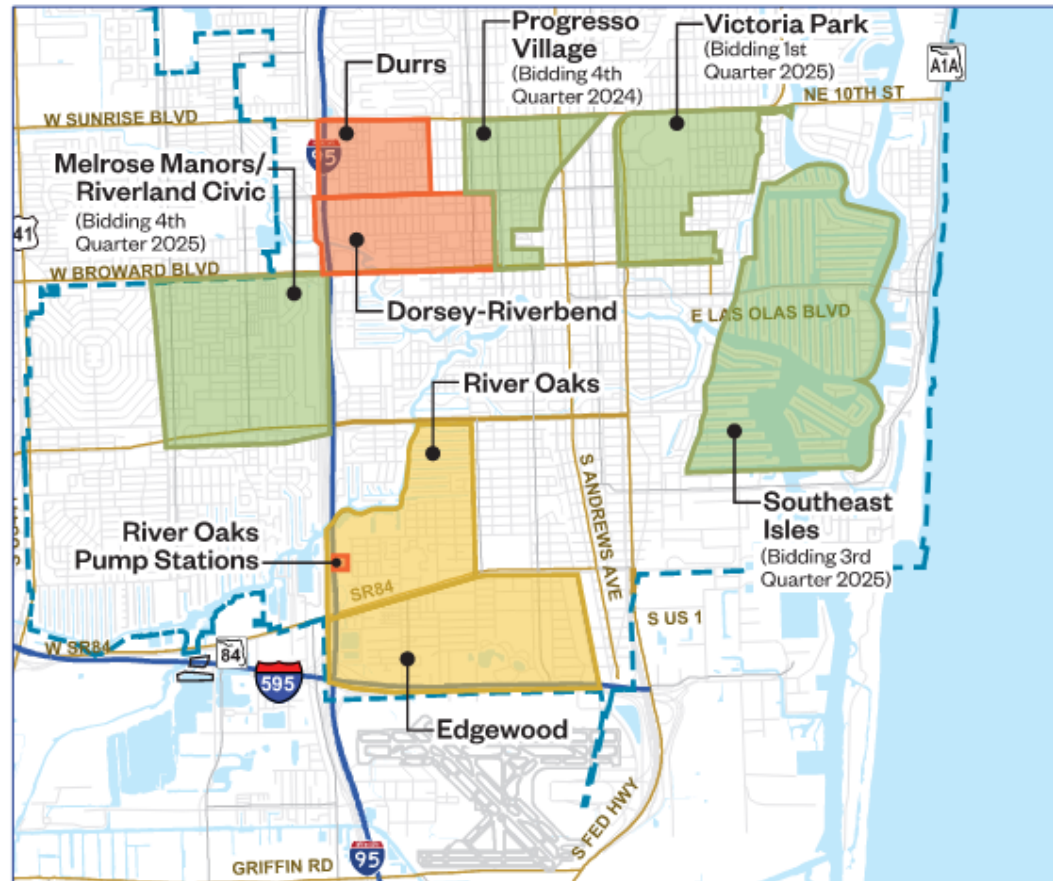
# Original Eight Neighborhoods

- Edgewood
- River Oaks
- Dorsey-Riverbend
- Durrs
- Progresso Village
- Victoria Park
- Southeast Isles
- Melrose Manors/Riverland



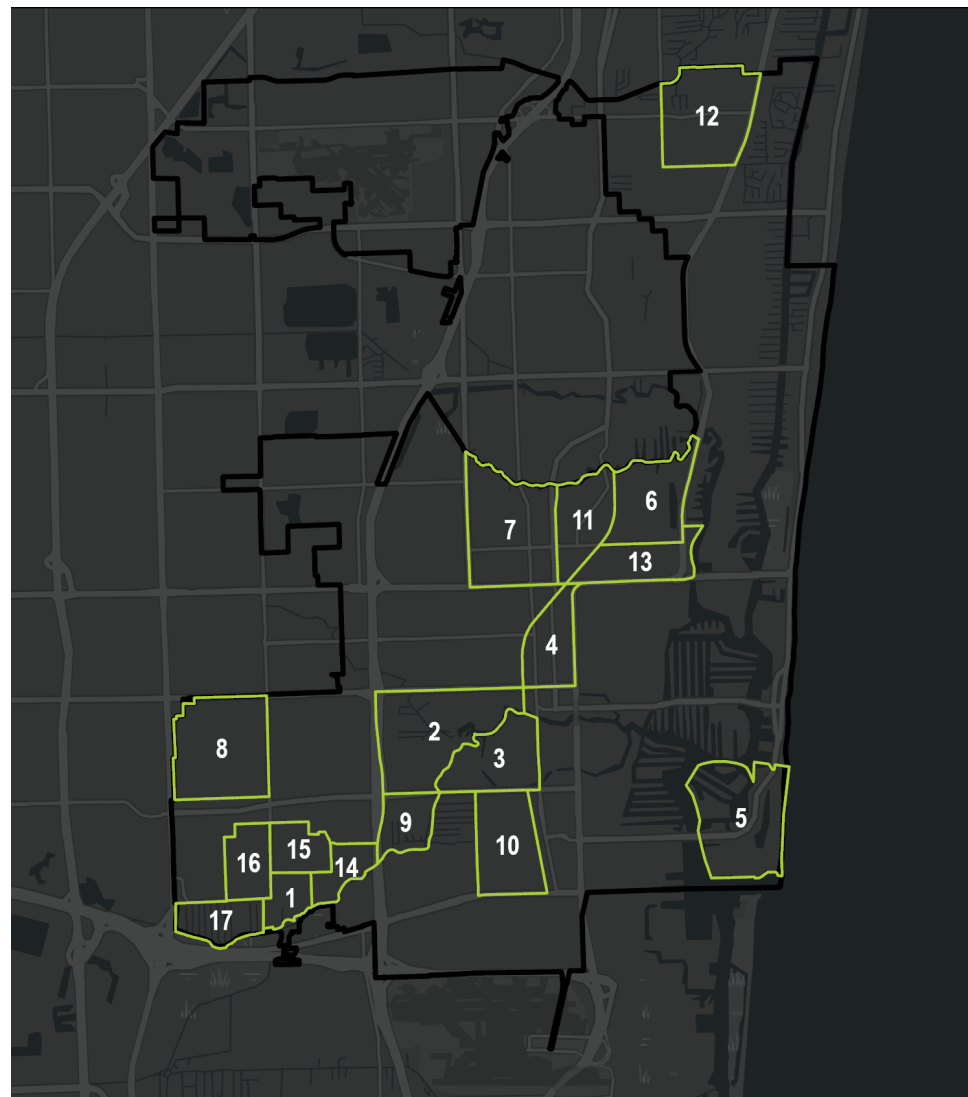
# Original Neighborhoods Progress

-  Construction Substantially Completed
-  In Construction
-  In Design



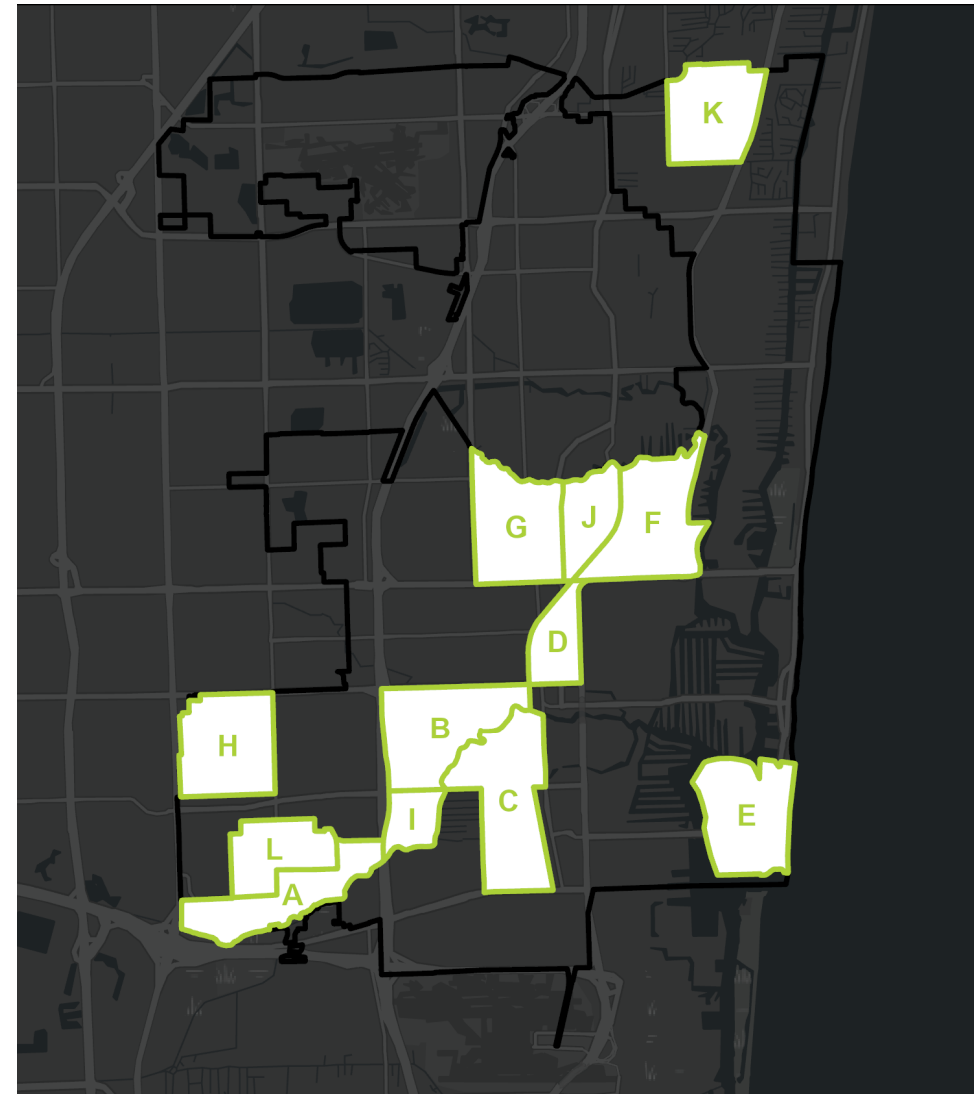
## Tranche 2 Neighborhoods

1. River Landings & Adjoining Areas
2. Sailboat Bend, Riverside Park & Adjoining Areas
3. Tarpon River
4. Flagler Village
5. Harbour Isles & Adjoining Areas
6. Poinsettia Heights
7. South Middle River
8. Melrose Park
9. Shady Banks
10. Croissant Park
11. Middle River Terrace
12. Imperial Point
13. Lake Ridge
14. Riverland Manors/Woods & Adjoining Areas
15. Chula Vista & Adjoining Areas
16. Riverland Village
17. Lauderdale Isles



# Projects

- A. River Landings, Riverland Manors/Woods, Lauderdale Isles & Adjoining Areas
- B. Sailboat Bend, Riverside Park & Adjoining Areas
- C. Tarpon River and Croissant Park
- D. Flagler Village
- E. Harbour Isles & Adjoining Areas
- F. Poinsettia Heights and Lake Ridge
- G. South Middle River
- H. Melrose Park
- I. Shady Banks
- J. Middle River Terrace
- K. Imperial Point
- L. Chula Vista, Riverland Village & Adjoining Areas



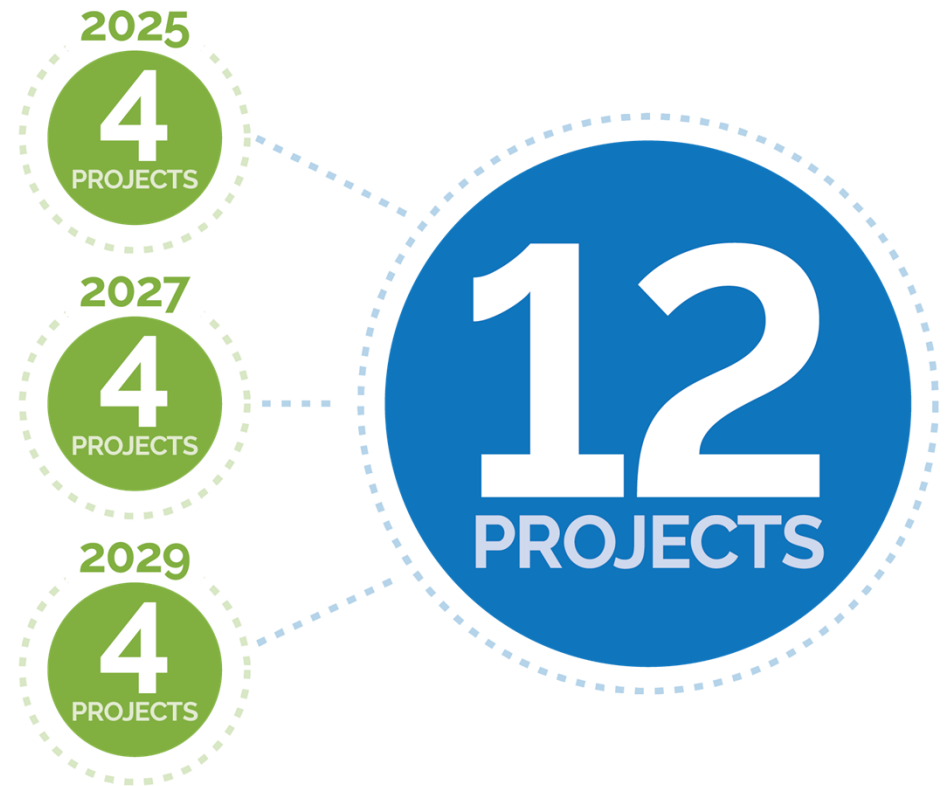
# The 17 Neighborhoods were consolidated into 12 Projects based on a variety of factors

- Proximity/Adjacency
- Similarity of hydrologic conditions and drainage infrastructure



## Project Phasing must also consider a number of factors

- Program funding/financing
- City ability to simultaneously manage multiple design/construction projects
- Project interdependencies



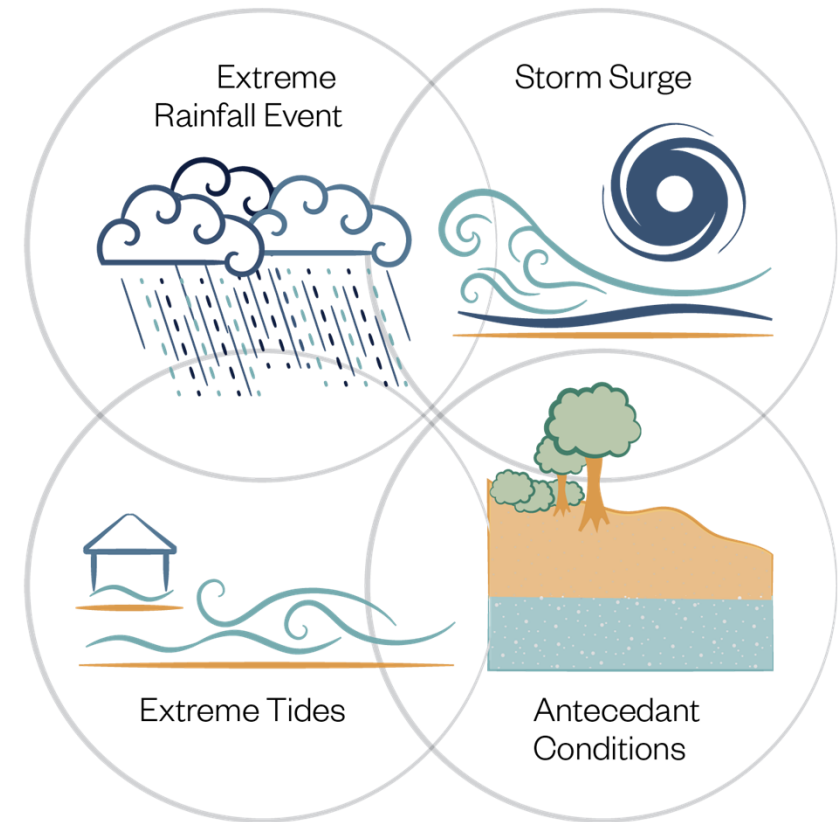
## Prioritization of Projects is still ongoing and will include consideration of...

- Flooding severity  
(based on **model results** and observation data)
- Critical assets within drainage basins
- Interdependencies
- Spatial distribution  
(impacts on neighbors and traffic)

currently using  
preliminary model results,  
while model is being  
updated

## Underway with updating the Stormwater Model to capture advancements in resilience planning

- Model conditions and parameters consistent with FS 380.093 (Resilient Florida Grant Program)
- Incorporation of future “extreme rainfall change factors”
- Incorporation of future groundwater conditions
- Consideration of regional water management operations



**Re-evaluating to a higher standard**

## Data Collection is critical and wet weather afforded timely opportunities

Hazen's field data collection for the 17 neighborhoods occurred during June/July 2024.

- Neighborhoods were visited in wet and dry conditions.

Priority locations within the neighborhoods were determined using:

- Flood prone areas (preliminary modeling)
- Low elevations (2018 DEM)
- Properties with FEMA repetitive losses



# Spatial coverage for data collection was widespread



Wet Weather Site Visits

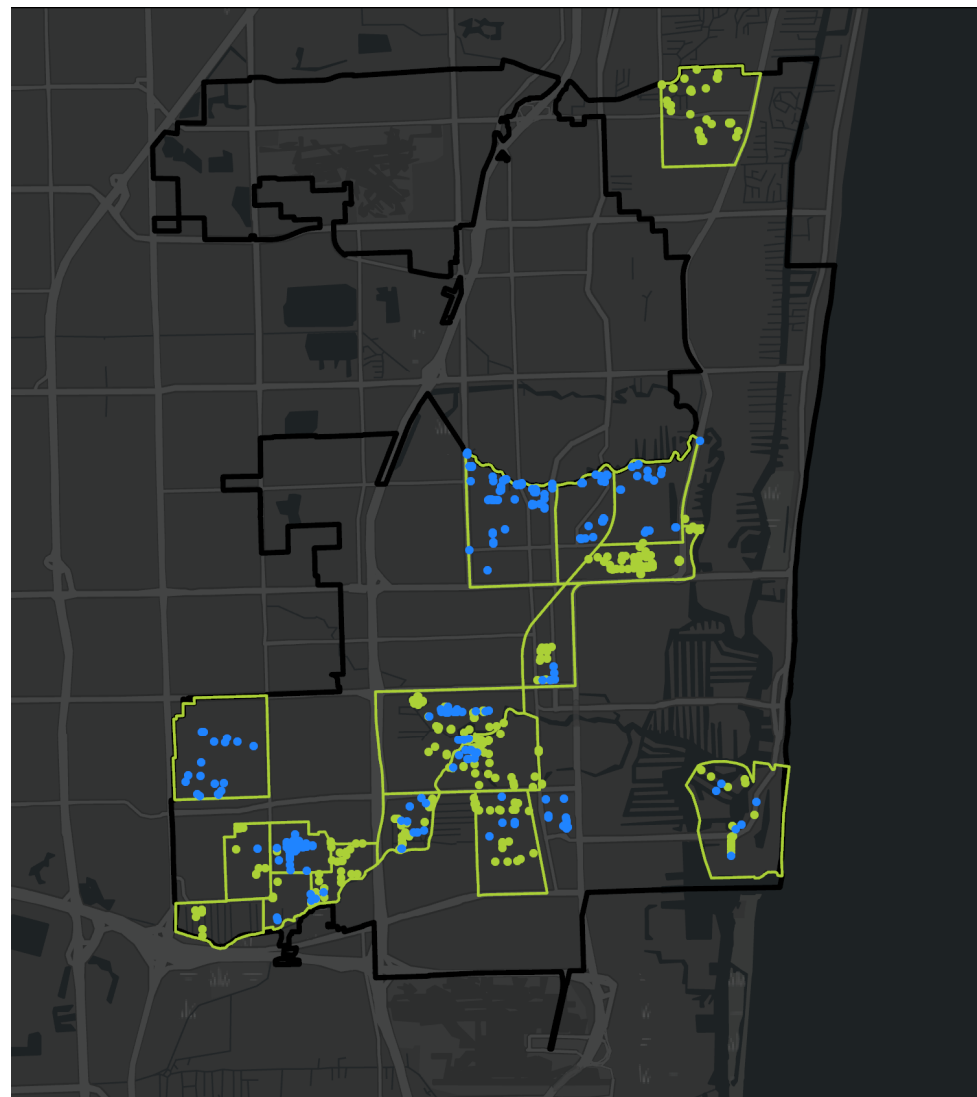
511 NW 17th St, Fort Lauderdale, FL 33311, USA

📍 327°NW (T) • 26.149014, -80.150366 ±5m ▲ -23m



Neighborhood 7  
11 Jun 2024 10:39:43 AM

Dry Weather Site Visits



# Data Collection Team used ArcGIS Survey123...

Swale Conditions  
Existing Infrastructure  
Outfall Conditions  
Mitigation Strategies



...and populated a PowerBI Dashboard

# ...providing a neighborhood overview “at a glance”

## Field Data Summary - Sailboat Bend



### Flooding

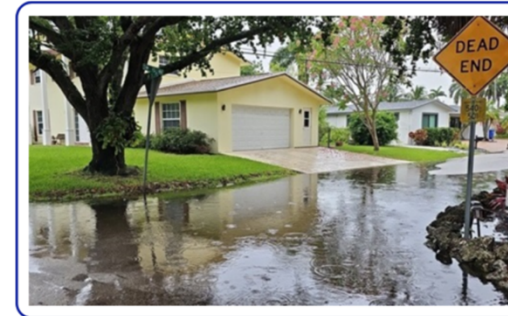
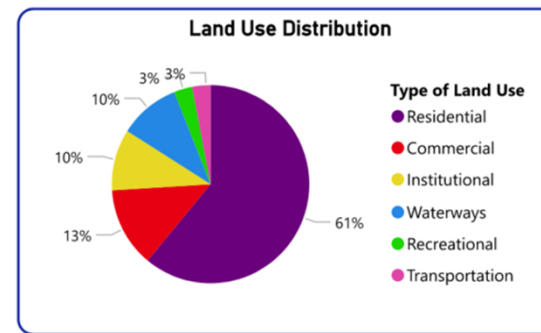
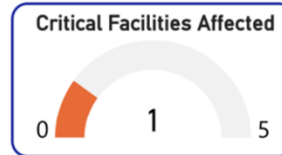
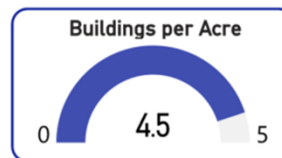
Nature of Flooding	Is There Drainage Infrastructure?
Isolated	Existing but undersized

### Swales

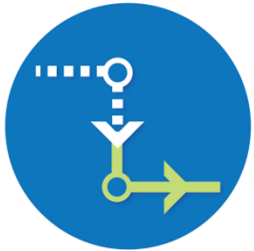
Existing Swales?	Grading Problems?
No	Yes

### Outfalls

Existing Outfalls?	Accessible?	Condition
Yes	No	N/A

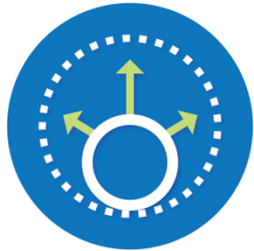


# A variety of potential mitigation strategies is proposed



Extend Drainage  
System

**DS**



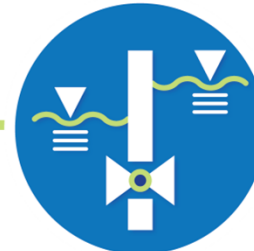
Increase  
Conveyance Capacity

**UP**



Install Pump  
Station

**PS-I**



Install Tidal  
Valve

**TV**



Capital  
Maintenance

**MA**



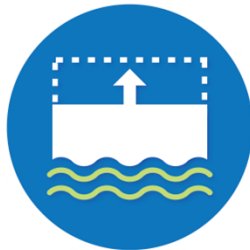
Private Resiliency  
Program

**PR**



Upgrade Existing  
Pump Station

**PS-U**



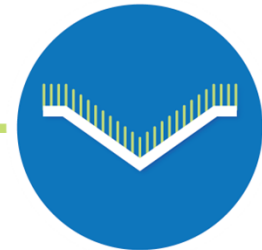
Raise  
Seawalls

**RS**



Grading  
Improvements











**GI**



Rehabilitate  
Grass Swales

**SW**

# Takeaway from Field Work & Desktop Analyses

		Adaptation Strategies									
											
Project	Tranche 2 Neighborhood Projects	DS	UP	PS-I	MA	PR	PS-U	RS	GI	TV	SW
A	Riverland Manors, Lauderdale Isles, River Landings & Adjoining Areas	✓		✓		✓		✓	✓	✓	✓
B	Sailboat Bend, Riverside Park & Adjoining Areas	✓	✓	✓		✓		✓		✓	✓
C	Tarpon River and Croissant Park	✓	✓	✓		✓		✓		✓	✓
D	Flagler Village		✓		✓	✓	✓				
E	Harbour Isles & Adjoining Areas		✓			✓				✓	
F	Lake Ridge and Poinsettia Heights	✓	✓	✓		✓			✓		✓
G	South Middle River	✓	✓	✓		✓			✓		✓
H	Melrose Park			✓	✓	✓					
I	Shady Banks	✓	✓	✓		✓				✓	✓
J	Middle River Terrace	✓	✓	✓		✓			✓		✓
K	Imperial Point	✓	✓			✓					✓
L	Riverland Village and Chula Vista & Adjoining Areas	✓		✓	✓	✓		✓		✓	✓

# Private Resilience Program



# Private Resilience Program

Review of existing documents

Conduct outreach meetings

Develop private resilience guidance documents

Develop cost-share and grant program recommendations



# Steps for developing private resilience guidance

1

## Review Existing Guidance and Programs



*Example:* Fight The Flood Private Property Adaptation (PPA) Program

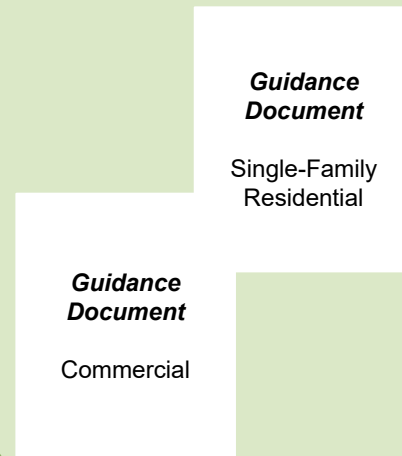
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## Stakeholder Outreach and Engagement



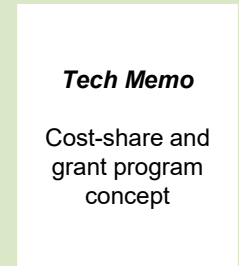
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## Private Resilience Guidance Development

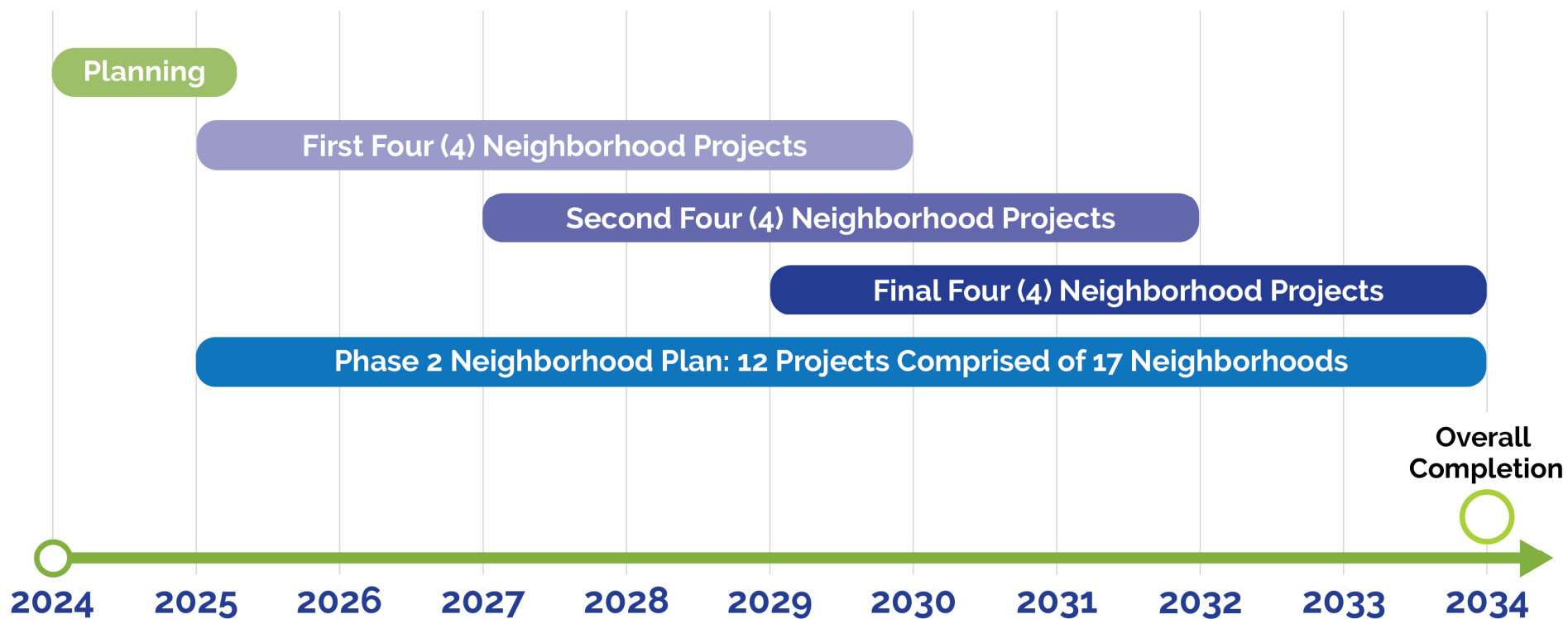


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## Private Resilience Cost-Share and Grant Program Recommendations

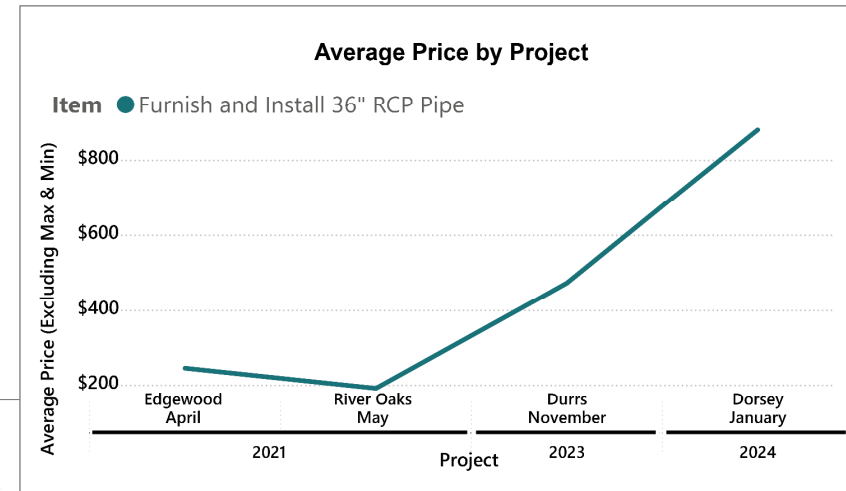
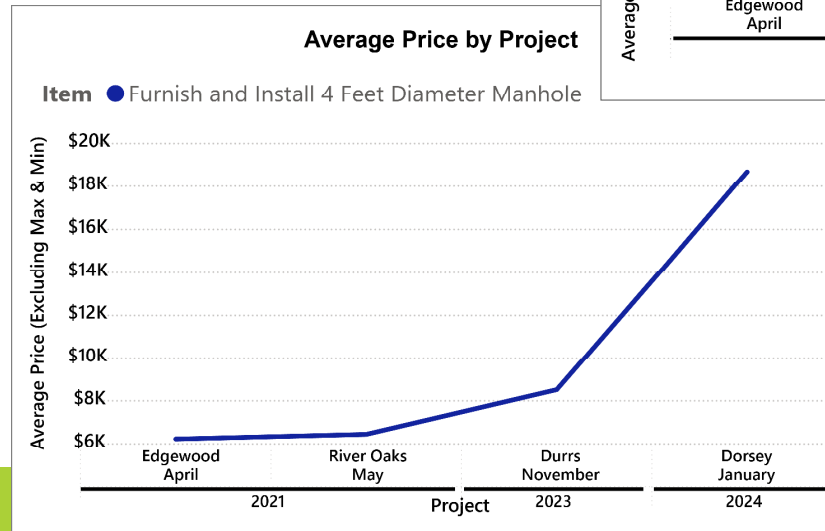


# The Phased Project Schedule plans for completion by 2034



# We are building a Cost Database to benefit the Program

- Developed to compare bid prices from all program projects
- Items included are sorted into various categories
- Improves cost estimating
- Allows trending analysis



# Public Outreach is a key component of the overall program

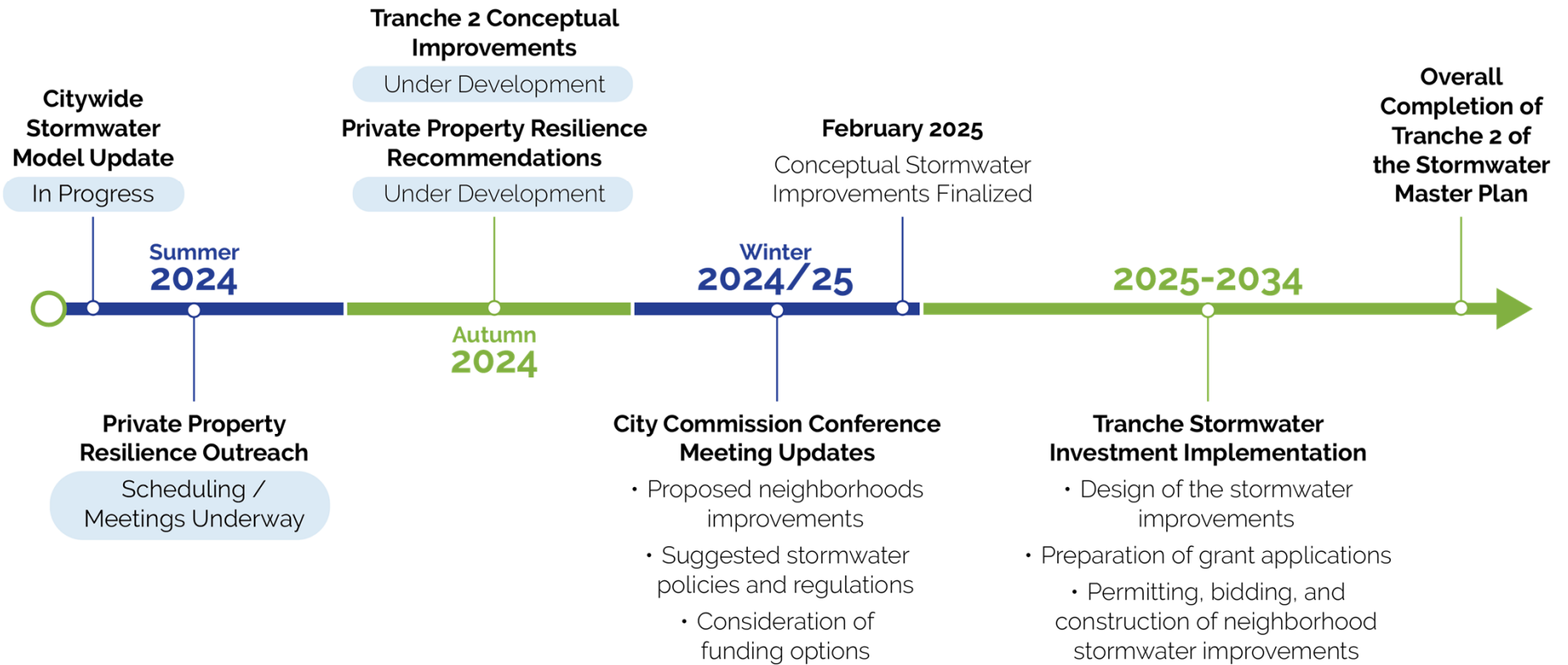
- Tranche 2 Neighborhood Meetings (planning, design, construction)
- Broader Citywide engagement relative to Private Property Resilience
  - City Staff
  - Homeowners/Businesses
  - Development Community



**“Best results achieved via collaboration”**



# Update on Tranche 2 Neighborhood Improvements Timeline

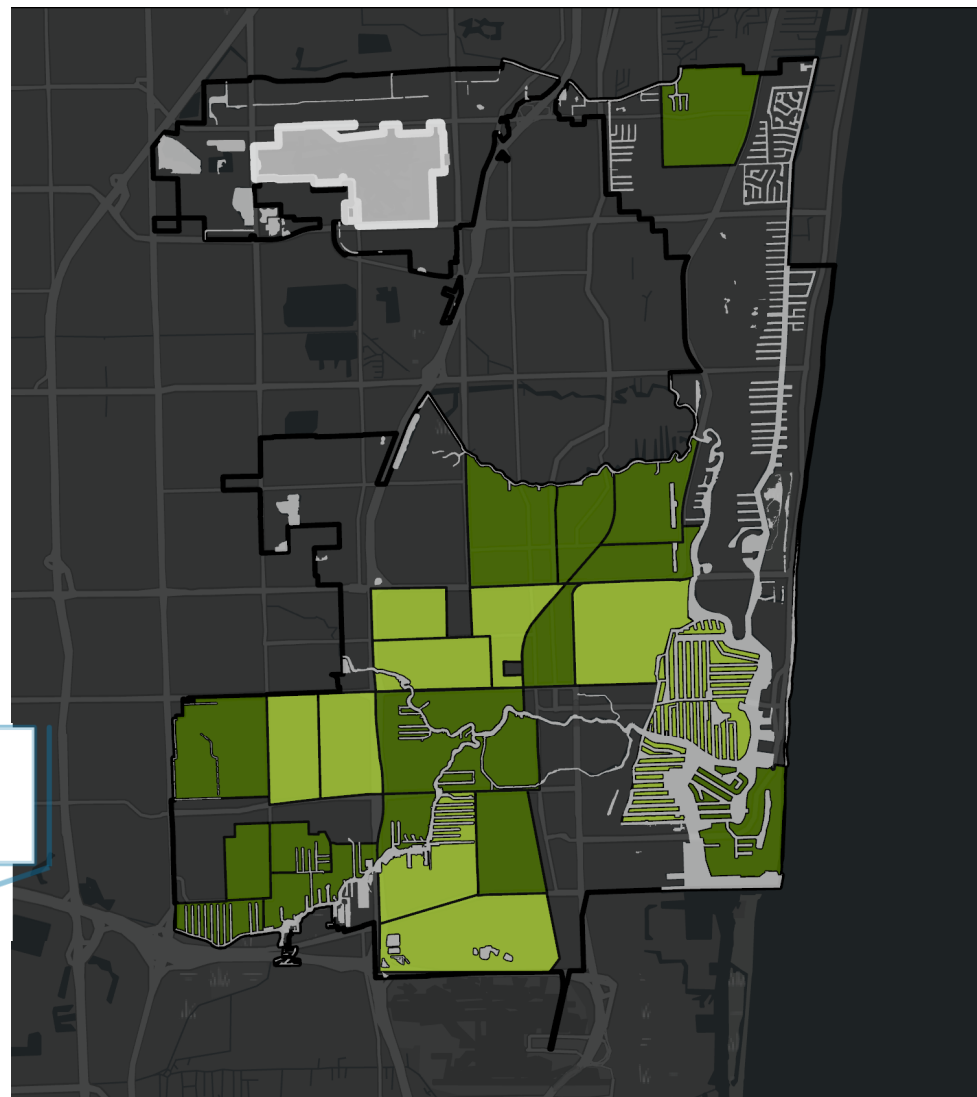


## The City's Neighborhood Stormwater Capital Investments are significant

	Area	
	Acres	Percent
City of Fort Lauderdale	23,040	100%
Waterbodies	2,308	10%
FTL Executive Airport	786	3%
Original Neighborhoods	4,088	18%
Tranche 2 Neighborhoods	5,197	24%
Remaining Area	7,920	45%

After completion of the proposed neighborhood projects, the City will have **addressed 55%** of the City with stormwater improvements.

the most flood-prone





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# Questions