TOWN OF LANTANA

Town Hall
500 Greynolds Circle
Lantana, FL 33462

Workshop Meeting
March 10, 2025 - 5:30 p.m.

For information regarding the procedures for public participation during a Town Council meeting, please refer to the end of this agenda.

***THIS TOWN COUNCIL MEETING CAN BE ACCESSED ONLINE FOR LISTENING PURPOSES ONLY. PLEASE SEE THE LAST PAGE FOR DETAILS.**

1. **ROLL CALL, SILENT PRAYER, AND PLEDGE OF ALLEGIANCE.**
   Karen Lythgoe, Mayor ____
   Mark Zeitler, Vice Mayor ____
   Kem Mason, Vice Mayor Pro Tem ____
   Christopher Castle, Councilmember ____
   Lynn J. Moorhouse, D.D.S., Councilmember ____

   LANTANA STAFF: Brian K. Raducci, ICMA-CM, Town Manager; R. Max Lohman, Town Attorney; and Kathleen Dominguez, CMC, Town Clerk

2. **APPROVAL OF AGENDA.**

3. **SPECIAL PRESENTATIONS:**
   a. Town of Lantana Asset Inventory and Ocean Avenue Sea Level Rise Vulnerability Assessment by Baxter & Woodman Consulting Engineers.

4. **PUBLIC COMMENTS.**

5. **COUNCIL COMMENTS.**

6. **ADJOURNMENT.**

Listen to the Town Council Meeting: Visit https://www.lantana.org/TownAgendas and click "View Event" next to the meeting date for the live broadcast. The link will be available when the meeting starts. The recording will be available on-demand after the meeting in the Past Events section.

PROCEDURES FOR PUBLIC PARTICIPATION

Any citizen is entitled to be heard on an official agenda item when the Town Council calls for public comment **OR** any matter not on the agenda under the "Public Comments" section. Citizens desiring to address the Town Council shall step up to the microphone at the podium, state their name and address in an audible voice for the record, and, unless the Chair grants additional time, shall limit their address to three (3) minutes. Citizens who wish to address the Council **MUST** complete a blue public comment card and present it to the Town Clerk before the item is discussed and wait for the Mayor to announce when it is their turn to speak. Likewise, if the public wishes to speak on a matter on the consent agenda, they must complete a blue card and present it to the Town Clerk before the start of the meeting.

Americans with Disabilities Act: In accordance with the provisions of the Americans with Disabilities Act (ADA), this document can be made available in an alternate format (large print) upon request. Special accommodations can be provided upon request with three (3) workings days advance notice of any meeting, by contacting Kathleen Dominguez, Town Clerk at Lantana Town Hall, 500 Greynolds Circle, Lantana, Florida, (561) 540-5000.

BAXTER & WOODMAN
Consulting Engineers

Town of Lantana

Asset Inventory and Ocean Avenue Sea Level Rise Vulnerability Assessment

March 10, 2025

Public Meeting Agenda

- Welcome
- Introductory Remarks
- Purpose of Study
- Critical and Important Assets
- Flood Scenarios
- Mitigation Strategies
- Ocean Avenue Assessment

What is a Sea Level Rise Vulnerability Assessment?

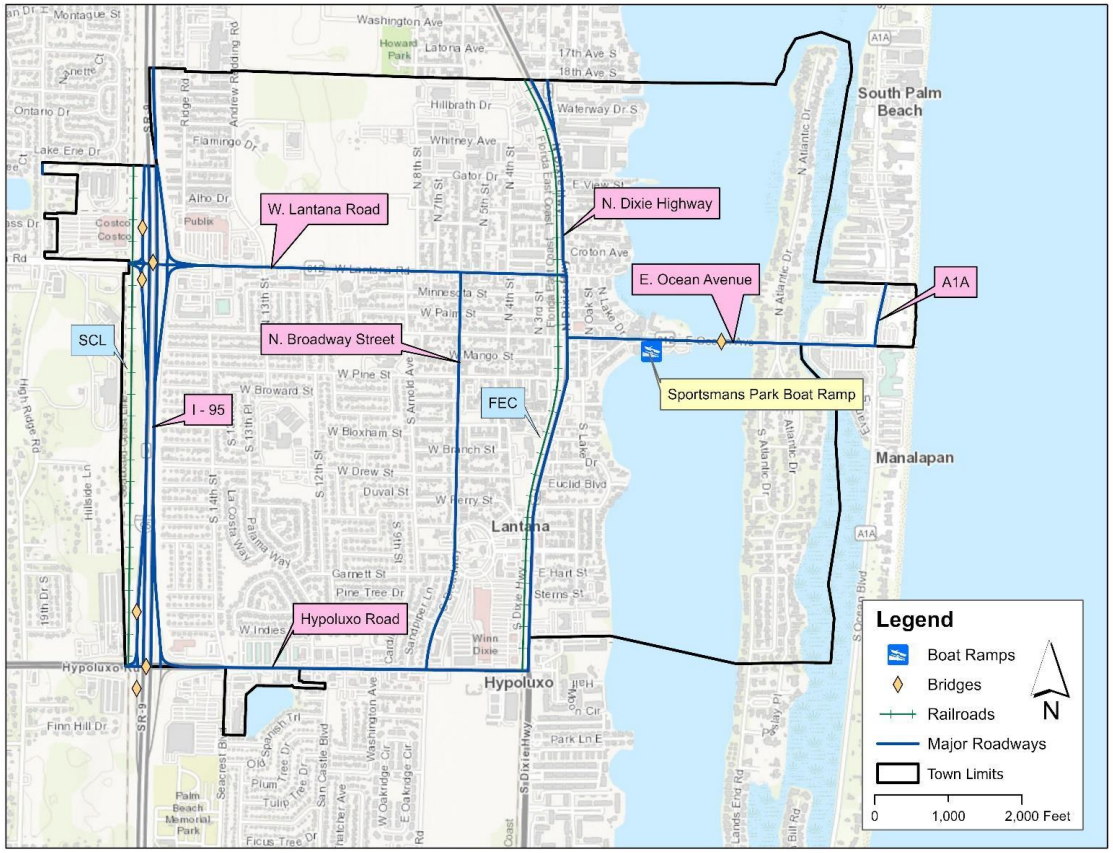
- Office of Resilience and Coastal Protection (ORCP), Resilient Florida Program
- Assess the impacts of Sea Level Rise (SLR) on assets owned by a municipality
- Identify Critical and Important Assets and Vulnerability to flooding
- To allow municipalities to prepare and mitigate for future impacts
- Assessments are fully funded by the State Department of Environmental Protection
- Qualifies municipalities for potential grant assistance for Resiliency Projects

What the Assessment Includes

- **Florida Statute § 380.093 and ORCP Guidelines**
- **Data Collection**
  - Census Data
  - Assets in GIS
  - Sea Level Rise and Storm Intensity Projections
  - Hydrologic Information in GIS
- **Flood Analyses for 2040 and 2070 Low and High Predictions**
  - Tailwater Effects (SLR and King Tides)
  - Storms (100-year and 500-year)
- **Exposure Analysis**
  - Flooding Depths on Assets
- **Sensitivity Analysis**
  - Percentiles of Vulnerabilities
- **Public Outreach**

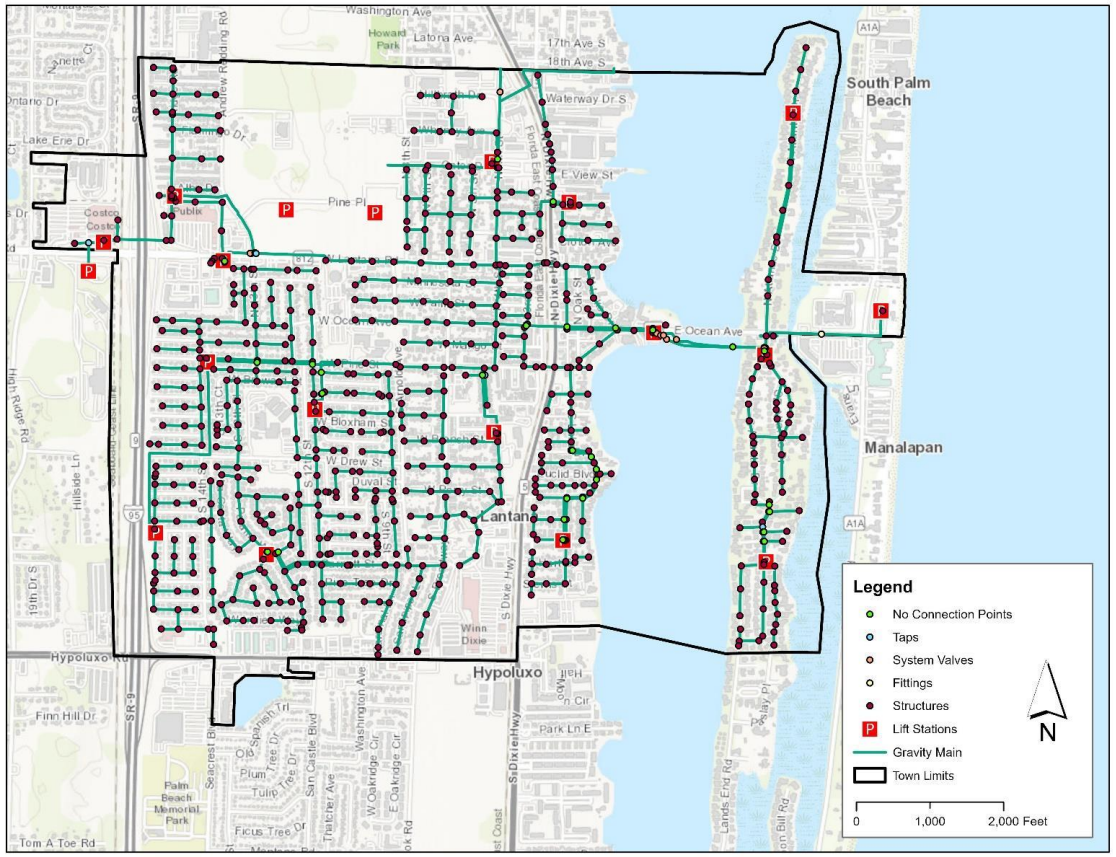
Critical Assets - Transportation

- Bridges
- Boat Ramps
- Major Roadways



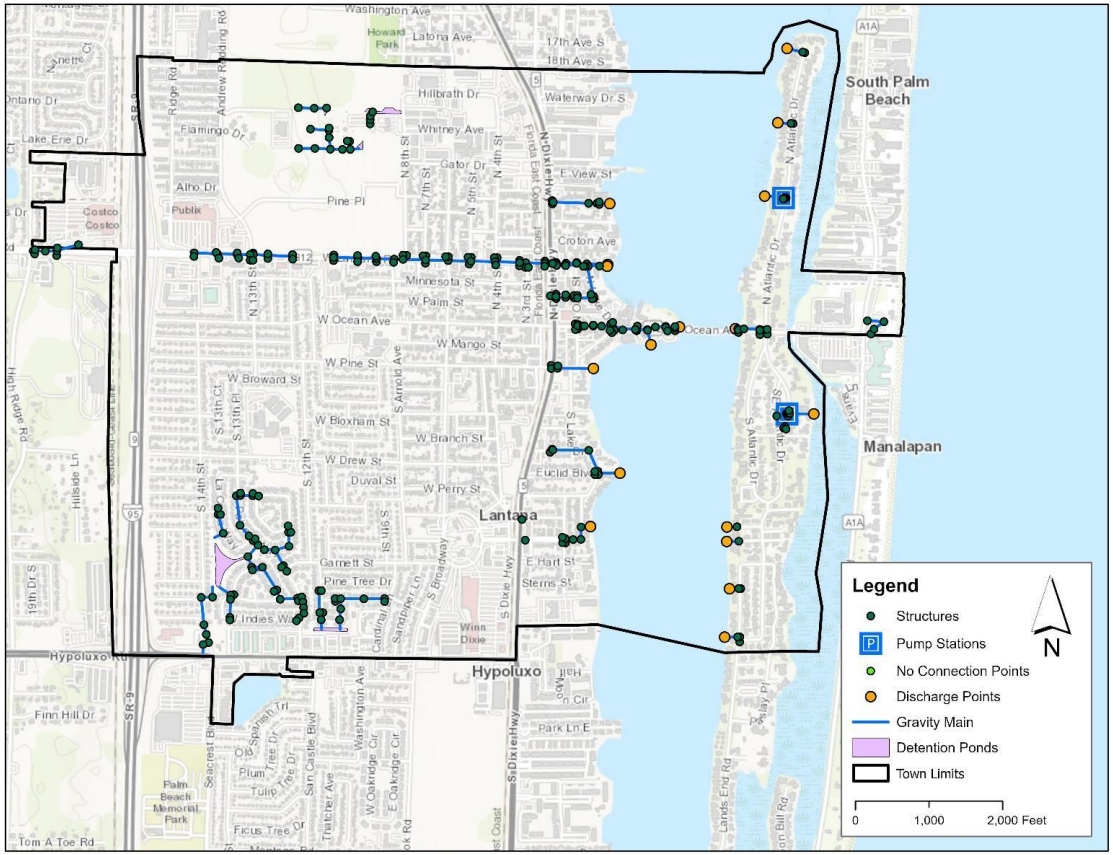
Critical Assets - Wastewater

- 154,413 LF Gravity Mains
- 670 Manholes
- 29,104 LF Force Mains
- 18 Lift Stations



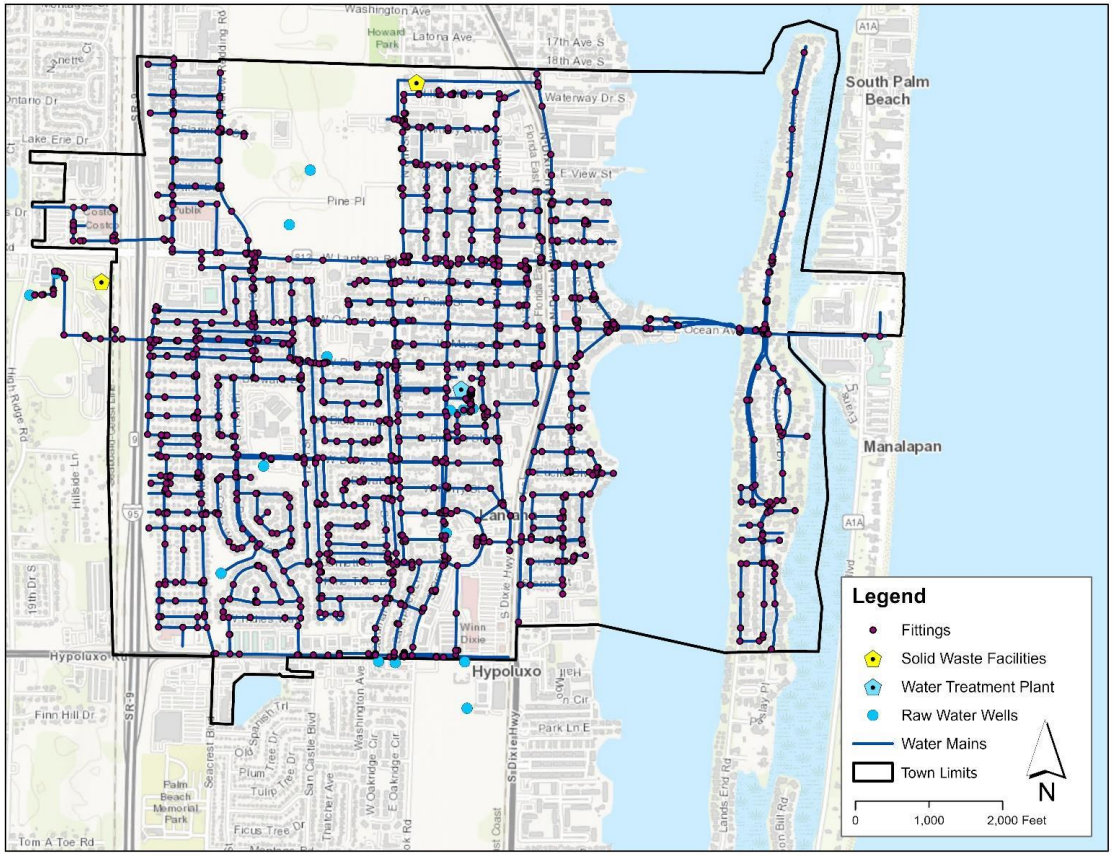
Critical Assets - Stormwater

- 5.5 Miles of Culverts
- 18 Outfalls

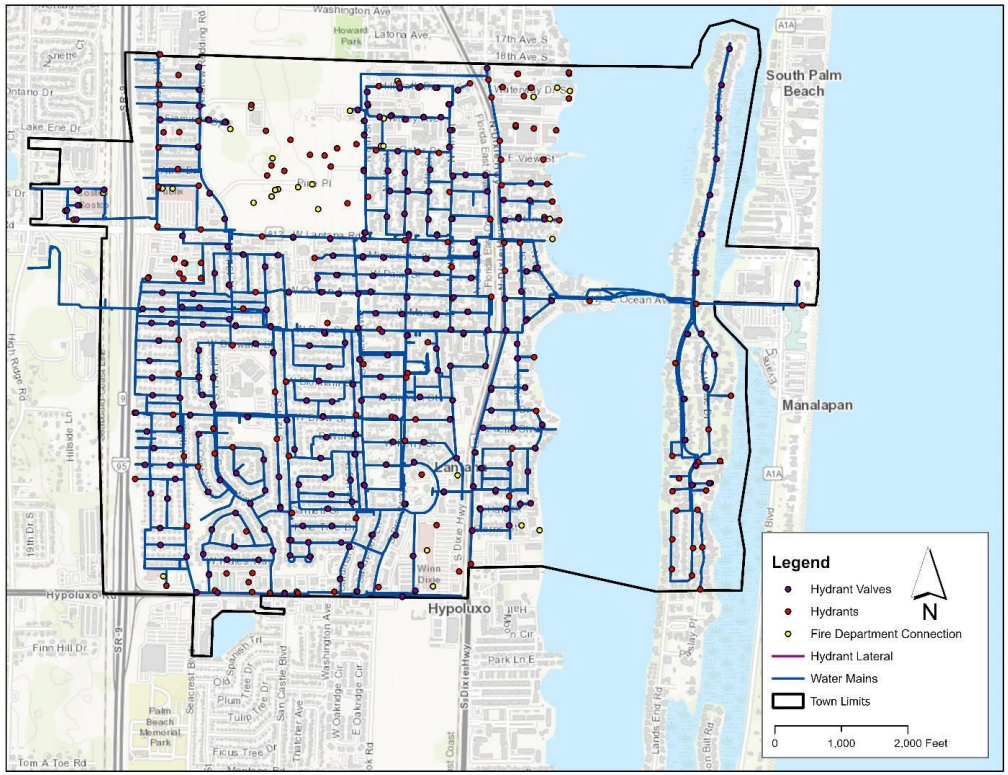


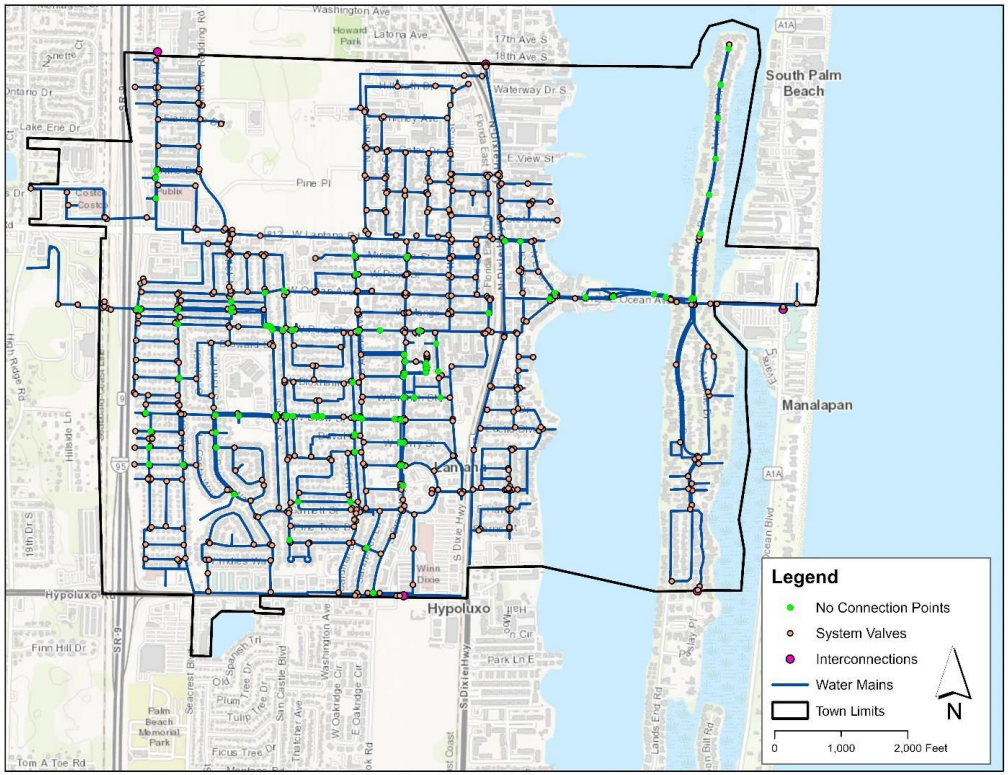
Critical Assets - Water

- 10 Raw Water Wells
- 259,359 LF Water Mains
- Water Treatment Facility
- 7 Interconnects



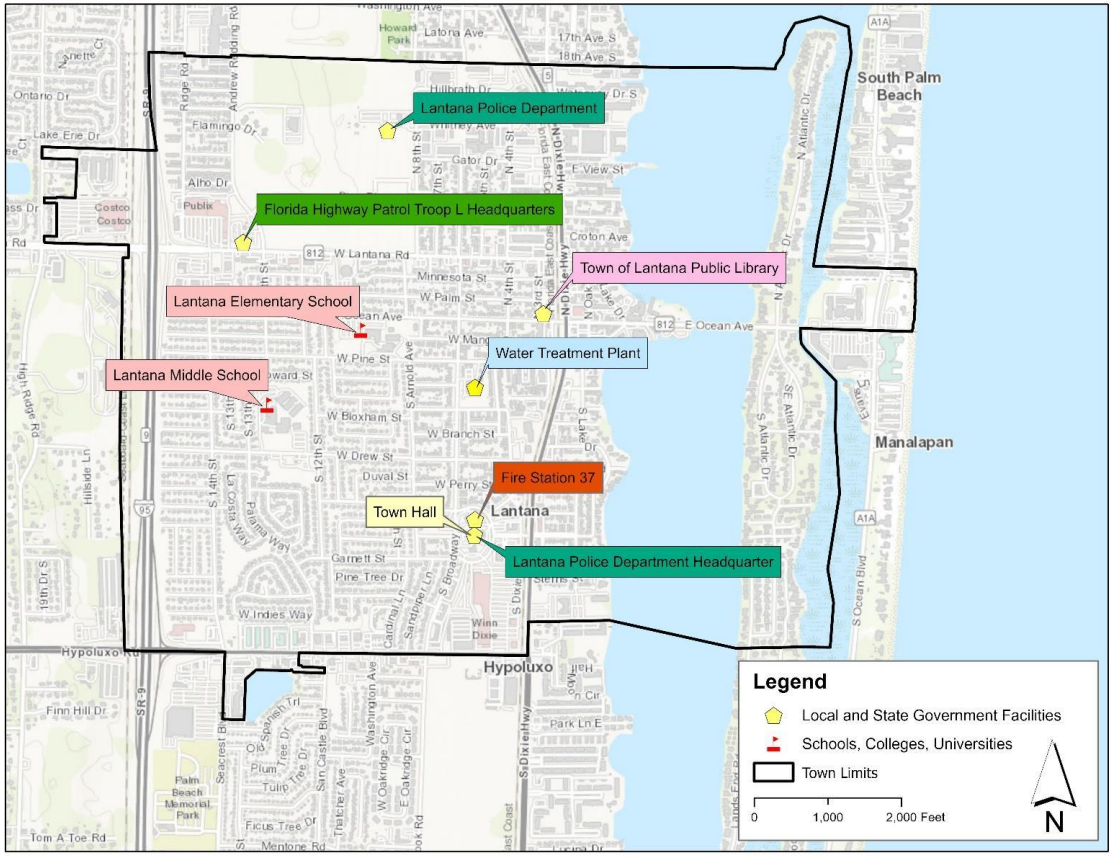
Critical Assets – Water Hydrants and Valves





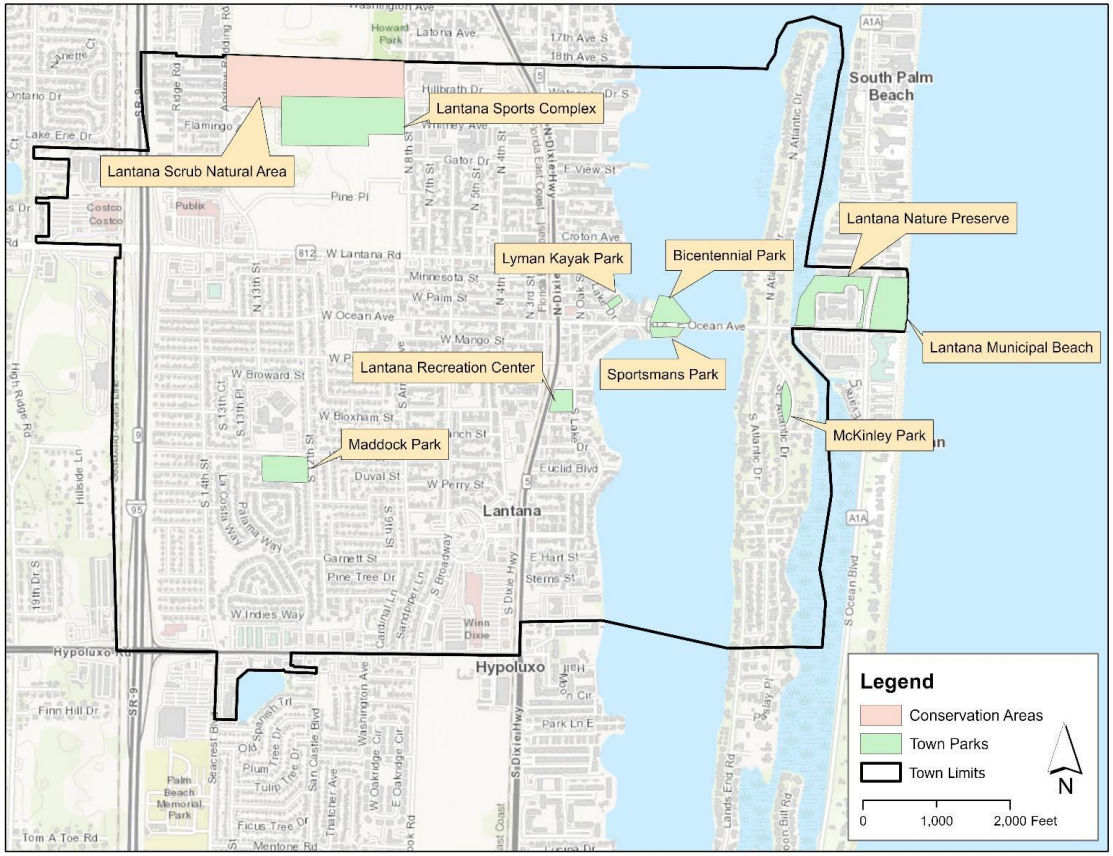
Critical Assets – Community and Emergency

- 2 Schools
- 1 Fire Station
- 2 Law Enforcement Facilities
- 2 Local Government Facility
- 1 State Government Facility

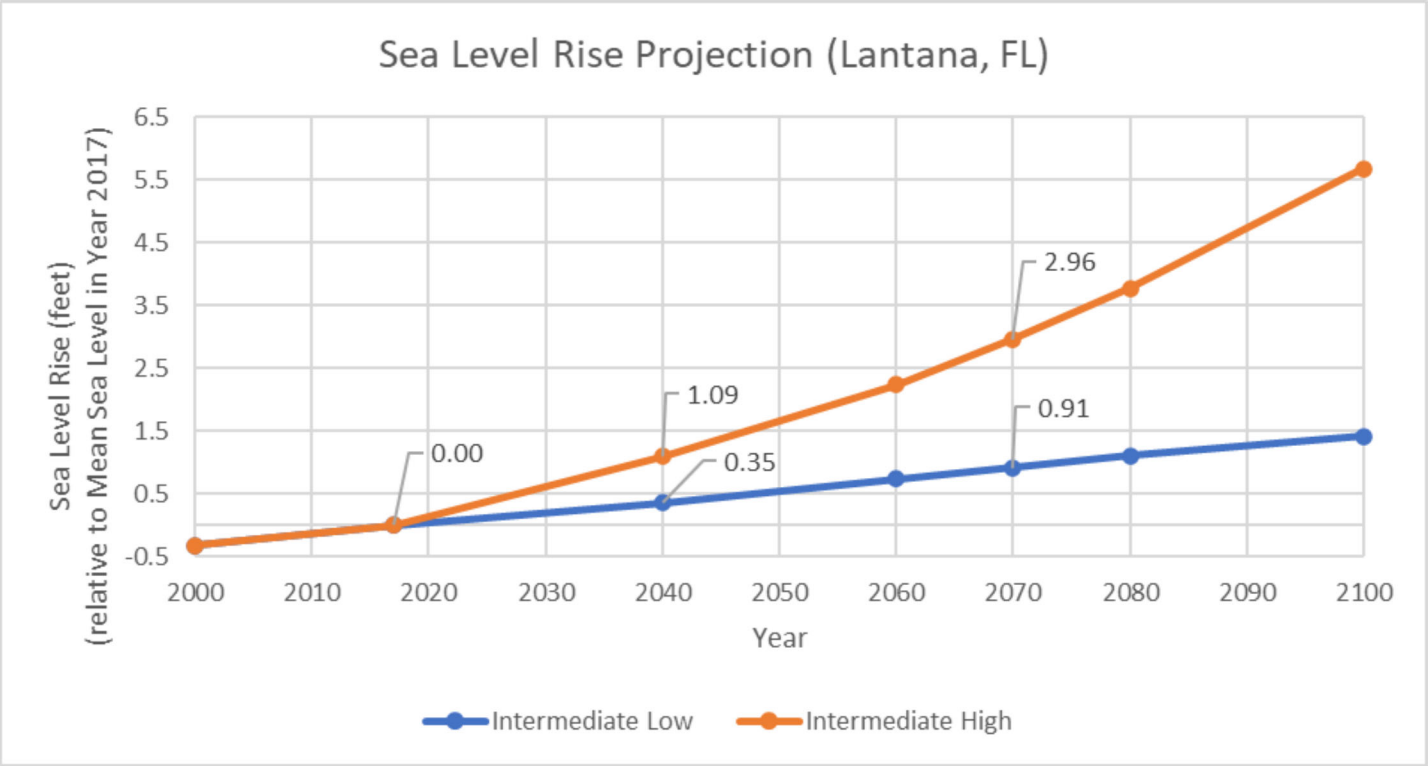


Critical Assets – Natural, Cultural, and Historic

- **10 Parks or Natural Areas**



Sea Level Rise Predictions



- **2040 & 2070**
- **Mean High**
- **King Tides**
- **Storm**
  - 100-year
  - 500-year
  - CAT3

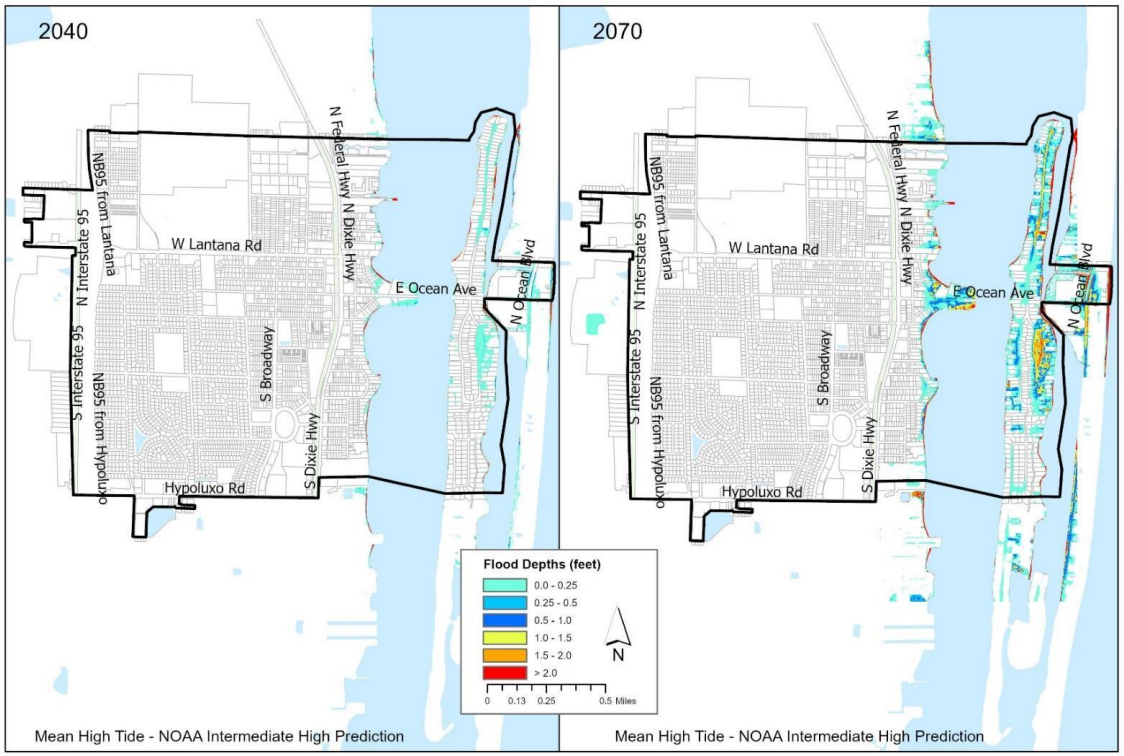
Vulnerability Scenarios

Scenario	Year	Storm	Tide	NOAA
1	2024	NA	Mean-High	NA
2	2040	NA	Mean-High	Inter-Low
3	2070	NA	Mean-High	Inter-Low
4	2040	NA	Mean-High	Inter-High
5	2070	NA	Mean-High	Inter-High
6	2024	NA	King	NA
7	2040	NA	King	Inter-Low
8	2070	NA	King	Inter-Low
9	2040	NA	King	Inter-High
10	2070	NA	King	Inter-High
11	2024	100Yr	Mean-High	NA
12	2040	100Yr	Mean-High	Inter-Low
13	2070	100Yr	Mean-High	Inter-Low

Scenario	Year	Storm	Tide	NOAA
14	2040	100Yr	Mean-High	Inter-High
15	2070	100Yr	Mean-High	Inter-High
16	2024	500Yr	Mean-High	NA
17	2040	500Yr	Mean-High	Inter-Low
18	2070	500Yr	Mean-High	Inter-Low
19	2040	500Yr	Mean-High	Inter-High
20	2070	500Yr	Mean-High	Inter-High
21	2024	CAT3	Mean-High	NA
22	2040	CAT3	Mean-High	Inter-Low
23	2070	CAT3	Mean-High	Inter-Low
24	2040	CAT3	Mean-High	Inter-High
25	2070	CAT3	Mean-High	Inter-High

Flooding Assessments

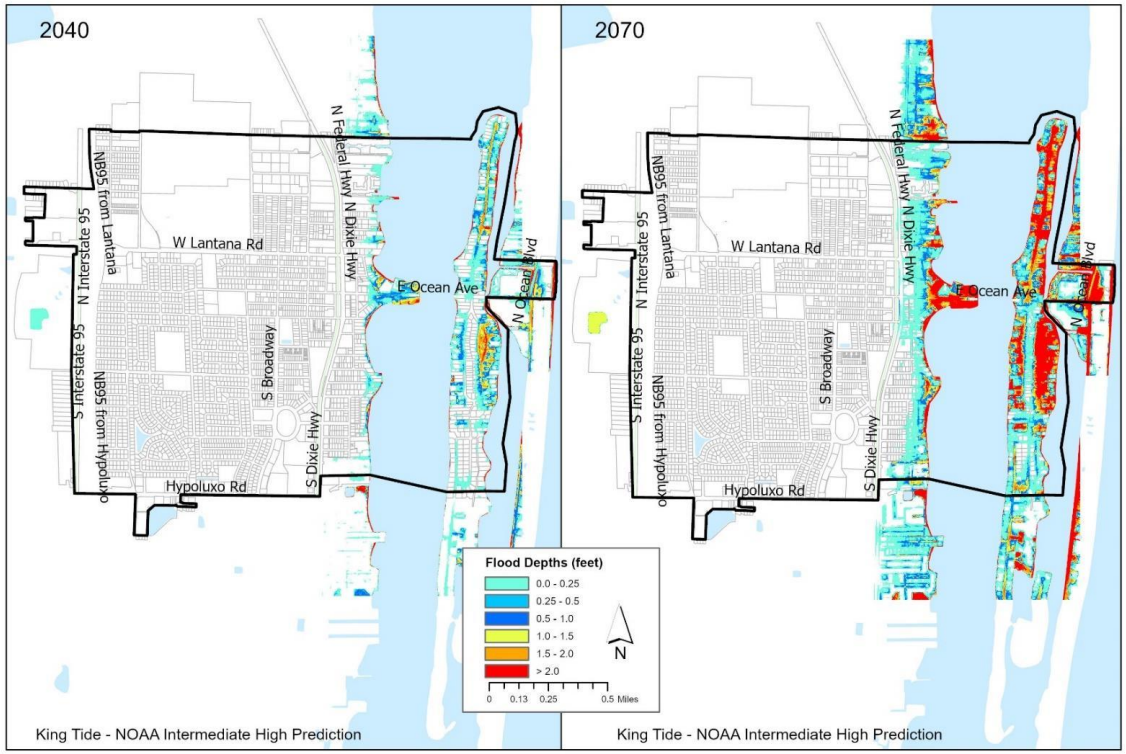
- 2040 vs. 2070
- Mean High Tide
- NOAA Intermediate High Prediction



Town of Lantana
Asset Inventory and Ocean Avenue Vulnerability Assessment
Flood Depths

Flooding Assessments

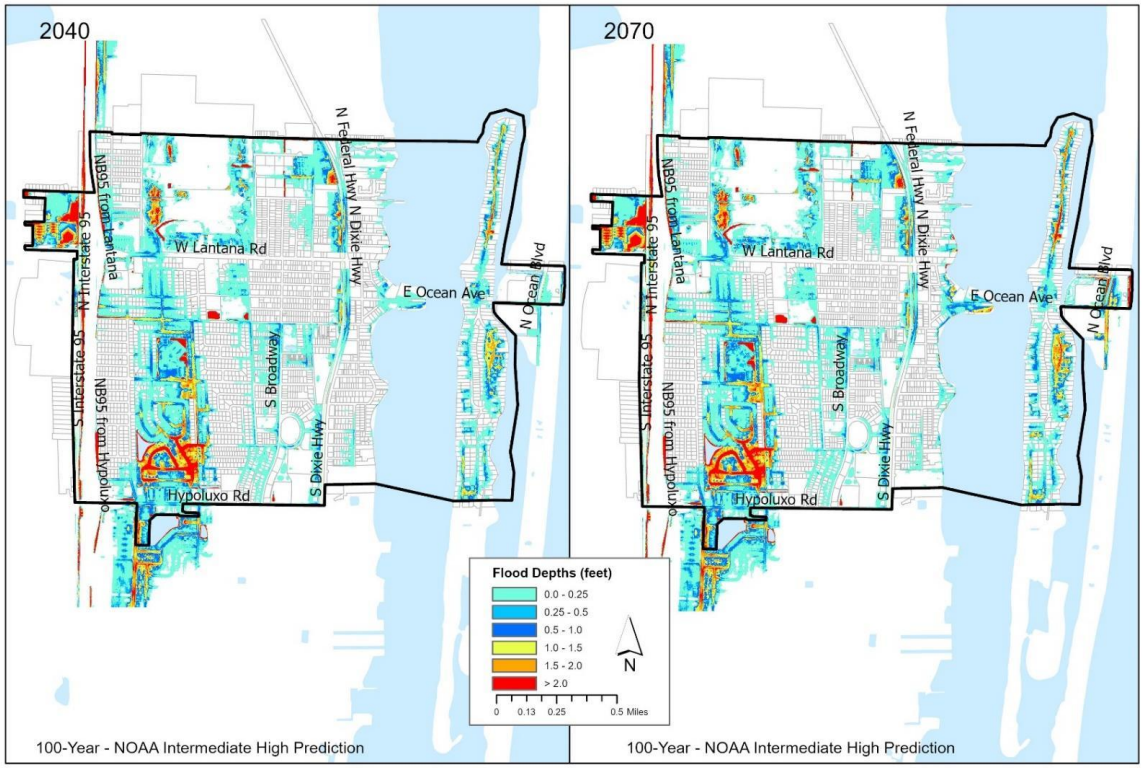
- 2040 vs. 2070
- King Tide
- NOAA Intermediate High Prediction



Town of Lantana
Asset Inventory and Ocean Avenue Vulnerability Assessment
Flood Depths

Flooding Assessments

- 100-Year Storm
- 2040 vs. 2070
- Mean High Tide
- NOAA Intermediate High Prediction

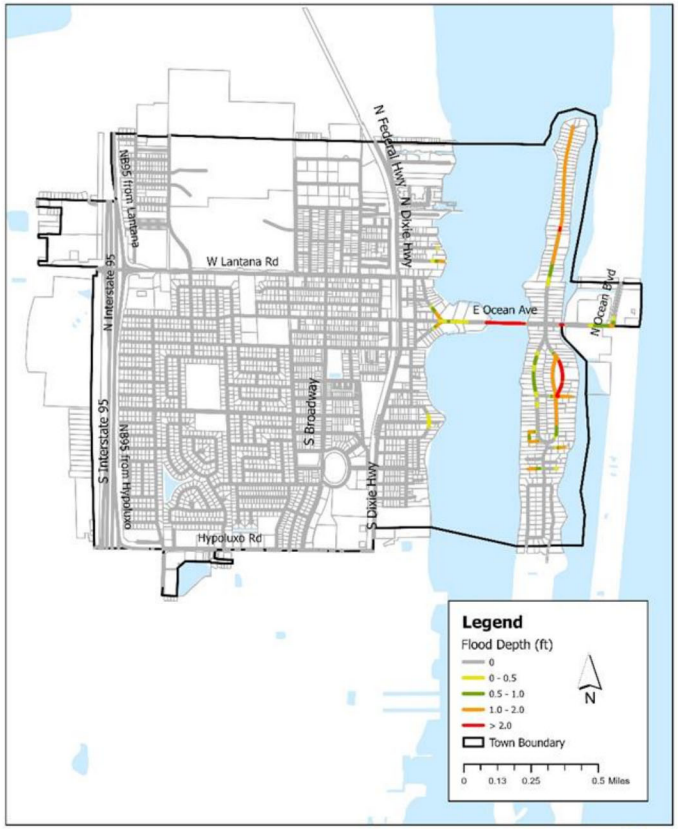


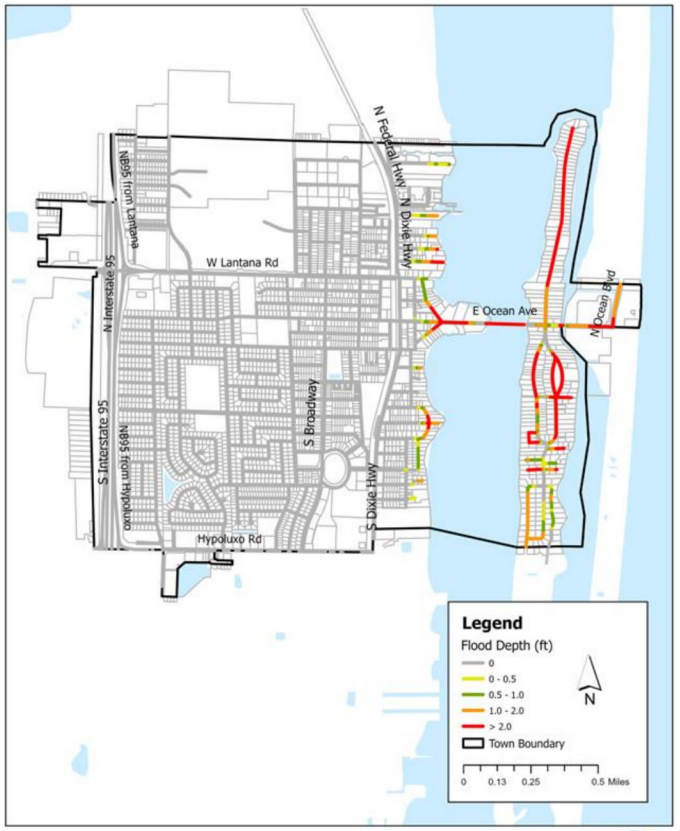
Town of Lantana
Asset Inventory and Ocean Avenue Vulnerability Assessment
Flood Depths

Assessment Results – Flood Depths at Lift Stations

Scenario:	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S16	S17	S18	S19	S20	S21	S22	S23	S24	S25
Year:	2024	2040	2070	2040	2070	2024	2040	2070	2040	2070	2024	2040	2070	2040	2070	2024	2040	2070	2040	2070	2024	2040	2070	2040	2070
Storm:	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100Yr	100Yr	100Yr	100Yr	100Yr	500Yr	500Yr	500Yr	500Yr	500Yr	CAT3	CAT3	CAT3	CAT3	CAT3
Tide:	MHT	MHT	MHT	MHT	MHT	King	King	King	King	King	MHT	MHT	MHT	MHT	MHT	MHT	MHT	MHT	MHT	MHT	MHT	MHT	MHT	MHT	MHT
NOAA:	NA	Low	Low	High	High	NA	Low	Low	High	High	NA	Low	Low	High	High	NA	Low	Low	High	High	NA	Low	Low	High	High
LS 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
LS 2	--	--	--	--	--	--	--	--	--	--	--	--	-0.98	--	-0.98	-0.95	-0.92	-0.89	-0.92	-0.89	--	--	--	--	--
LS 3	--	--	--	--	0.41	-0.55	-0.20	0.36	0.54	2.41	-0.50	-0.45	-0.39	-0.45	0.45	-0.33	-0.28	-0.21	-0.28	0.47	0.44	0.79	1.35	1.53	3.40
LS 4	--	--	--	--	--	--	--	--	--	-0.51	-0.12	-0.10	-0.08	-0.10	-0.08	-0.06	-0.05	-0.03	-0.05	-0.03	--	--	--	--	0.48
LS 5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-0.55
LS 6	--	--	-0.65	-0.47	1.40	0.44	0.79	1.35	1.53	3.40	1.48	1.56	1.66	1.58	1.85	1.73	1.80	1.91	1.82	2.02	1.43	1.78	2.34	2.52	4.39
LS 7	--	--	--	--	--	--	--	--	--	-0.59	--	-0.97	-0.88	-0.95	-0.80	-0.82	-0.76	-0.68	-0.74	-0.64	--	--	--	--	0.40
LS 8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-0.47
LS 9	--	--	--	--	--	--	--	--	--	--	-0.86	-0.76	-0.65	-0.76	-0.65	-0.56	-0.48	-0.39	-0.48	-0.39	--	--	--	--	--
LS 10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-0.94	-0.87	-0.78	-0.87	-0.78	--	--	--	--	--
LS 11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
LS 12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
LS 13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
LS 14	--	--	--	--	--	--	--	--	--	--	0.39	0.49	0.59	0.49	0.59	0.67	0.74	0.82	0.74	0.82	--	--	--	--	--
LS 15	--	--	--	--	--	--	--	--	--	--	0.28	0.44	0.68	0.44	0.68	0.96	1.15	1.45	1.15	1.45	--	--	--	--	--
LS 16	--	--	--	--	-0.66	--	--	-0.71	-0.53	1.34	--	--	--	--	-0.61	--	--	--	--	-0.59	-0.63	-0.28	0.28	0.46	2.33
LS 17	--	--	--	--	--	--	--	--	--	--	-0.01	0.09	0.21	0.09	0.21	0.31	0.39	0.49	0.39	0.49	--	--	--	--	--
LS 18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-0.94	-0.84	-0.94	-0.84	--	--	--	--	--

Assessment Results – Flood Depth on Roadways





Critical Asset Sensitivity

Overall Risk Assessment	Land Area Inundated (% of census tract or neighborhood)	Critical Assets Affected (percentage of total assets or within each asset category)
None	0%	0%
Low	<25%	<25%
Medium	25 – 50%	25 – 50%
High	50 – 75%	50 – 75%
Extreme	>75%	>75%

	Percentage of Roadway Inundated Under Each Scenario																									
	Total Miles	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S16	S17	S18	S19	S20	S21	S22	S23	S24	S25
Roadways (Major)	10.683	1%	1%	1%	1%	3%	1%	2%	3%	3%	7%	5%	6%	6%	6%	8%	7%	8%	8%	8%	10%	3%	4%	6%	6%	8%
Roadways (Minor)	32.674	0%	0%	0%	0%	5%	3%	4%	5%	5%	12%	25%	27%	28%	27%	29%	30%	31%	32%	31%	33%	5%	6%	8%	8%	17%

Critical Asset Sensitivity

Overall Risk Assessment	Land Area Inundated (% of census tract or neighborhood)	Critical Assets Affected (percentage of total assets or within each asset category)
None	0%	0%
Low	<25%	<25%
Medium	25 – 50%	25 – 50%
High	50 – 75%	50 – 75%
Extreme	>75%	>75%

	Percentage of Critical Assets Inundated Under Each Scenario																								
	Total Assets	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S16	S17	S18	S19	S20	S21	S22	S23	S24	S25
Lift Stations	18	0%	0%	6%	6%	17%	11%	11%	17%	17%	28%	39%	44%	50%	44%	56%	56%	61%	61%	61%	67%	17%	17%	17%	17%	39%
Water System Valves	572	0%	1%	1%	2%	7%	5%	5%	7%	7%	16%	50%	51%	52%	51%	53%	53%	53%	55%	53%	55%	7%	7%	9%	10%	20%
Sanitary System Valves	12	8%	8%	17%	25%	50%	42%	42%	50%	50%	75%	58%	58%	58%	58%	67%	58%	67%	67%	67%	75%	50%	50%	58%	75%	75%
Fire Hydrants	394	0%	0%	1%	2%	7%	5%	6%	7%	8%	16%	41%	42%	44%	43%	45%	44%	45%	46%	45%	47%	7%	9%	11%	12%	21%
Hydrant Valves	260	0%	1%	2%	3%	5%	4%	5%	5%	6%	14%	46%	47%	48%	47%	49%	48%	49%	50%	49%	52%	5%	7%	10%	10%	17%
Water Wells	16	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	38%	38%	38%	38%	38%	38%	38%	38%	38%	38%	0%	0%	0%	0%	0%
Pump Stations	3	0%	0%	33%	33%	67%	67%	67%	67%	67%	67%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	67%	67%	67%	67%	67%
Bridges	6	0%	0%	0%	0%	0%	0%	0%	0%	0%	14%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	0%	0%	0%	0%	14%
Boat Ramp	1	0%	0%	0%	0%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Schools, Colleges, Universities	2	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	0%	0%	0%	0%	0%
Local and State Government Facilities	8	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	0%	0%	0%	0%	0%

Mitigation Strategies

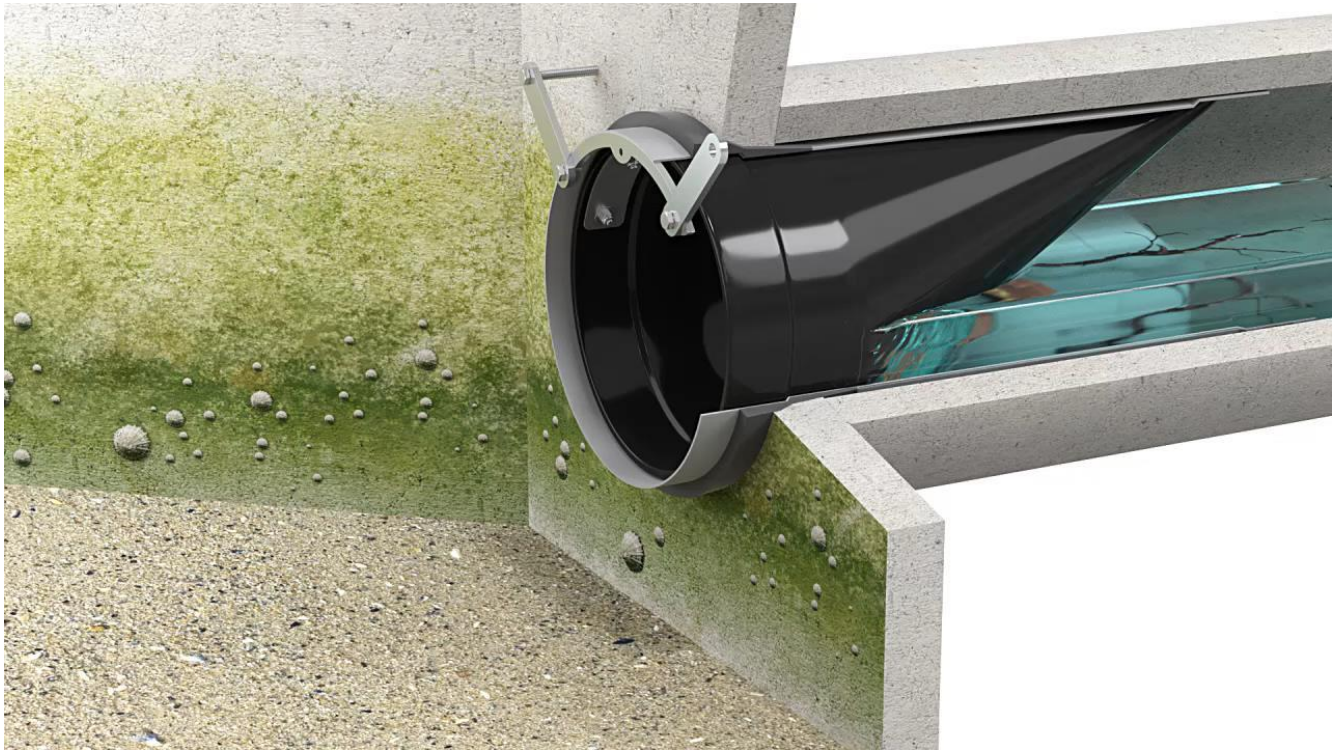
- **Overall, impacts in 2040 are minimal to the Town**
  - Highest impacts on eastern and western portion of the Town
- **Impacts are more severe in 2070**
- **Mitigation is needed prior to 2040**
  - Type of mitigation should be phased
- **Mitigation responsibility is shared between the Town and other Municipal Entities, Homeowners, Businesses, and Developers**

Recommendations

- Prioritize Areas of Concern
- Work with Neighboring Communities
- Monitor State and Federal efforts
- Position the Town for Grant Assistance

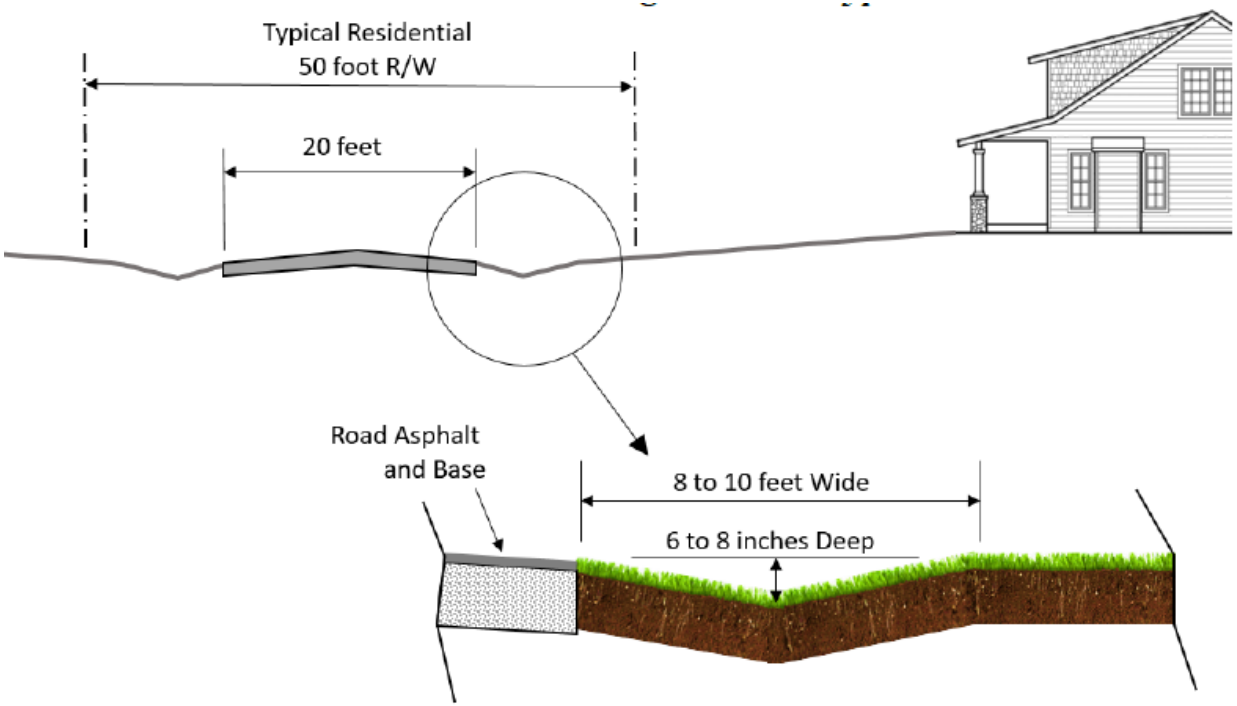
Mitigation Strategies

In-Line Check Valves



Mitigation Strategies

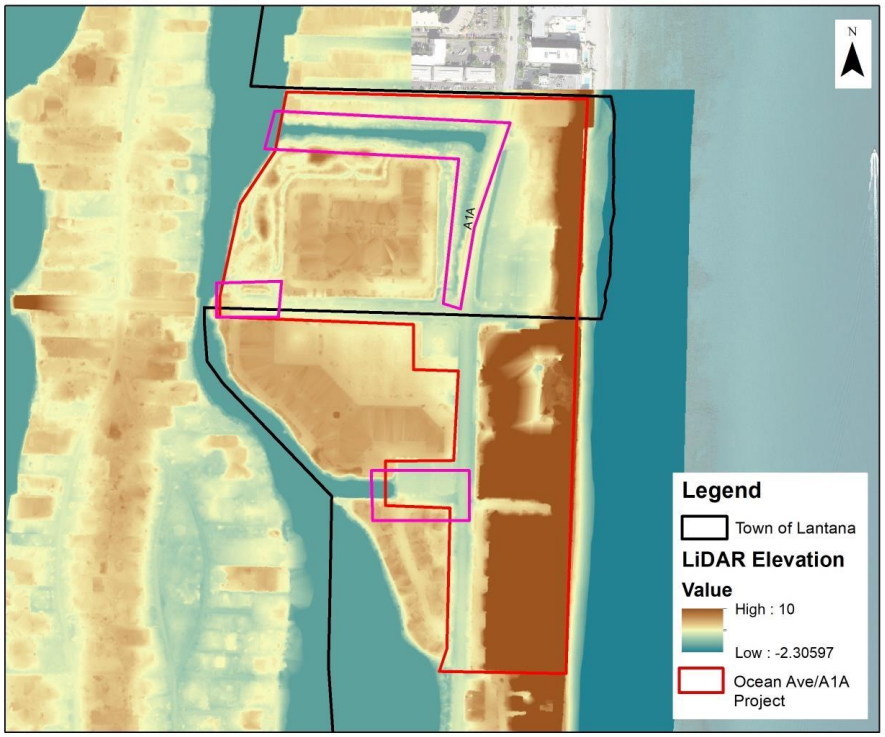
- **Drainage System Improvement Projects**
- **Swale Restoration**
- **Exfiltration Trenches**
- **Green Infrastructure**
  - Bioswales
  - Rock Gardens
  - Native Plantings
  - Rain Gardens
  - Living Shorelines
  - Increase Park Space



Ocean Avenue Assessment

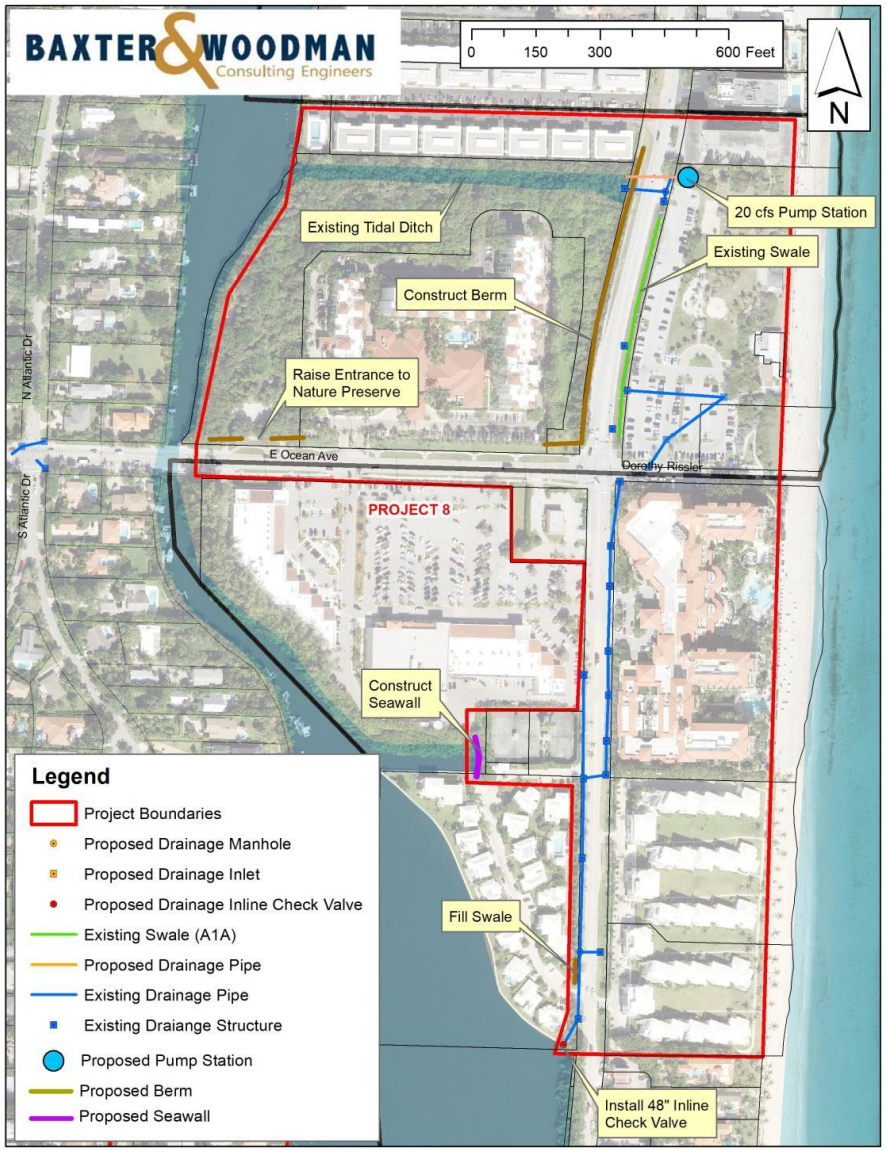
- **Focus area within the study that is especially susceptible to SLR based on the proximity to the ocean and intracoastal waterway**





Ocean Avenue Recommendations

- In-Line Check Valves
- Seawalls
- Fill swale to prevent water backing up to roadway
- Construct Berm
- Install Pump Station



Questions and Discussion

