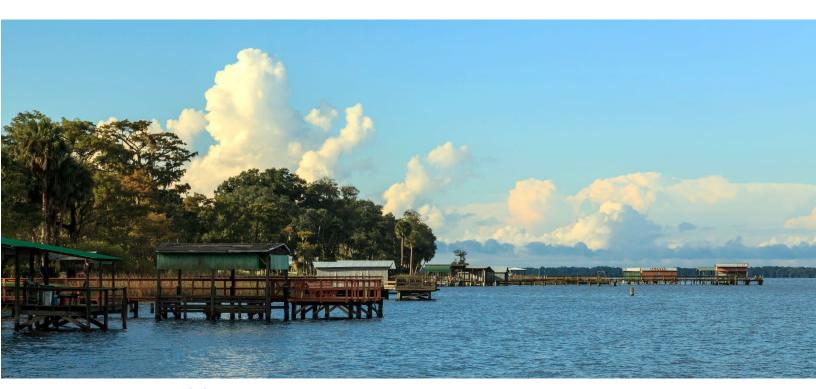
# Putnam County Vulnerability Assessment

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**Planning for Resilience to Flood Risks** 



# **Prepared by:**



# **Executive Summary and Key Messages**

The purpose of this vulnerability assessment is to evaluate the current and future flood risks and to identify the locations and the critical assets with flood risks in Putnam County. Identified flood risk locations can be used by the County to support project development and funding pursuits for resilience-building efforts. Putnam County's Vulnerability Assessment is unique in that, as an inland county, this report includes detailed flood depth modeling from coastal influence flood scenarios and also from rain-driven flood events. Nearly all the vulnerability assessments completed in Florida to date have been focused on coastal (sea level rise and storm surge) flood risks. Priority Focus Areas – locations of special importance for reducing flood risks – were identified from collaborations with the County, the Steering Committee for the assessment, Local Mitigation Strategy project locations, and input from the general public during outreach events. Thirty areas have been prioritized based on County guidance and impacted assets at those locations.

Nearly 13,000 critical assets were mapped and analyzed for the assessment. Flood depths from 19 different flood scenarios (rainfall, sea level rise, storm surge of various time periods and intensities and compound flooding) were assigned at the locations of all critical assets. A data visualization dashboard was developed to facilitate data transparency, allowing more people to review and understand the locations and assets affected by different flood scenarios. The data dashboard can be accessed at: <a href="https://datavisual.balmoralgroup.us/ResilientPutnam">https://datavisual.balmoralgroup.us/ResilientPutnam</a>.

In addition to the priority focus areas analyzed here, several areas of economic significance were also assessed for flood impacts: irrigated agricultural lands, the Historic Districts in Palatka, the Paper Mill, and Port Putnam. **Key messages from the vulnerability assessment are summarized as follows**:

# **Key Messages**

- Future rainfall changes are projected to significantly increase flood risks: the current 100-yr, 24-hr rain event of 10.6 inches is projected to increase nearly 40% to 14.6 inches by 2070. Modeled flood impacts translate to an additional 6,000 acres of flood-affected area (current 100-yr flood impact compared to 2070 100-yr flood)
- Areas impacted from current 100-yr rain-driven flood event: nearly 27% of unincorporated Putnam County more than 123,000 acres, with 2,046 critical assets flood-impacted
- Areas impacted from 2040 sea level rise (king tide condition): about 7% of unincorporated Putnam County more than 32,000 acres, with 480 critical assets flood-impacted
- The greatest numbers of critical assets affected are County or local roads; these typically represent about half of the impacted numbers of assets (depending on flood scenario and location)
- Priority focus areas were identified from County and community input; these areas can serve as the starting point to focus the next steps for project or policy design and/or implementation. Ten of these areas are recommended for project development and identification of funding options.
- This vulnerability assessment can support the pursuit of additional funding sources to help pay for projects that build resilience and reduce flood impacts.
- The flood maps and flood depths at locations of critical assets can help guide project ranking for capital improvement plans and Local Mitigation Strategy (LMS) projects that are flood-risk related.

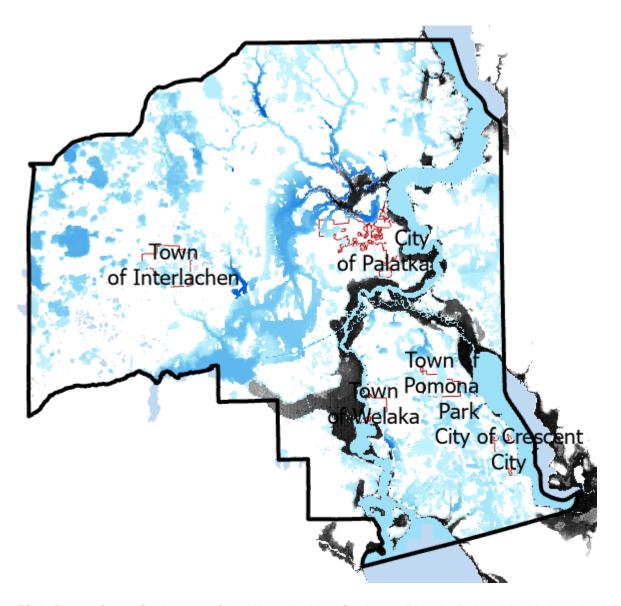


Figure ES-1. Putnam County flood extents of the 100-yr rain-driven flood event (blue shading) and the 2070 sea-level rise king tide (gray shading)

#### **Acknowledgement and Disclaimer**

This work was funded in part through a grant agreement from the Florida Department of Environmental Protection's Office of Resilience and Coastal Protection Resilient Florida Program. The views, statements, findings, conclusions, and recommendations expressed herein are those of the authors and do not necessarily reflect the views of the State of Florida or any of its subagencies.



# Introduction

The purpose of vulnerability assessments is to identify and quantify flood risks to support the planning for projects and policies to build resilience in Putnam County. These assessments must consider flood risks from current and future tidal flooding, storm surge flooding, rainfall-induced flooding, and compound flooding (combinations of surge and SLR flooding). Vulnerability assessments completed in compliance with Resilient Florida standards (from Section 380.093, Florida Statutes) are required for local governments to be eligible for Resilient Florida implementation grant funds. This assessment and the spatial data of flood impacts and flood depths can serve as guiding information for the next steps of project development and implementation.

# **Key Terms**

**25-yr, 100-yr, 500-yr rainfall or storm surge events** are the flood events from rainfall or storm surge with annual probability of 4% (1-in-25 years), 1% (1-in-100 years) or 0.02% (1-in-500 years). Note: this does not mean that a 100-yr rain event will only occur once in 100 years; it's possible that "100-yr rain events" could occur multiple times over just a few years, especially if rainfall is becoming more intense.

**Adaptation** is the change in policies and/or the built environment (capital improvement projects) to make an area more resilient. Adaptation is sometimes grouped into 4 main types: Protection (examples: levees, seawalls), Accommodation (examples: elevated infrastructure, drainage/stormwater upgrades), Retreat (examples: easements, land acquisition), or Avoidance (examples: zoning or restrictions on development).

Adaptive capacity represents the ability of a system or community to adjust, cope with, or recover from the impacts of hazards and climate change. It involves factors such as the availability of resources, institutional capacity, governance structures, technological capabilities, and community engagement.

**Critical assets** are the infrastructure or natural and cultural assets defined by F.S. 380.093. These include 36 types of assets grouped into 4 groups: Critical Community and Emergency Facilities, Critical Infrastructure, Natural, Cultural, and Historical Resources, and Transportation and Evacuation Routes. These are described in detail in Appendix A.

**Exposure Analysis** is the mapping of flood depths for various types of flooding scenarios from rainfall, sea level rise (SLR), and storm surge.

**GIS** is a Geographic Information System – a software tool used to manage and analyze spatial data; GIS was used in this study to support flood-impact modeling and critical assets flood depth estimates.

**High Tide** (HT) flooding for this study is specified as 2 feet (ft) above Mean Higher High Water (average of daily higher high water elevations); this type of flooding is estimated to occur roughly 4 times per year. The type of HT flooding is sometimes referred to as king tide.

**Inundation or Flooding** refers to a depth of water above the land surface in areas where there is not typically surface water present.

**Priority Focus Areas** are regions of particular importance for reducing flood risks. These were identified by the County, the steering committee, and the community during an interactive workshop activity.

**Resilience** the ability of an asset, area, or community to cope with a hazardous event – in this context, flood events from rainfall, sea level rise, and/or storm surge.

**Sea level rise** (SLR) is the increase in elevation of the sea surface. Sea level near Putnam County has risen by about 9 inches in the last 100 years. Sea level rise in the future was estimated here using NOAA's 2017 SLR scenarios: Intermediate-Low and Intermediate-High (in 2040 and 2070 periods).

**Sensitivity Analysis** is the process of assigning flood depths at locations of critical assets and also characterizing the social/economic vulnerabilities at locations of the assets or region of interest.

**Sensitivity** refers to the inherent characteristics and qualities of a system or community that make it susceptible to adverse impacts. This includes factors such as the physical and social attributes of the system, its infrastructure, natural resources, and the socio-economic conditions of the community.

**Storm surge** is the increase height of water surface elevations resulting from a hurricane or other intense storm.

**Vulnerability Assessment** here means a certain type of flood risk analysis to identify affected areas and assets based on flood scenarios and critical assets specified by Resilient Florida and Section 380.093 (F.S.)

**Vulnerability** describes the level of negative impact to an asset or region – in this context, vulnerability to flood risks is the focus.

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# Flood Risk Vulnerability Summary

This section briefly describes the process and summarizes results of the vulnerability assessment. Additional detail on methods and data sources is provided in the Methods section and Appendix A (descriptions and data sources of critical asset types). A vulnerability assessment combines flood modeling, critical assets inventory, and community insights to identify assets and locations/areas at risk of flood impacts for various flood scenarios. The assessment process follows specific steps, in compliance with F.S. 380.093 (check current statute from grant); **Figure 1** provides an overall summary.

- Data collection: data on land surfaces elevations, flood scenarios (rainfall, SLR, and storm surge
  of various intensities and timeframes), critical assets, areas of significance or priorities are some
  of the key datasets compiled. Input and expertise from the community and County and Steering
  Committee expertise were important in this phase to update asset information and identify priority
  areas.
- 2. Exposure analysis: modeling inundation extent and depths for all flood scenarios.
- 3. Sensitivity analysis: assigning flood depths and social/demographic information for priority areas and critical assets.
- 4. Vulnerability assessment: this tells the whole story about how flood risks were quantified and identifies priorities and key next steps.

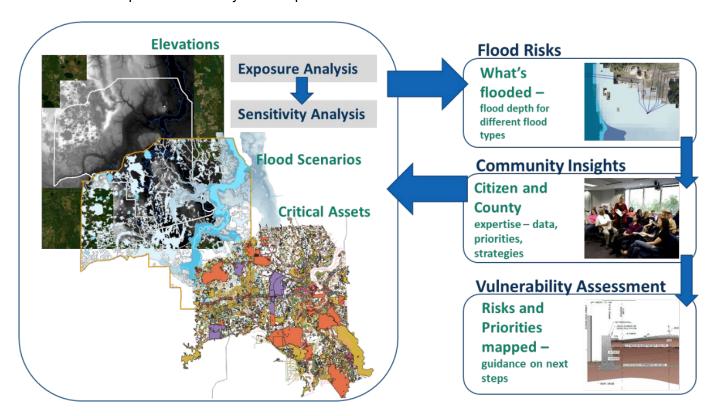


Figure 1: Vulnerability Assessment Process Diagram

The 19 flood scenarios modeled for flood-impacts are listed below. Notes: High Tide (HT) is defined as 2 ft above Mean Higher High Water (MHHW), Int-Low is NOAA's Intermediate Low (the second lowest of their 5 SLR scenarios), Int-High is NOAA's Intermediate High scenario (the second highest of their SLR scenarios. Future periods analyzed here are 2040 and 2070; all SLR scenarios are based on NOAA's 2017 scenarios (Sweet et. al 2017) as required by Resilient Florida standards based on section 380.093, F.S. as of 2023.

- 1. Current high tide (HT) flooding
- 2. HT flooding + Int-Low in 2040
- 3. HT flooding + Int-High in 2040
- 4. HT flooding + Int-Low in 2070
- 5. HT flooding + Int-High in 2070
- 6. Current 100-yr flood event; rain-driven
- 7. Current 500-yr flood event; rain-driven
- 8. 2070 100-yr flood event; rain-driven
- 9. 2070 500-yr flood event; rain-driven
- 10. 25-year storm surge: no sea level rise (SLR)
- 11. 25-year storm surge + Int-Low in 2040
- 12. 25-year storm surge + Int-High in 2040
- 13. 25-year storm surge + Int-Low in 2070
- 14. 25-year storm surge + Int-High in 2070
- 15. 100-year storm surge: no sea level rise (SLR)
- 16. 100-year storm surge + Int-Low in 2040
- 17. 100-year storm surge + Int-High in 2040
- 18. 100-year storm surge + Int-Low in 2070
- 19. 100-year storm surge + Int-High in 2070

The details of the modeling of flood impacts for these scenarios are explained in the Exposure Analysis portion of the report. Flood depths from the flood scenarios were assigned for each of the nearly 13,000 critical assets.

# Critical Assets and Areas Affected

**Figure 2** shows the flood-impacted areas by municipality for 4 of the 19 flood scenarios modeled. These scenarios were selected as they are more near-term and are roughly in the middle of the scenarios in terms of likelihood and impacts (not the most or least extreme). About 27% of unincorporated Putnam County shows rain-driven flood impacts (100-yr event). Coastal flood impacts (near the river) show significant areas impacted in Palatka and unincorporated Putnam County; about 7% of those areas show likely flood impacts from the High Tide 2040 SLR scenario and the compound 25-yr storm surge/2040 SLR scenario. The assets most affected by these flood scenarios are roads, stormwater assets (ponds, ditches), and historical buildings (not just those in historic districts). There are 2,046 impacted critical assets showing flood risk in the 100-yr rain-driven event, and over half of those are roads (1,227 roadway segments), and most of those roads are short roadway segments of local or private roads. About 300 stormwater ponds or ditches show flooding near the asset locations for the 100-yr rain event flood scenario. These are particularly important as flooding at locations of stormwater assets suggests there would likely

be more localized flood impacts nearby that would require more detailed, local stormwater modeling to identify (see **Figure 3** – asset numbers impacted by asset group).

The SLR and storm surge scenarios affect fewer critical assets than the rain-driven flood scenarios: 479 and 628 flood-impacted assets for the 2040 high tide (HT/SLR) and 2070 HT/SLR scenarios, respectively (NOAA Intermediate High). However, flooding near those assets is sunny-day high tide flooding (defined at 2 ft above Mean Higher High Water). That type of HT flooding currently occurs about 4 times per year, while the 100-yr rain-driven flood impacts would in theory be roughly once in 100 years. Increasing rain intensity in recent years means that big rain events are occurring more often, and the 2070 100-yr rain flood scenario shows impacts at about 140 additional critical asset locations (2,044 for 100-yr event and 2,173 for 2070 100-yr).

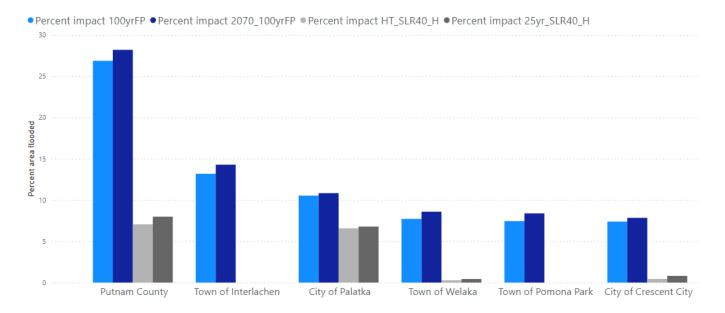


Figure 2: Percent of areas flooded in unincorporated Putnam County and the 5 municipalities - 4 selected flood scenarios

Note: flood scenario impacts shown in figure above are - 100-yr rain, 100-yr in 2070, high tide in 2040 (intermediate high SLR), and SLR + 25-yr surge (2040 intermediate high SLR).

As described above, the local or private roads are the majority of the critical assets affected, and the low elevation areas near the river are where most coastal influence flood scenario impacts occur. **Figure 3** illustrates numbers of flood-impacted critical assets for 6 of the flood scenarios, while **Figure 4** shows an example of HT with 2040 intermediate high SLR near Paradise Circle.

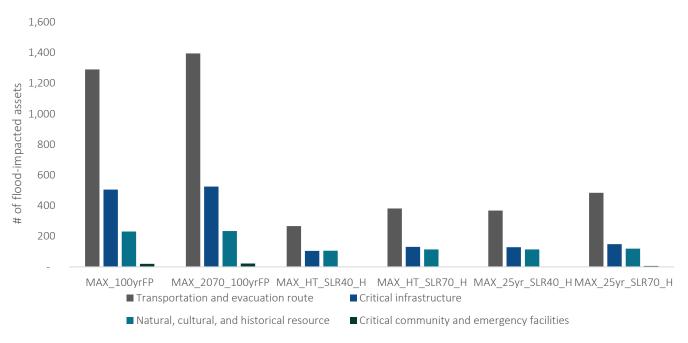


Figure 3. Numbers of flood-impacted assets by asset group for 6 flood scenarios

Note: 6 Flood scenarios are: 100-yr Rainfall, 100-yr Rainfall in 2070, 2040 Intermediate High SLR High Tide (2040-IH SLR HT), 2070 Intermediate High SLR High Tide (2070-IH SLR HT), 2040-IH SLR +25-yr surge, and 2070-IH SLR +25-yr surge

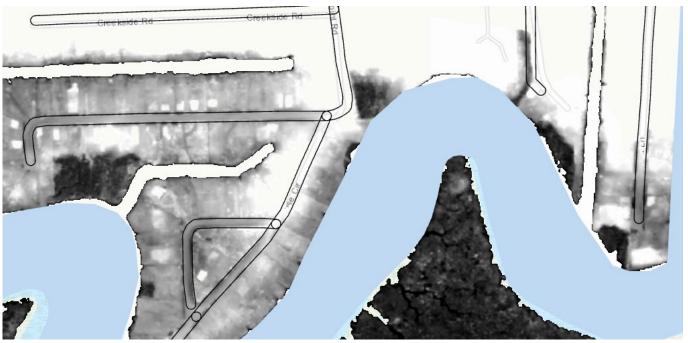


Figure 4. Example high tide flood with 2040 Intermediate High SLR (near Paradise Circle and Edgewater Rd.)

Note: numerous roadway segments with flooding (shaded areas) – typical max flood depths of about 1.5 ft in this example.

# Flood Impacts Summary

As expected, the rain-driven flood scenarios impact the most area and most critical assets in the County, as the coastal (SLR and/or storm surge) scenario impacts are only in areas near the St. Johns River. However, the High Tide (HT) SLR scenarios should be interpreted as high priority for some flood-impacted critical assets (mostly local or private roads) because these impacts will be annual - flooding about 4 times/year potentially in the next 20 years. While the rain-driven flood impacts are based on a 100-yr rain event, the rarity of big rain events is changing; in recent decades the numbers of high-intensity rain events are increasing. Meaning: the 100-yr rain event floodplain should not be assumed to be as infrequent as once in 100 years. An assessment of future rainfall changes in Florida that was completed by USGS found that the County-average 1-day, 100-yr rain event of 10.6 inches today might increase to 13.9 inches by 2040 and 14.6 inches by 2070 (Irizarry-Ortiz et al. 2022).

All flood-impacted critical assets can be reviewed in summary tables and charts at the vulnerability assessment data dashboard: https://datavisual.balmoralgroup.us/ResilientPutnam

Also, Appendix C includes summary tables with flood-impacted critical assets for 2 rainfall scenarios (100-yr and 2070 100-yr), 3 SLR scenarios (High Tide present-day, High Tide 2040 Intermediate High SLR, and High Tide 2070 Intermediate High SLR), and 2 SLR+surge scenarios (2040 SLR Int-High with 100-yr storm surge and 2070 SLR Int-High with 100-yr storm surge).

#### The following list briefly summarizes some of the key flood-impact findings:

- Numerous local or private roadway segments show flood risks in the SLR and surge flood scenarios and also in the rain-driven flood scenarios. Florida Department of Transportation (FDOT) roads with major impacts in the High Tide SLR scenarios are: Federal Point Rd. and W. River Rd. These show only minor impacts through 2040 but by 2070 there are substantial lengths of those roadways affected.
- FDOT road segments designated as evacuation routes by Florida Division of Emergency Management (FDEM) show significant (> 1 mi) of flooding near roadways for CR-309, CR-310, SR-20, S US-17, SR-100. 8 other evacuation route segments show less significant impacts.
- More than half of the total number of affected critical assets are local or private roads. These are represented as roadway segments (about 3,800 unique roadway names total; represented by around 9,500 roadway segments). About 1,200 local or private roadway segments show some flood risk in the 100-yr rain-driven flood scenario.
- 5 schools in the County show potential flood impacts on the school property in the 100-yr floodplain scenario; 2 of these are public schools: Mellon Learning Center and Middleton-Burney Elementary. There are no coastal flood scenarios (SLR or surge) impacts at school locations.
- 12 wastewater treatment facilities or pump stations show potential flood impacts in the 100-yr raindriven scenario; the Putnam County wastewater treatment facility (WWTF) does not show flooding on that parcel, but there is flooding of areas and roads nearby the treatment plant in the 100-yr rain flood event.
- Flooding at locations of stormwater assets (reservoirs and small linear treatment features from FDOT- District 2) might have other localized flood impacts not represented by the elevation-based model framework of this study. More detailed hydrologic and hydraulic modeling at priority

- locations would be needed to fully understand local stormwater impacts from flooding at stormwater pond locations.
- Priority Focus Areas were identified by steering committee, community, and County input. From 30 potential Focus Areas (locations summarized in Priority Focus Area section that follows) there are 10 that emerge as high priority based on County-identified priority, Local Mitigation Strategy (LMS) project status, or numbers of critical assets affected near the location. These 10 Priority Focus Areas are:
  - o River Park neighborhood Crescent City; Fruitland area
  - o Georgetown Area
  - Commercial Avenue
  - o Dunn's Creek Area
  - o Putnam County WWTF
  - Pico Road Boat Ramp
  - State Road 100 Flooding Rice Creek
  - Bardin Road Flooding
  - Sportsmans Harbor
  - St. John's Avenue near the Hospital
- Next steps for flood-resilience improvements should likely target a selection of those areas for further investigation and design where needed and identification of external funding options that align with the project impacts.

Based on an overall risk rating for the percent of area or critical assets that are flood affected (**Table 1**), the categorized risk ratings for the 4 asset groups are provided in **Table 2** for 6 selected flood scenarios. All asset groups fall into the "Low" risk category (less than 25% of assets impacted) except for Critical Infrastructure which is "Medium" risk due to the large number of stormwater assets with nearby flood impacts.

Table 1. Overall flood risk ratings based

Overall Risk	% Land Area or % of Critical
Assessment Rating	Assets with flood impacts
None	0
Low	less than 25%
Medium	25% to 50%
High	50% to 75%
Extreme	more than 75%

Note: categories based on Resilient Florida guidelines

Table 2. Percent of flood-impact critical assets by asset group for 6 selected flood scenarios

#### % of flood-impacted assets

Asset Group	MAX_ 100yrFP	MAX_2070_ 100yrFP	MAX_HT_ SLR40_H	MAX_HT_ SLR70_H	MAX_25yr_ SLR40_H	MAX_25yr_ SLR70_H
Transportation and evacuation route	10%	14%	3%	4%	4%	5%
Critical infrastructure	30%	31%	6%	8%	8%	9%
Natural, cultural, and historical resource	17%	17%	8%	8%	8%	9%
Critical community and emergency facilities	12%	14%	1%	1%	1%	4%
Total impacted assets	16%	17%	4%	5%	5%	6%

Note: 6 Flood scenarios are: 100-yr Rainfall, 100-yr Rainfall in 2070, 2040 Intermediate High SLR High Tide (2040-IH SLR HT), 2070 Intermediate High SLR High Tide (2070-IH SLR HT), 2040-IH SLR +25-yr surge, and 2070-IH SLR +25-yr surge.

A complete tally of the impacted critical assets by asset type (**Table 3**) and the regionally significant critical assets (**Table 4**) are in the following tables for the same 6 selected flood scenarios.

Table 3. Numbers of flood-impact critical assets for 6 selected flood scenarios 6 Flood scenarios are: 100-yr Rainfall, 100-yr Rainfall in 2070, 2040 Intermediate High SLR High Tide (2040-IH SLR HT), 2070 Intermediate High SLR High Tide (2070-IH SLR HT), 2040-IH

SLR +25-yr surge, and 2070-IH SLR +25-yr surge

		Numbers of flood-impacted assets					
Asset Group	Asset Type	100-yr Rainfall	100-yr Rainfall 2070	2040-IH SLR HT	2070-IH SLR HT	2040-IH SLR +25-yr surge	2070-IH SLR +25-yr surge
Critical community and emergency facilities	affordable public housing	3	3	1	1	1	1
Critical community and emergency facilities	colleges and universities	-	-	-	-	-	-
Critical community and emergency facilities	community centers	-	2	-	-	-	-
Critical community and emergency facilities	correctional facilities	2	2	-	-	-	1
Critical community and emergency facilities	disaster recovery centers	-	-	-	-	-	-
Critical community and emergency facilities	emergency medical service facilities	1	1	-	-	-	1
Critical community and emergency facilities	emergency operation centers	-	-	-	-	-	-
Critical community and emergency facilities	fire stations	1	1	-	-	-	1
Critical community and emergency facilities	health care facilities	3	3	1	1	1	1
Critical community and emergency facilities	hospitals	-	-	-	-	-	-
Critical community and emergency facilities	law enforcement facilities	1	1	-	-	-	1
Critical community and emergency facilities	local government facilities	-	-	-	-	-	-
Critical community and emergency facilities	risk shelter inventory	1	1	-	-	-	-
Critical community and emergency facilities	schools	5	5	-	-	-	-
Critical community and emergency facilities	state government facilities	3	3	-	-	-	-

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		Numbers of flood-impacted assets					
Asset Group	Asset Type	100-yr Rainfall	100-yr Rainfall 2070	2040-IH SLR HT	2070-IH SLR HT	2040-IH SLR +25-yr surge	2070-IH SLR +25-yr surge
Critical infrastructure	communications facilities	24	25	6	7	7	8
Critical infrastructure	disaster debris management sites	2	2	-	-	-	-
<b>Critical Infrastructure</b>	drinking water facilities	49	49	27	27	27	29
Critical Infrastructure	electric production and supply facilities	62	62	20	23	23	24
Critical Infrastructure	solid and hazardous waste facilities	18	18	3	3	3	3
Critical Infrastructure	stormwater treatment facilities and pump stations	310	329	15	35	33	48
Critical Infrastructure	wastewater treatment facilities and lift stations	12	12	6	8	8	9
Critical Infrastructure	water utility conveyance systems	28	28	28	28	28	28
Natural, cultural, and historical resource	conservation lands	43	43	21	22	22	23
Natural, cultural, and historical resource	historical and cultural assets	182	185	80	87	87	90
Natural, cultural, and historical resource	parks	6	6	5	5	5	6
Transportation and evacuation route	airports	7	7	1	2	2	2
Transportation and evacuation route	bridges	24	24	11	12	12	12
Transportation and evacuation route	bus terminals	-	-	-	-	-	-
Transportation and evacuation route	major roadways	1,227	1,330	232	345	331	447
Transportation and evacuation route	marinas	29	30	21	21	21	21
Transportation and evacuation route	ports	1	1	1	1	1	1
		2,044	2,173	479	628	612	757

Table 4. Numbers of flood-impacted regionally significant assets for selected flood scenarios

#### **Numbers of flood-impacted assets**

					ou impuesed as		
Asset Group	Asset Type	MAX_100 yrFP	MAX_2070_1 00yrFP	MAX_HT_SL R40_H	MAX_HT_SL R70_H	MAX_25yr_SL R40_H	MAX_25yr_SL R70_H
<b>Critical Infrastructure</b>	drinking water facilities	1	1	1	1	1	1
Critical Infrastructure	electric production and supply facilities	4	4	2	2	2	2
Critical Infrastructure	wastewater treatment facilities and lift stations	3	3	1	1	1	1
Transportation and evacuation route	airports	1	1	-	-	-	-
Transportation and evacuation route	bus terminals	-	-	-	-	-	-
Transportation and evacuation route	major roadways	47	47	9	13	12	17
Transportation and evacuation route	ports	1	1	1	1	1	1
Transportation and evacuation route	rail facilities	1	1	1	1	1	1
		58	58	15	19	18	23

Note: 6 selected flood scenarios: 100-yr Rainfall, 100-yr Rainfall in 2070, 2040 Intermediate High SLR High Tide (2040-IH SLR HT), 2070 Intermediate High SLR High Tide (2070-IH SLR HT), 2040-IH SLR +25-yr surge, and 2070-IH SLR +25-yr surge

# **Priority Focus Areas**

Priority Focus Areas are the locations of particular community importance and known flood risks that were identified for further study or project development to potentially reduce flood risks. County expertise, steering committee input, flood-related LMS projects not currently in implementation, and interactive mapping at a community meeting were all key sources of information in identifying focus areas. 30 areas were identified for potential resilience initiatives; they are shown in **Figure 5** – with circle size indicating number of critical assets affected. **Table 5** ranks the 30 areas – with 5 areas identified as high-priority by the County, 4 flood-related LMS projects, and the other areas ranked from highest to lowest numbers of critical assets affected by the 100-yr rain flood scenario. The Social Vulnerability Index (see details in Sensitivity Analysis section) was also included at the locations of each Priority Focus Area to provide a measure of social and economic risk at the locations of these priority areas (values closer to 1 indicate higher social risk).

10 of the identified Priority Focus Areas are recommended here for further study and possible design of flood-risk reducing projects. These are the 5 County-identified prioritized, the 4 LMS projects already on the list for potential funding pursuit, and the area of St. John's Avenue near the Hospital. The St. John's Avenue area near the hospital is a priority because of potential access issues near a regionally significant critical asset: the hospital. **Table 5** summarizes the number of critical assets at each Priority Focus Area.

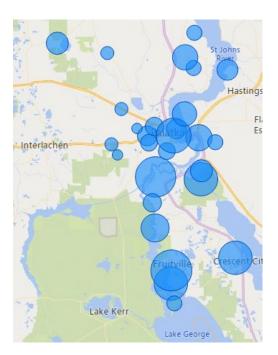


Figure 5. 30 Priority Focus Areas (size indicating # of critical assets affected)

Note: circle size proportional to numbers of critical assets with flood impacts for the 100-yr rainfall floodplains (assets counted within half a mile of the priority area center point).

Table 5. Priority Focus Areas with numbers of critical assets affected for 3 flood scenarios: 2040 SLR High Tide, 2070 SLR with 25-yr surge, and 100-yr rainfall.

#### **Number of Critical Assets Affected**

			uniber of Critical	Assets Affected	
Priority Area	Priority Note	2040 High Tide	2070 25-yr Sea-Level Rise	100-yr Floodplain	SVI
River Park neighborhood Crescent City; Fruitland	County priority	13	16	33	0.86
Georgetown Area	County priority	9	13	21	0.86
Commercial Avenue	County priority	3	11	7	0.67
Dunn's Creek Area	County priority	20	25	21	0.65
Putnam County WWTF	LMS Project	0	0	3	0.84
State Road 100 Flooding Rice Creek	LMS Project	0	1	2	0.27
Bardin Road Flooding	LMS Project	0	1	2	0.86
Pico Road Boat Ramp	LMS Project	5	6	12	0.44
Sportsmans Harbor	<b>County priority</b>	12	15	14	0.84
St. John's Avenue near Hospital	Impacts near hospital	0	0	6	0.87
E Buchanan Cir		18	27	32	0.65
Crill Ave near River Street Flooding (City of Palatka)		16	22	23	0.44
Middleton-Burney Elementary School		0	0	21	0.65
Palmetto Bluff		1	2	11	0.99
East River Road		7	12	10	0.95
San Mateo Road Dunn's Creek		5	8	8	0.84
Coral Farms Road		0	0	8	0.95
Booker Park		5	6	6	0.84
N Moody Rd		0	2	5	0.71
Saratoga Harbor		2	3	5	0.67
CSX Transportation near Palatka WWTF		1	2	4	0.71
Neighborhood at Davis Lake Road		0	1	4	0.65
Drayton Island		2	4	3	0.44
Millican Road		0	0	3	0.84
Champion Rd		3	3	3	0.44
SR 20 in 9-mile swamp		0	0	2	0.27
CR 309C Drainage		0	1	1	0.75
Marjorie Harris Carr Cross Florid	la Greenway -	0	0	1	1
Hunter Rd flooding			_	_	0.11
Etoniah Creek Wildlife		0	0	1	0.44
Management Area Hog Island		0	0	0	0.84
Total or average		122	181	2 <b>71</b>	0.68
iotai oi avelage		122	191	2/1	ชื่อ.บ

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The sections that follow provide short summaries of the priority areas, and the 100-yr floodplain flood depths near the area for the 100-yr event are shown to illustrate extent of nearby flooding. These sections simply explain the location for context and it is indicated how each area was determined as a potential priority focus area.

Applications note: project development or other resilience-building actions or further design work is not limited to Priority Focus Areas. Other asset locations or regions in the County might be identified for next steps based on emerging priorities.

# **Focus Area Locations**

# River Park neighborhood Crescent City; Fruitland

The River Park neighborhood in Crescent City and Fruitland (**Figure 6**) was identified as a high priority area for flooding from a LMS project list related to potential flood impacts and based on County feedback. These areas are prone to flooding in non-tropical weather in combination with tides.



Figure 6. River Park neighborhood Crescent City; Fruitland

# Georgetown Area

The Georgetown area (**Figure 7**) was identified as a high priority area for reducing flood impacts during a Steering Committee meeting and through input from the County.





Figure 7. Georgetown Area

#### **Commercial Avenue**

Commercial Avenue (**Figure 8**) has a history of flooding during tropical events, especially east of Palatka, and was identified as a high priority area for reducing flood impacts during a Steering Committee meeting and through input from the County.



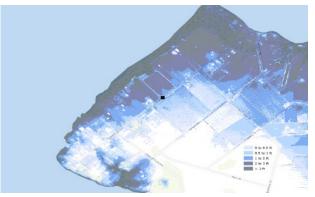


Figure 8. Commercial Avenue

#### Dunn's Creek Area

The Dunn's Creek area (**Figure 9**) was identified as a high priority area for reducing flood impacts during a Steering Committee meeting and through input from the County.



Figure 9. Dunn's Creek Area

#### State Road 100 Flooding at Rice Creek

State Road 100 Flooding at Rice Creek (**Figure 10**) was identified as a priority area for reducing flooding from a local mitigation strategy project list related to potential flooding impacts.



Figure 10. SR-100 Flooding at Rice Creek

# Crill Avenue near River Street Flooding (City of Palatka)

The underpass area near the railroad tracks on Crill avenue (**Figure 11**) has a history of flooding during some typical afternoon storm events. It was identified as a priority to reduce flooding during a Steering Committee meeting.



Figure 11. Crill Avenue, Palatka near railroad bridge

#### Middleton-Burney Elementary School

The Middleton-Burney Elementary School (**Figure 12**) provides shelter services to the community and serves a large Hispanic population. It was identified as a priority to reduce flooding during a steering committee meeting and is on the list to be rebuilt at Union Avenue and CR 308B. The main office floods during big rain events.



Figure 12. Middleton-Burney Elementary School

## Pico Road Boat Ramp

Pico Road Boat Ramp (**Figure 13**) was identified as a priority area for reducing flooding from a local mitigation strategy project list related to potential flooding impacts.



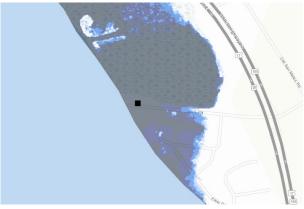


Figure 13. Pico Road Boat Ramp

#### **Sportsmans Harbor**

Sportsmans Harbor (in Welaka; **Figure 14**) has a history of flooding and was identified by the County during a Steering Committee meeting to be a high priority area for reducing flood impacts. It is adjacent to the St John's River and includes both high-value properties on the river front and some lower value residential properties further from the river.



Figure 14. Sportsmans Harbor (Welaka)

# St. John's Avenue near the Putnam County Hospital

St. John's Avenue (**Figure 15**) has a history of flooding during tropical events and was particularly bad during Hurricane Matthew (2 ft of water depth). The county has blown out the berms near the airport to help alleviate flooding. This area was identified as a priority for reducing flooding in a Steering Committee meeting. The hospital is a regionally significant critical asset, and flooding on access roads to the hospital is a particular concern.



Figure 15. St. John's Avenue near the Hospital

#### E Buchanan Cir

Flooding in the area of East Buchanan Circle (**Figure 16**) was reported at a public workshop with community input during an interactive map review exercise.





Figure 16. East Buchanan Circle

#### Palmetto Bluff

Palmetto Bluff (**Figure 17**) was identified as a priority area to reduce flooding in the County's stormwater master plan (SMP); it was discussed by the Steering Committee as a possible priority and is still in design for drainage improvements.



Figure 17. Palmetto Bluff

#### **East River Road**

East River Road and East Palatka and the nearby fields (**Figure 18**) have a history of flooding during tropical events like Hurricane Ian. The Steering Committee determined this area to be a priority area for reducing flooding.





Figure 18. East River Road

#### San Mateo Road at Dunn's Creek

San Mateo Road at Dunn's Creek (**Figure 19**) has been mentioned as a major problem and was identified as a priority area to reduce flooding in the County's stormwater master plan (SMP).

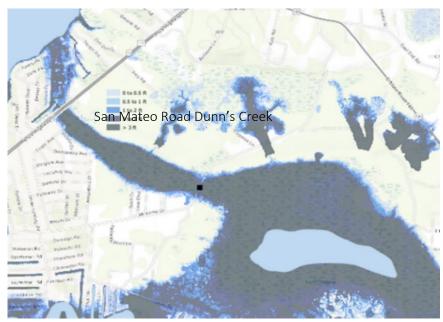


Figure 19. San Mateo Road at Dunn's Creek

#### **Coral Farms Road**

Coral Farms Road and the area (**Figure 20**) has undergone significant work to save the road. However, the area east of Coral Farms is still prone to flooding. It was identified as a priority area by a Steering Committee.



Figure 20. Coral Farms Road

#### **Booker Park**

Booker Park (**Figure 21**) was identified as a priority area for reducing flooding at a public workshop with community input during an interactive map review exercise.



Figure 21. Booker Park

#### N Moody Rd

North Moody road (**Figure 22**) was identified as a priority for reducing flooding at a public workshop with community input during an interactive map review exercise. Community members indicated that there is flooding on this road near the airport.



Figure 22. N Moody Rd

# Saratoga Harbor

Saratoga Harbor (**Figure 23**) was identified as a priority area to reduce flooding in the County's 2006 SMP. An inundation study was done in January of 2023 and repairs have been made to fix the road. However, there are ongoing issues related to fixing the dam as part of the multi dam/containment reservoir system and it is still in the process of being fixed.



Figure 23. Saratoga Harbor

## CSX Transportation near Palatka WWTF

CSX Transportation near the Palatka WWTF (**Figure 24**) has been selected as a priority for reducing flooding; flooding on or near the railway was reported at a public workshop with community input during an interactive map review exercise.



Figure 24. CSX Transportation near Palatka WWTF

# Neighborhood at Davis Lake Road

The Steering Committee prioritized a neighborhood at Davis Lake Road for reducing flooding (**Figure 25**). This neighborhood is in a very wet area and the developer has reportedly agreed to improve the drainage infrastructure.

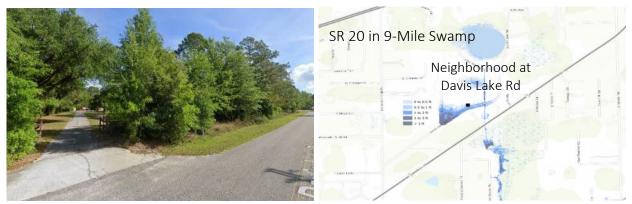


Figure 25. Neighborhood at David Lake Road

## **Putnam County WWTF**

Putnam County WWTF (**Figure 26**) was identified as a priority area for reducing flooding from the local mitigation strategy project list related to potential flooding impacts. The WWTF is designated as a regionally significant asset based on the scope of its service area.



Figure 26. Putnam County WWTF

# **Drayton Island**

The key flooding issues on Drayton Island: the private ferry becomes inaccessible and there are seawall issues that residents believe need rebuilding, based on input from the Steering Committee (**Figure 27**).

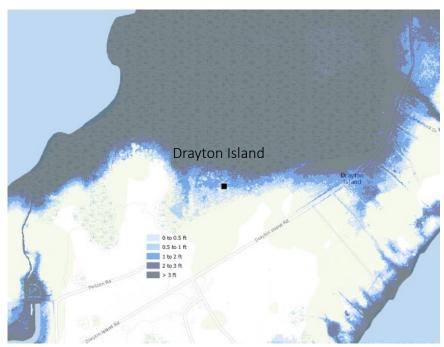


Figure 27. Drayton Island

#### Millican Road

Millican Road (**Figure 28**) was identified as a priority area to reduce flooding in the County's stormwater master plan (SMP) and is still in design to fix.



Figure 28. Millican Road

# **Champion Rd**

Flooding on or in the area of Champion Road (**Figure 29**) was reported at a public workshop with community input during an interactive map review exercise.



Figure 29. Champion Road

# **Bardin Road Flooding**

Bardin Road Flooding (**Figure 30**) was identified as a priority area for reducing flooding from a local mitigation strategy project list related to potential flooding impacts.

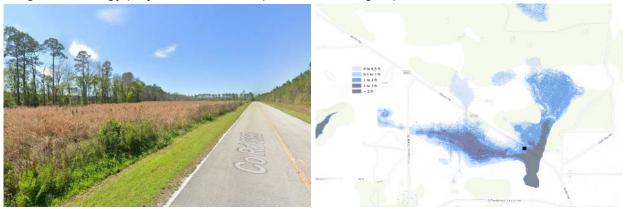


Figure 30. Bardin Rd

# SR 20 in 9-mile Swamp

State Road 20 in 9-mile swamp (**Figure 31**) has a history of flooding up to the pavement edge with summer rains. It was identified as a priority to reduce flooding in a Steering Committee meeting.



Figure 31. SR-20 in 9-mile Swamp

# St. Johns Avenue (CR 309C) Drainage

Drainage infrastructure for St. Johns Avenue (County Road 309C) was identified as a priority in a Steering Committee meeting as a way to reduce impacts from flooding (**Figure 32**). Culverts have already been put in to mitigate damage done by Hurricane Matthew and Phases 4 and 5 will include putting in swales.



Figure 32. St. Johns Avenue (CR 309C) Drainage

# Marjorie Harris Carr Cross Florida Greenway – Hunter Rd flooding

Hunter road in the Marjorie Harris Carr Cross Florida Greenway Park (**Figure 33**) was identified as a priority for reducing flooding at a public workshop with community input during an interactive map review exercise.



Figure 33. St. Johns Avenue (CR 309C) Drainage

## Hog Island

Hog Island (**Figure 34**) was identified as a priority in a Steering Committee meeting as there has been some interest in potentially allowing some development on the island. Almost the entire island appears to be potentially at risk for flooding under the 100-yr floodplain. While no critical assets are located on the island – the potential for development meant that it was included here.

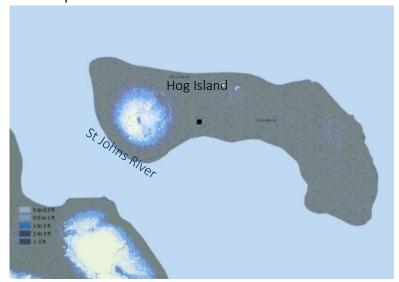


Figure 34. Hog Island

# Etoniah Creek Wildlife Management Area

Flooding on roads in the Etoniah Creek Wildlife Management Area (**Figure 35**) was reported at a public workshop with community input during an interactive map review exercise.



Figure 35. Etoniah Creek Wildlife Management Area

# Areas of Economic Significance

Four areas of economic significance are summarized below to characterize their flooded areas for selected flood scenarios. These areas were identified based on input from the County and/or the community during

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an outreach event: the Georgia-Pacific Palatka paper mill, irrigated agricultural lands, Palatka's historic districts, and Port Putnam.

#### Paper mill

The Palatka Paper Mill is in its 77<sup>th</sup> year of operation with its 580-acre manufacturing facility on a 6,000-acre campus on the northwest outskirts of Palatka. The Georgia-Pacific operation is a huge influence on the local economy, but also the state's economy, as well. Today, the Palatka paper mill remains the largest private employer in Putnam County with roughly 1,000 employees and an additional 2,400+ indirect jobs in the community, bringing an estimated \$750 million to the local community. Despite its huge impact financially and economically to the region, the Palatka mill is also recognized by the Environmental Protection Agency (EPA) for its work in reducing energy and water use. In 2020, the mill achieved the EPA's ENERGY STAR Top Project for 2020 for achieving 40% water reduction in a 10-week period through investments in improved equipment and monitoring. **Figure 36** shows that most of the infrastructure on the property is out of the flood-impacted areas for the 2070 SLR with 100-yr storm surge scenario. Similar flood depths and extents were seen for the 100-yr rain flood scenario.



Figure 36. Georgia-Pacific Palatka Operations and nearby flood impacts

Note: shaded area indicates depths of flooding (darker is greater depth) from 2070 SLR - intermediate high with 100-yr surge

# **Agricultural Lands**

The irrigated agricultural lands in the northeastern portion of the County are critical economic drivers in the region, part of the Tri-County Agricultural Area that includes portions of Flagler and St. Johns Counties.

**Figure 37** and **Figure 38** illustrate flood impacts from the 2070 SLR with 100-yr storm surge (the most extreme version of coastal impact flood scenarios considered here; about 1,000 irrigated acres impacted in that scenario) and also from the 100-yr rain event (about 500 acres impacted in the lands further to the south. The SLR/surge impacts would be especially damaging giving the potential salinization of the soils resulting from that. Impacts from rain-driven flood scenarios are expected to be less severe and of course more familiar to producers who are accustomed to dealing with big rains. Nutrient and soil losses and potential equipment damage are some of the key impacts from floods on irrigated agricultural lands in the County.

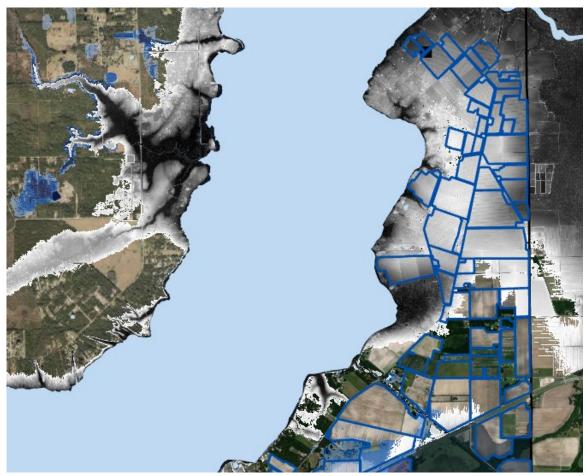


Figure 37. Irrigated agricultural lands and coastal flood impacts

Note: Nearly 1,000 acres of irrigated agricultural lands (mostly potatoes and sod) show flood impacts from 2070 SLR – intermediate high with 100-yr surge (grayscale shading indicates flood areas)

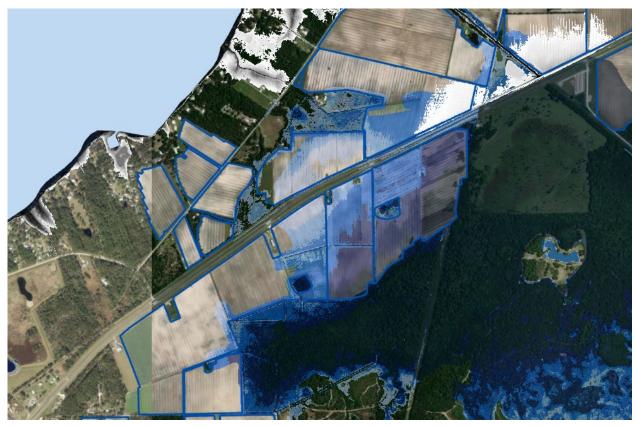


Figure 38. Irrigated agricultural lands and 100-yr rain-driven flood impacts

Note: Roughly 500 acres of irrigated agricultural lands (mostly potatoes/ cabbage rotations) show flood impacts from the 100-yr rain event (blue shading indicates flood areas)

#### Palatka Historic Districts

The City of Palatka's historic districts are split into north and south sections, with each holding high value within Putnam County. The districts serve to preserve the city's heritage and provide various economic impacts. Both districts provide direct, and indirect value to the city from architectural, historical, economic, and educational values. They contain a variety of styles that represent the development of Palatka throughout its history from the 19<sup>th</sup> century. The preservation of these historical areas can have a positive economic impact to the city and county. Tourism is a huge draw for these heritage districts, people visit these districts and in return visit hotels, restaurants, and many other local businesses, boosting the local economy. Most of the Historic District areas are not flood-impacted for the 100-yr rainfall or the 2070-SLR with 100-yr surge (Figure 39). There would likely be some property flooding in the northeastern portion of North Historic District. The flood-impacted area approaches River Street in the South Historic District, but no roadway flooding seems likely there – elevations along River St. are about 10 ft (NAVD 88), while MHHW is about 0.6 ft (NAVD 88).



Figure 39. Palatka North and South Historic Districts and coastal flood impact areas

Note: shaded area indicates depths of flooding (darker is greater depth) from 2070 SLR – intermediate high with 100-yr storm surge

#### Port Putnam

Port Putnam, located in Palatka, FL – just east of the paper mill, was established in 1961, opening the region to barge and other commercial ship traffic. In 2023 a 3-year, \$1.4M+ renovation project was given the greenlight and includes collaboration between the US Army Corps of Engineers and Putnam County. The port is currently under this project still that started in 2023 and includes increased navigable access through dredged channels, and many improvements to the port itself such as warehouses, property expansions, and more. This will spur new economic opportunities for the community. Flood impacts look to by relatively minor at the port location for the 2070 SLR – intermediate high with 100-yr storm surge scenario (planning estimates only). Elevations range from about 7 to 13 ft (NAVD 88) over most of the port property.



Figure 40. Port Putnam and coastal flood impacts

Note: shaded area indicates depths of flooding (darker is greater depth) from 2070 SLR – intermediate high with 100-yr storm surge

# **Adaptation: Next Steps**

The 4 main types of flood-risk adaptations are sometimes described as: Protection, Accommodation, Retreat, Avoidance (the PARA framework). This can be a helpful way to group the different strategies for planning or implementation of resilience-building projects or policies.

**Protection** describes strategies or projects that are defensive against flood impacts while leaving the areas or assets being protected mostly unchanged. These could be traditional or nature-based protective infrastructure like seawalls, levees, or living shorelines.

**Accommodation** means design changes that allow structures to remain roughly where they were but they might be elevated or use flood-proof construction. Other examples of Accommodation include increased flood storage through Low Impact Development (LID) or regional stormwater facilities.

**Retreat** means getting critical assets or other properties out of flood-risk areas by relocating them to more flood-resilient locations. This includes property acquisitions or easements in some cases, but for public infrastructure this usually means relocating critical assets.

**Avoidance** typically means not putting new development in areas of current or future flood risks. For major public infrastructure with long lifespans, a low-risk area today might be a high-risk area for floods in the future due to changing coastal water levels and increasing intense rainfall risks. Land use restrictions and zoning decisions are usually part of the process in avoiding flood impacts.

The following list summarizes key recommendations for utilizing this vulnerability assessment and reducing flood risks in Putnam County:

- The critical asset flood risks and flood depth data from this assessment should be used as supporting data for LMS potential projects related to flood risks or other Capital Improvement Plan (CIP) project identification or ranking.
- The exposure analysis maps and/or the supporting GIS data can be used where appropriate to
  evaluate land use change decisions; more detailed, dynamic modeling may be needed, but the
  flood mapping here can provide screening level evaluation to determine if more investigation of
  flood risks is needed.
- Support conservation easements and land acquisitions in locations of flood impacts to reduce likelihood of new infrastructure/development. Putnam County is home to significant areas of conservation easements and parks, and these areas were identified here to be major floodwater storage areas, providing flood-protection benefits to nearby areas.
- Several elements of this study could possibly benefit the Community Rating System (CRS) credits
  for the County. The County floodplain management personnel could explore whether the flood
  data improvements and public information provided with this vulnerability assessment could be
  used to increase CRS credits. Some examples of CRS credit activities potentially achieved by this
  assessment: Activity 410 (Floodplain Mapping), Activity 440 (Flood Data Maintenance), and Activity

- 320 (Map Information Service). There may be other data developed here that benefits the CRS rating and this should be explored further.
- Stormwater and roadway improvement projects should consider changing flood risks; this is particularly important for high-tide impacted roads near the river. The future sea level changes might bring sunny day flooding to some low-elevation roadway segments near the river. Roadway resurfacing or other maintenance should consider future flood risks and potentially include designs to elevate roadway and stormwater assets in areas affected High Tide in 2040. Examples: near San Mateo Rd. in the south, near Cedar Creek Rd. and Eagle Creek Rd. in the north. Tailwater elevations used in stormwater modeling near the St. Johns River could consider sea level rise to ensure systems perform as planned through the next several decades.
- The County should consider developing a roadway elevation master plan possibly as part of an updated Stormwater Master Plan – to establish a schedule of roadway elevation increases for flood impacted roads.
- Pursue external funding to support flood resilience projects. There are several funding options for projects that reduce flood risks, and recent federal legislation has allocated more funding toward projects that reduce flood risks. Likely grant program funding pursuits include:
  - Resilient Florida: this study provides the supporting data and findings to potentially pursue competitive grant funding for resilience-building capital improvement project.
  - Hazard Mitigation Grant Program (HMGP): The County has experience with HMGP funding of its LMS projects, and this assessment can inform potential new projects or locations for LMS projects.
  - <u>Building Resilient Infrastructure and Communities</u> (BRIC): similar to HMGP in requirements and eligible project types – this could support funding of projects that reduce flood risks in the County.

Projects that reduce flood risks for numerous critical assets or at locations of regionally significant assets will rank higher among competitive funding sources.

#### • Near-term action steps for project funding pursuit:

- 1) Identification of high-impact project(s) that reduce flood risks
- 2) Project conceptualization and/or design: this also includes quantifying project impact: assets or area affected; cost-benefit analysis where needed or feasible. Design can be supported by grant funding depending on the program.
- 3) Grant application due diligence and preparation

#### Note:

The following methods and data sections describes the flood modeling approaches and data used in this vulnerability assessment.

The appendices that follow the methods section are:

- Appendix A: Asset Type descriptions
- Appendix B: Exposure Analysis: flood extent maps
- Appendix C: Critical Asset flood depths for selected flood scenarios

# **Methods and Data for Mapping Inundation**

# Exposure Analysis: data and methods for inundation mapping

The goal the exposure analysis element of a vulnerability assessment is to identify and map the depth of water and extent of flooding caused by various flooding scenarios. The methods and data are described below, and a series of maps is provided in Appendix B illustrate flood depths and extents in the County. The data sources and methods for flood-impact mapping are described below.

#### Flood Scenarios List

This includes flood exposure maps and the underlying spatial data for the following 19 flood scenarios:

- 1. Current high tide (HT) flooding
- 2. HT flooding + Int-Low in 2040
- 3. HT flooding + Int-high in 2040
- 4. HT flooding + Int-Low in 2070
- 5. HT flooding + Int-high in 2070
- 6. Current 100-yr flood event; rain-driven
- 7. Current 500-yr flood event; rain-driven
- 8. 2070 100-yr flood event; rain-driven
- 9. 2070 500-yr flood event; rain-driven
- 10. 25-year storm surge: no sea level rise (SLR)
- 11. 25-year storm surge + Int-Low in 2040
- 12. 25-year storm surge + Int-high in 2040
- 13. 25-year storm surge + Int-Low in 2070
- 14. 25-year storm surge + Int-high in 2070
- 15. 100-year storm surge: no sea level rise (SLR)
- 16. 100-year storm surge + Int-Low in 2040
- 17. 100-year storm surge + Int-high in 2040
- 18. 100-year storm surge + Int-Low in 2070
- 19. 100-year storm surge + Int-high in 2070

# Flood Scenarios: Data and Methods Topography

Land surface elevations or topographic data were provided by the most recent digital elevation model (DEM) in Putnam County. The DEM data is from LiDAR data from the "FL\_Peninsular\_Putnam\_2018" DEM released in July 2022. Our team combined about 50 individual DEM tiles to prepare the complete DEM coverage for Putnam County. This DEM was used for inundation depth calculations for all flood scenarios. Mean accuracy in elevations was 0.04 ft (0.48 inches) when compared to the 62 Ground Control

Points used to verify elevations. All elevations in this report are in the NAVD88 datum unless otherwise indicated. The DEM and data documentation/verification files are available for review and retrieval here.

#### Rain-Driven Flood Scenarios

Rain-driven flooding was analyzed with a County-wide approach to determine reasonable flood depths for the 100-year and 500-year events. FEMA floodplain GIS files, based on the 2012 Flood Insurance Study (FIS, from FEMA), were provided by Putnam County and utilized for flood depth estimation. Depths of inundation at flooded areas were calculated as the difference of the flood elevation and the DEM, providing spatially variable water depth grids for both the 100-yr and 500-yr events.

Zone AE floodplains, which have an established Base Flood Elevation (BFE), also known as the 100-year elevation, and Zone A floodplains, which are areas within the 100-year floodplain but do not have an established BFE, were assumed to be areas inundated from the 100-year storm event and therefore, the areas with known rain-driven flooding. To determine the flood elevations, the following methodologies were developed for the different county floodplain instances:

#### **Zone A Floodplains**

Zone A 100-year elevations were calculated with GIS tools, by analyzing the current FEMA floodplain boundary against LiDAR to determine an average elevation. A buffered boundary was utilized to account for the FEMA Zone A floodplain being delineated using approximate methods.

To account for varying floodplain sizes over varying topography, smaller floodplains were discarded and larger floodplains were subdivided. Floodplains under 2,500 square feet in area were not included in the analysis since areas below this threshold produced unreliable results. For very large floodplains, the FEMA shape was subdivided into an upstream and downstream sections to accurately capture flood depths that were reasonable with the existing LiDAR. Subdividing of floodplains also occurred in areas near critical assets where known flooding was occurring.

**Figure 41** depicts a Zone A floodplain shape in blue compared to the resulting 100-year inundation shape outlined in red. As shown, the resulting inundation shape from the average elevation analysis conducted closely resembles the existing FEMA shape.

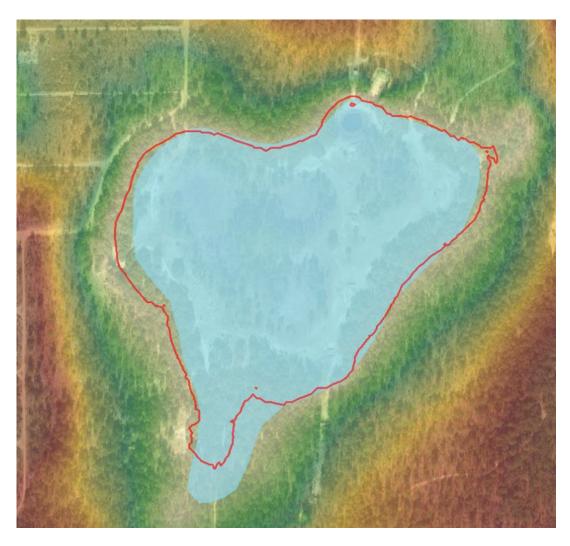


Figure 41. Zone A 100-year Inundation Shape vs FEMA Shape Zone A floodplain shape in blue compared to the resulting 100-year inundation shape outlined in red

## Ocklawaha Floodplain

The Lake Ocklawaha Floodplain, which encompasses 103 square miles of Putnam County, is assigned as FEMA Zone A. Due to its size and the available gage data for the lake and river, this floodplain was analyzed with gage analyses instead of the methodology discussed in the Zone A Floodplain section previously.

The floodplain shape was subdivided due to the presence of Rodman Dam in the southeastern portion of the floodplain, which separates Lake Ocklawaha from the Ocklawaha River. A Flood Frequency Analysis (FFA) was run utilizing USGS gage 02243960 to determine the appropriate flood elevations of the Ocklawaha River. The analysis calculated the 100-year elevation to be 9.5 and the 500-year elevation to be 10.6. For the Lake portion of the floodplain, a separate analysis was conducted which looked at the Mean Daily Water Levels of the Lake at SJRWMD Gage P-0132 from May 2004 to February 2024.

Evaluation of this data demonstrated a conservative estimate of the 100-year elevation is 32.0 and the 500-year elevation is 33.0, as shown in **Figure 42**.





Figure 42. Lake Ocklawaha Gage Analysis

# **Zone AE Floodplains**

Zone AE floodplains were assigned their established 100-year BFE from previous FEMA modeling. There are eleven major riverine tributaries in the county, all of which were established as Zone AE and studied during in the 2012 FEMA FIS for Putnam County. Seven are associated with the Lake Ocklawaha floodplain and four are associated with the St. Johns River floodplain. These tributaries are summarized in **Table 6**.

Table 6. Putnam County Riverine Tributaries

Tributary	Floodplain
Acosta Creek	St. Johns River
Devall Branch	St. Johns River
Two Mile Creek	St. Johns River
Unnamed Tributary to Two Mile Creek	St. Johns River

Tributary	Floodplain
Etonia Creek	Ocklawaha
Falling Branch	Ocklawaha
Gum Creek	Ocklawaha
Simms Creek	Ocklawaha
Tributary 1 to Simms Creek	Ocklawaha
Tributary 1-A to Simms Creek	Ocklawaha
Tributary 2 to Simms Creek	Ocklawaha

Tributaries were subdivided according to their BFE to create stepped inundation shapes along the tributary. The upstream BFE was assigned to the subdivided floodplain shape. An example of this is depicted in **Figure 43**, with the BFE labeled in red and subdivided floodplain in blue.

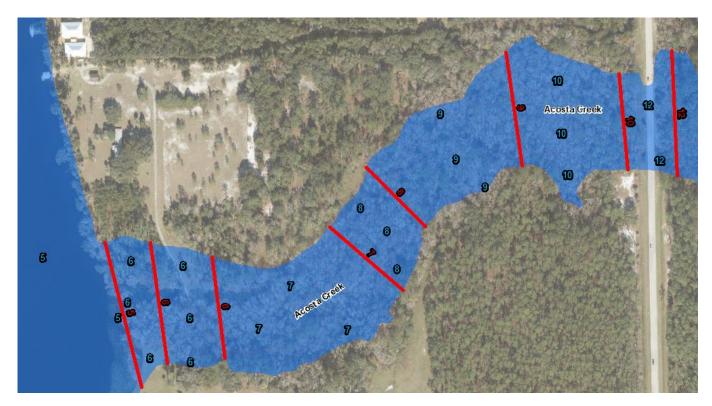


Figure 43. Acosta Creek Tributary – Zone AE Example

For the seven tributaries associated with Lake Ocklawaha, the established BFE was not utilized where the elevation was below the elevation 32.0, which is the 100-year elevation developed for Lake Ocklawaha by the gage analysis discussed in the previous section.

#### **500-Year Floodplains**

To determine the 500-year flood elevations for floodplains not associated with the St. Johns River or Ocklawaha waterbodies, a uniform depth to add to the 100-year elevation was calculated using the SCS

method, which accounts for soil storage and rainfall depths. The precipitation used was 13.9 inches, which is the 500-year/24-hour rainfall depth from the NOAA Point Precipitation Frequency Estimate at Station 08-6753 in Palatka, Florida.

Floodplains were split into two land use categories to distinguish between developed and undeveloped land. Curve numbers were assigned based on the primary Hydrologic Soil Group and followed the TR-55 manual. Dual hydrologic soil groups were assigned Type D curve numbers. Waterbodies were assigned a curve number of 100. Increases in 500-year flood elevations ranged from 0.36 ft for undeveloped Type A soils floodplains to as much as 1.1 ft for developed, Type D soil floodplains. Waterbodies were assigned 1.16 ft of depth increase. A comparison of the 100-year to 500-year inundation is shown in **Figure 44**, with the 100-year inundation shown in red and the 500-year shown in purple. The original FEMA floodplain is shown in blue.

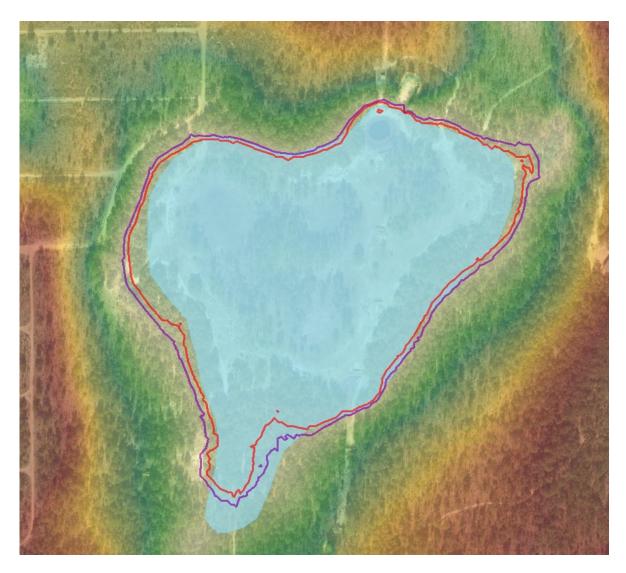


Figure 44. 500-year Inundation vs 100-year Inundation and FEMA Zone A Floodplain Zone A floodplain shape in blue: 100-year inundation shape outlined in red. 500-year in purple

#### St. Johns River 500-Year Floodplains

The St. Johns River is a Zone AE floodplain with 100-year elevations ranging from 5.0 to 6.0 across the county. FEMA 500-year floodplains were included in the 2012 data provided by Putnam County; however, no elevations were assigned to these floodplains. A log-log analysis between the 10-year and 100-year flood elevations for the river was conducted to determine the 500-year elevations for two river floodplain sections. From this analysis, an increase of 1.05 ft was applied to river sections with a BFE of 5.0 and an increase of 1.75 ft was applied to river sections with a BFE of 6.0.

A comparison of the 100 and 500-year inundation, shown as outlines, against the FEMA 100 and 500-year shapes is shown in **Figure 45**. The shapes closely resemble each other, confirming the methodology used.



Figure 45. St. Johns River 100 and 500-year Inundation Comparison

#### **Future Rainfall**

Flooding related to future rainfall was mapped for the year 2070, utilizing the Coordinated Regional Downscaling Experiment (CORDEX) 2070 change factors multiplied by current NOAA Atlas 14 data to estimate future rainfall depths (USGS - future rainfall change factors based on work of Irizarry-Ortiz et al. 2022). The CORDEX future rainfall change factors were used here as they were between the lower and higher values of two alternative modeling systems for estimating future rain intensities. Based on the USGS future rainfall change analysis, the County-average 1-day, 100-yr rain event of 10.6 inches might increase to 13.9 inches by 2040 and 14.6 inches by 2070.

The runoff corresponding to the 2070 rainfall for both the 100- and 500-year events was calculated using the rational method. The average increase in depth from present day to 2070 was calculated for the various land cover and soil types in the county, 0.35 ft for the 100 year and 0.7 ft for the 500 year, and added to the present-day inundation depth. Floodplain buffers were increased from the original analysis to cover more area to reflect the expected increase in flooded extents.

## Sea Level Rise and Storm Surge Flood Scenarios

#### Sea Level Rise

F.S. 380.093 requires the use of the 2017 National Oceanic and Atmospheric Administration (NOAA) Intermediate-High and Intermediate-Low sea level rise projection curves for the 2040 and 2070 planning horizons. SLR projections were adopted from the NOAA Technical Report NOS CO-OPS 083 – Global and Regional Sea Level Rise Scenarios for the U.S., published in 2017, which projected sea level rise out to the year 2100. In the absence of established NOAA SLR projections for Putnam County, local sea level data is derived through interpolation between the closest National Oceanic and Atmospheric Administration tide gauges. This analysis incorporates information from two NOAA tide gauges with SLR projections: the Mayport tide station (Station ID: 8720218), located to the east of Putnam County and at the mouth of the St. Johns River to the Atlantic Ocean, and the Fernandina Beach tide station (Station ID: 8720030), situated to the northeast of Putnam County. The SLR projection values from these stations exhibited similarities, and the values were chosen through interpolation, with Putnam County serving as the centroid. Weights for the values were assigned according to the distance of these stations from the County. HT flooding values were selected as the MHHW plus 2 ft, corresponding to a moderate flooding threshold as defined by NOAA within the County's vicinity. The HT flooding values were calculated by adding the corresponding amount of sea level rise based on the year and projection evaluated."

**Table 7** reflects the resulting sea level rise projections used for the analysis. These values are used for further analyses to determine future seasonal tidal variations, high tide flooding, and storm surge water levels.

Table 7. Sea Level Rise Values

Projection	2000 [ft]	2040 [ft]	2070 [ft]
NOAA Intermediate-Low	0.00	0.69	1.25
NOAA Intermediate-High	0.00	1.44	3.31

## Mean Higher High Water

The National Oceanic and Atmospheric Administration publishes tidal datums throughout the coastal areas of the United States to be used as references for measuring local water levels. Numerous tidal stations, both active and closed, are present along the length of the St. Johns River. Out of these, six stations were identified to be within Putnam County; however, these six stations are not active NOAA stations. The average MHHW for the sites with vertical datums relative to the North American Vertical Datum of 1988 (NAVD88) was found to be 0.58 ft NAVD 88 with a standard deviation of ± 0.04 ft. The tidal Putnam County | Vulnerability Assessment

datums NOAA tidal station at Buffalo Bluff, St. Johns River, Florida (Station ID: 8720767), was identified as one of the closest stations to the centroid of Putnam County. Mean higher high water was further used in the analysis of high tide flooding.

#### **High Tide Flooding**

High tide flooding, also known as nuisance flooding, includes minor flooding events that do not pose a significant threat to public safety or cause major property damage. However, these events can disrupt routine day-to-day activities, place added strain on infrastructure systems such as roadways and stormwater systems, and result in minor property damage.

There are three active USGS gage stations within Putnam County and the neighboring counties. The gage data from Racy Point, St Johns River, Florida (USGS Station ID: 02245290), located upstream, Buffalo Bluff, St Johns River, Florida (USGS Station ID: 02244040), located downstream, and Dunns Creek (USGS Station ID: 02244440) were compared. It was observed that the water levels at both stations are similar, with minor variations.

The verified water level data from the USGS gage station at Buffalo Bluff, St Johns River, Florida, was used to calculate the total annual frequency of high tide flooding days for varying flood stage elevations. This choice was based on the larger dataset available, spanning from 2010 to the present. **Figure 46** shows the gage data from the station.

In order to evaluate current and future high tide flooding, a threshold value for flooding must be established. The National Weather Service publishes thresholds for flood stages that can be used to qualify the type of flooding in an area. Flood stages are defined as a height above water levels that begin to create a hazard to lives, property, or commerce. Minor flooding is defined as minimal or no property damage but with the possibly of some public threat. Moderate flooding stage is defined as the water level where transfer to a higher elevation is necessary to save property and some evacuation may be required. Major flooding stage is defined as when the water elevation causes extensive property damage and evacuation.

**Table 8** displays the elevation of each flood stage associated with St. Johns River, along with the descriptions of the impacts associated with each flood stage. These flood thresholds have been identified by the National Weather Service specifically for the St. Johns River near Buffalo Bluff. The values were obtained from predictions made by the National Weather Service for the Buffalo Bluff gage site. Upon comparison, it was observed that these values align with the flood threshold values for Racy Point, indicating identical thresholds for both locations. **Figure 47**, **Figure 48**, **and Figure 49** display the number of days each flood stage threshold was exceeded for the years 2010 to 2023.

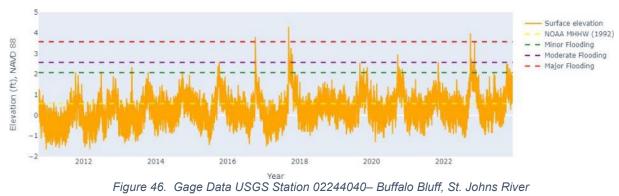
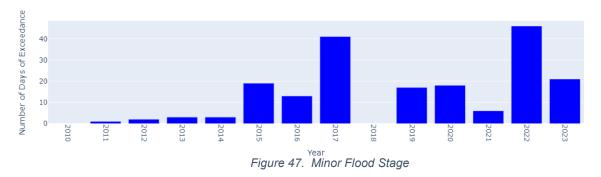


Table 8. Flood Stage Categories

Stage	Description	<b>Elevation</b> ft, NAVD88
Minor Flooding	Flooding of low-lying areas, parks, campgrounds and normally flood prone roadways is likely. Some boat ramps and docks along the St. Johns River and other inland waterways will begin to flood.	2.07
Moderate Flooding	Some flooding of structures and roads along the St. Johns River and other inland waterways is expected. Evacuation of people or property to higher ground is possible and the advice of Emergency Management or local officials should be heeded.	2.57
Major Flooding	Extensive inundation of structures and roads in the area is expected. Evacuations of people or transfer of property to higher ground is likely and the advice of Emergency Management should be heeded.	3.57

Occurrences of Threshold Value Exceedance for Each Year



Occurrences of Threshold Value Exceedance for Each Year

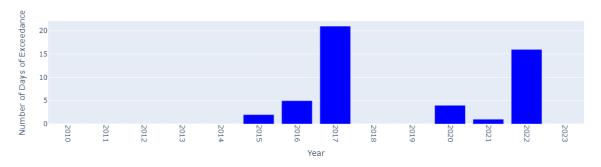
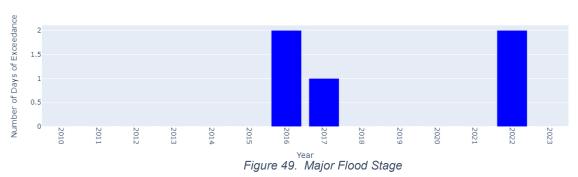


Figure 48. Moderate Flood Stage

Occurrences of Threshold Value Exceedance for Each Year



As sea levels rise, the exceedance for specific flood stage elevations would increase. To estimate future high tide flooding days the adjusted sea level rise values for 2040 and 2070 intermediate low and intermediate high projections were added to the observed water levels. Using the minor, moderate, and major flooding stages as the threshold, the future number of annual exceedance days was estimated. **Table 9** presents the number of days per year that water levels exceeded specified flooding thresholds.

Table 9. Current and Future High Tide Flooding Days

Stage	Current	2040 Inter. Low [ft, NAVD88]	2040 Inter. High [ft, NAVD88]	2070 Inter. Low [ft, NAVD88]	2070 Inter. High [ft, NAVD88]
Minor Flooding	14	42	129	137	365
Moderate Flooding	4	14	49	51	364
Major Flooding	< 1	1	5	5	251

#### **Storm Surge**

The 100-year (1% annual exceedance probability, AEP) storm surge scenarios were evaluated, per Florida state statute requirements, using the Federal Emergency Management Agency (FEMA) Effective Flood Insurance Study (FIS) for Putnam County dated 02/02/2012.

Per F.S. 380.093(3)(d), higher frequency storms can be analyzed to evaluate the sensitivity of critical assets. In addition to analyzing the effects of a 100-year storm surge, a 25-year (4% AEP) was also analyzed to further understand the sensitivity of the critical assets for this study.

The FEMA Effective FIS had eight transects located on the St. Johns River within Putnam County. The average stillwater elevations at these transects have a negligible difference therefore, the largest elevation published by FEMA for a 25-year and 100-year return period storm was taken to be conservative. The stillwater elevation for the 25-year return was determined to be +4.05 ft, NAVD88. For the 100-year return period storm the stillwater elevation was determined to be +5.3 ft, NAVD88. **Table 10** shows storm surge values of the 25-year storm surge used in this study. **Table 11** shows storm surge values for a 100-year storm surge projected to 2040 and 2070 respectively.

Table 10. 25-Year Storm Surge Values, ft, NAVD88

Current [ft]	2040 Inter. Low [ft]	2040 Inter. High [ft]	2070 Inter. Low [ft]	2070 Inter. High [ft]
4.1	4.8	5.6	5.4	7.4

Table 11. 100-Year Storm Surge Values, ft, NAVD88

Current [ft]	2040	2040	2070 Inter. Low	2070
	Inter. Low [ft]	Inter. High [ft]	[ft]	Inter. High [ft]
5.3	6.1	6.8	6.6	8.7

#### Flood Depth Mapping Procedures for SLR and Surge

Following the identification of the flood scenarios, a GIS-based modified "bathtub" model analysis was conducted to quantify spatially variable flood depths and extents. The bathtub approach involved creating a raster (gridded data) covering the extent of the digital elevation model (DEM) of Putnam County with an elevation value corresponding to the storm surge levels. The various flood scenario rasters were used as input to conduct mathematical operation that involves the subtraction of the DEM values from the storm surge raster. Negative values from the operation, which correspond to areas that are not flooded, were omitted from the resulting raster. The resulting storm surge rasters were modified to eliminate areas that are not hydrologically connected to depict a more accurate representation of the storm surge flooding. The storm surge raster values represent the spatially variable flood depths in ft throughout the County.

**Table 12** below, lists the SLR and storm surge elevations and data sources being used in the Putnam County Vulnerability Assessment.

Table 12. Summary List of Data and Data Sources

Data Type	Value	Unit	Data Source
Sea Level Rise 2000 base year: 2040 Intermediate Low	0.69	ft	NOAA Technical Report NOS CO-OPS 083 - Global and Regional Sea Level Rise Scenarios (2017) – Mayport, FL - 8720218
Sea Level Rise 2000 base year: 2040 Intermediate High	1.44	ft	NOAA Technical Report NOS CO-OPS 083 - Global and Regional Sea Level Rise Scenarios (2017) – Mayport, FL - 8720218
Sea Level Rise 2000 base year: 2070 Intermediate Low	1.25	ft	NOAA Technical Report NOS CO-OPS 083 - Global and Regional Sea Level Rise Scenarios (2017) – Mayport, FL - 8720218
Sea Level Rise 2000 base year: 2070 Intermediate High	3.3	ft	NOAA Technical Report NOS CO-OPS 083 - Global and Regional Sea Level Rise Scenarios (2017) – Mayport, FL - 8720218
Sea Level Rise 2000 base year: 2040 Intermediate Low	0.69	ft	NOAA Technical Report NOS CO-OPS 083 - Global and Regional Sea Level Rise Scenarios (2017) – Fernandina Beach, FL - 8720030
Sea Level Rise 2000 base year: 2040 Intermediate High	1.44	ft	NOAA Technical Report NOS CO-OPS 083 - Global and Regional Sea Level Rise Scenarios (2017) – Fernandina Beach, FL - 8720030
Sea Level Rise 2000 base year: 2070 Intermediate Low	1.25	ft	NOAA Technical Report NOS CO-OPS 083 - Global and Regional Sea Level Rise Scenarios (2017) – Fernandina Beach, FL - 8720030
Sea Level Rise 2000 base year: 2070 Intermediate High	3.3	ft	NOAA Technical Report NOS CO-OPS 083 - Global and Regional Sea Level Rise Scenarios (2017) – Fernandina Beach, FL - 8720030
Tidal Data: MHHW	0.57	ft, NAVD88	NOAA Tides & Currents (Station ID: 8720767)
Storm Surge 25-year Return (4% AEP)	4.05	ft, NAVD88	FEMA FIS Putnam County (2012)
Storm Surge 100-year Return (1% AEP) + 2040 Intermediate Low	4.8	ft, NAVD88	FEMA FIS Putnam County (2012)
Storm Surge 100-year Return (1% AEP) + 2040 Intermediate High	5.6	ft, NAVD88	FEMA FIS Putnam County (2012)
Storm Surge 100-year Return (1% AEP) + 2070 Intermediate Low	5.4	ft, NAVD88	FEMA FIS Putnam County (2012)
Storm Surge 25-year Return (4% AEP) + 2070 Intermediate High	7.4	ft, NAVD88	FEMA FIS Putnam County (2012)
Storm Surge 100-year Return (1% AEP)	5.3	ft, NAVD88	FEMA FIS Putnam County (2012)
Storm Surge 100-year Return (1% AEP) + 2040 Intermediate Low	6.1	ft, NAVD88	FEMA FIS Putnam County (2012)
Storm Surge 100-year Return (1% AEP) + 2040 Intermediate High	6.8	ft, NAVD88	FEMA FIS Putnam County (2012)
Storm Surge 100-year Return (1% AEP) + 2070 Intermediate Low	6.6	ft, NAVD88	FEMA FIS Putnam County (2012)
Storm Surge 100-year Return (1% AEP) + 2070 Intermediate High	8.7	ft, NAVD88	FEMA FIS Putnam County (2012)
Flood Stages	Varies	ft, NAVD88	National Weather Service <a href="https://water.weather.gov/ahps2/hydrograph.php?gage=palf1&amp;wfo=jax">https://water.weather.gov/ahps2/hydrograph.php?gage=palf1&amp;wfo=jax</a>

## Sensitivity Analysis

Sensitivity analysis includes the assignments of flood depths at the locations of critical assets and also includes some measure of the social vulnerability of a community or location. Overall flood risk sensitivity describes characteristics of an area, community, or infrastructure that make it at risk of negative impacts to flood risks. This might include the physical (location, elevation) and the social factors (income, education) of the area and its community. The goal of sensitivity analysis is to better understand flooding impacts on critical and essential infrastructure, and a location's dependence on them. This involves analyzing how extreme flooding affects various types of infrastructure within different scenarios. The Social Vulnerability Index (described below) was used here as an average measure of disaster susceptibility in the context of social and economic factors.

#### **Critical Assets Flood Depths**

Critical assets were defined by Section 380.093 (F.S.) into 4 Asset Groups, with a total of 36 Asset Types falling under one of those groups. These are listed as follows:

Critical Community and Emergency Facilities: Affordable Public Housing, Colleges and Universities, Community Centers, Correctional Facilities, Disaster Recovery Centers, Emergency Medical Service Facilities, Emergency Operation Centers, Fire Stations, Health Care Facilities, Hospitals, Law Enforcement Facilities, Local Government Facilities, Logistical Staging Areas, Risk Shelter Inventory, Schools, State Government Facilities

**Critical Infrastructure:** Communications Facilities, Disaster Debris Management Sites, Drinking Water Facilities, Military Installations, Solid and Hazardous Waste Facilities, Stormwater Treatment Facilities and Pump Stations, Wastewater Treatment Facilities and Lift Stations

**Transportation Assets and Evacuation Routes:** Airports, Bridges, Bus terminals, Ports, Major roadways, Marinas/Boat Ramps, Rail facilities, and Railroad bridges

**Natural, Cultural, and Historical Resources:** Conservation Lands, Historical and Cultural Assets Parks, Shorelines, Surface waters, Wetlands.

Descriptions and data sources of each asset type are summarized in Appendix A.

Regionally significant assets were identified based on definitions from Section 380.093 (F.S.) as critical assets that support the needs of communities spanning multiple geopolitical jurisdictions. The following assets were determined to be regionally significant:

- Airports (Palatka Municipal Airport)
- Bus Terminals (Greyhound Palatka)
- Drinking Water Facilities (only municipal plants)
- Electric Production and Supply Facilities (power generation assets only)
- Major Roadways (all FDOT roadways)
- Ports (Port Putnam)
- Rail Facilities (CSX Mainline)
- Wastewater Treatment Facilities (only municipal plants)

Flood depths at the locations of critical assets were assigned to the areas near those assets. For most critical assets originally represented as point locations in the database, the property boundaries (parcels) containing the point were used as the area locations for the critical asset. The purpose of this is to better quantify the range of flood impacts at an asset location. For example, the Palatka airport represented as a single point might not have been identified as flood-impacted in some scenarios, but when the whole airport property is considered, the area flooded and the average and maximum flood depths can be quantified to provide a more complete view of flood risks.

Similarly, for linear features like roadway segments from FDOT or NTD (National Transportation Dataset: used for non-FDOT roads), areas were assigned as 50 ft from the roadway linear feature for FDOT roads (100ft total width) and 40 ft from the roadway feature for smaller NTD roads. This allowed for areas of flood impact to be calculated for roads. Similar processing was completed with bridges; note: estimated flood depths and lengths of flooding at bridge locations does not typically represent flood depth above roadway surface. While the DEM (digital elevation model: surface elevations) typically captures roadway elevations correctly, bridge surface elevations are not typically represented by most large scale DEM's. Visual inspection of flood depths and bridge locations suggests no flood risk at elevated bridges. Some bridges with minimal elevation increase from adjacent roads might be identified as flood-impacted.

For each critical asset, the flood-impacted area, maximum flood depth, minimum flood depth, and average depth were calculated for all 19 flood scenarios and these flood depths were joined to the spatial database of critical assets. These can be readily accessed for selected scenarios in the online data dashboard, and they can be accessed for all flood scenarios in the critical assets GIS database included with this report.

# Social Vulnerability

Social vulnerability is the susceptibility of social populations to the adverse impacts of harmful natural events. Socially vulnerable populations located within communities often have much fewer resources and extended recovery times on average, compared to non-vulnerable populations. Their locations relative to critical infrastructure and services supports decision-makers, and responders understand and address gaps and vulnerabilities in the community.

For this Vulnerability Assessment for Putnam County, the pertinent goal regarding sensitivity analysis was to understand how flooding hazards impact Putnam County's ability to prepare for, recover from, and adapt to these events for the future, with a certain focus on impacts within socially vulnerable populations. With social vulnerability tools, it is possible to quantify an area's vulnerability index. The CDC/ATSDR Social Vulnerability Index (SVI) was an essential tool in this analysis. Developed by the Centers for Disease Control and Prevention (CDC) and Agency for Toxic Substances and Disease Registry (ATSDR), it is a designated and proven option regarding social vulnerability data. The SVI tool quantifies the social vulnerability aspects of locations to environmental disasters. The CDC SVI uses many variables to assess county or census tract-level social vulnerability, these range from socioeconomic status, household composition, minority status, housing variables, transportation, disability status, and more. Using these variables, the SVI tool provides the needed support to empirically analyze the county's social vulnerability from environmental aspects.

Within the CDC/ATSDR tool, the ATSDR's Geospatial Research, Analysis & Services Program (GRASP) creates databases to help emergency responders and public health officials identify and map vulnerable communities that will more than likely require assistance before, during, and after a harmful natural event. The CDC/ATSDR SVI uses U.S. Census data to determine the social vulnerability of every census tract. Census tracts are subdivisions of counties for which the Census collects statistical data. The SVI ranks each tract on 16 social factors, including poverty, lack of vehicle access, and crowded housing, and groups them into four related themes (**Figure 50**). Then each tract receives an overall ranking relative to the State (**Figure 51**).

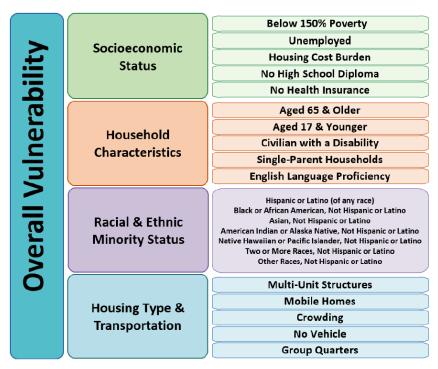


Figure 50. Social Vulnerability Four Characteristics with the underlying data types

Source: CDC SVI, 2020

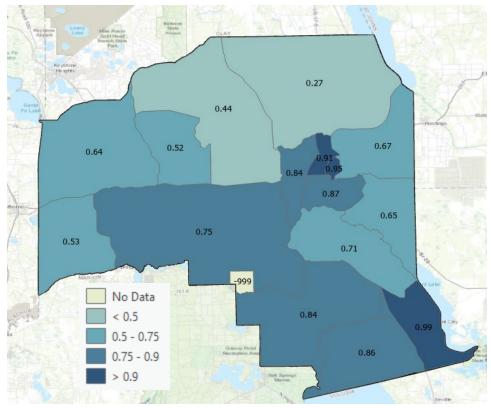


Figure 51. Overall Social Vulnerability Index ranking (0 to 1)

Note: higher values indicate greater vulnerability relative to other census tracts in Florida

# References

Irizarry-Ortiz, M. M., Stamm, J. F., Maran, C., & Obeysekera, J. (2022). Development of projected depth-duration frequency curves (2050–89) for south Florida. Scientific Investigations Report. https://doi.org/10.3133/sir20225093

Michelle M Irizarry-Ortiz, & Joann F Dixon. (2023). Change factors to derive projected future precipitation depth-duration-frequency (DDF) curves at 242 National Oceanic and Atmospheric Administration (NOAA) Atlas 14 stations in Florida

Sweet, W.V., Kopp, R.E., Weaver, C.P., Obeysekera, J., Horton, R.M., Thieler, E.R. and Zervas, C., 2017. Global and regional sea level rise scenarios for the United States (No. CO-OPS 083).

#### The appendices that follow are:

- Appendix A: Asset Type descriptions
- Appendix B: Exposure Analysis: flood extent maps
- Appendix C: Critical Asset flood depths for selected flood scenarios

# **Appendix A: Asset Type Descriptions**

The following provides a list with definitions of critical asset data in accordance with Subsection 380.093, F.S. for assessing the vulnerability of critical community and environmental assets to sea level rise, high tide flooding, storm surge, and rainfall events.

# **Transportation and Evacuation Routes**

# **Airports**

**Description:** Airports are all areas that are authorized for aircrafts take-offs and landings, including helipads.

Source: Florida Division of Emergency Management

# **Bridges**

**Description:** A bridge is a structure built to span a physical obstacle (such as a body of water, wetland, road, or rail) without blocking the way underneath.

**Source:** Florida Department of Transportation

#### **Bus Terminals**

**Description:** Bus terminals refer to any premises for storage or parking of buses or the loading and unloading of passengers.

**Sources:** Department of Transportation, Division of Emergency Management

# Major Roadways

**Description:** All roadway segments, including FDOT, other public roads, and some private roads. Includes identifying attribute for evacuation route

**Sources:** Florida Department of Transportation for FDOT roads, USGS National Transportation Dataset (NTD) for local and private roads

## Marinas and Boat Ramps

**Descriptions:** Marina is a dock or basin providing secure moorings for boats, possibly with supply, repair, and other facilities. Boat ramp refers to any graded slopes, slabs, pads, or planks used for launching boats.

Sources: Florida Department of Transportation, Division of Emergency Management

#### **Ports**

**Description:** A port is a maritime facility comprising one or more loading areas where ships load and discharge cargo and/or passengers.

Source: Putnam County

## Rail Facilities

**Description:** Any land, buildings, or equipment of the rail system which primarily operate to provide services to the passengers. This includes the CSX line and all rail crossings of roads as separate features in the data.

**Sources:** National Transportation Atlas Database (NTAD)

# Critical Infrastructure

#### **Communication Facilities**

**Description:** Refers to any and all public and private instrumentalities used in the transmission of information or data, including post offices.

Sources: Florida Division of Emergency Management

# **Disaster Debris Management Sites**

**Description:** Refers to a site that acts as a temporary staging area for debris that has accumulated after the occurrence of a disaster.

Sources: Florida Division of Emergency Management

## **Drinking Water Facilities**

**Description:** Refers to public supply facilities that produce and distribute drinking water to the surrounding community; includes public supply well locations and public supply treatment plants.

Sources: Florida Department of Environmental Protection

## **Electric Production and Supply Facilities**

**Description:** an electricity generating or distribution facility. There are separate layers for: transmission lines, Substations, and power generation facilities (including solar) from EPA.

**Sources:** Department of Homeland Security (DHS) Homeland Infrastructure Foundation-Level Data (HIFLD) and EPA.

#### Solid and Hazardous Waste Facilities

**Description:** A site, location, tract of land, installation, or building used for incineration, composting, sanitary landfilling, or other methods of disposal of solid wastes, or, if the solid wastes consist of scrap tires, for collection, storage, or processing of the solid wastes; or for the transfer of solid wastes.

Sources: Florida Department of Environmental Protection and EPA

# Stormwater Treatment Facilities and Pump Stations

**Description:** Stormwater management facility means a facility or other technique used to reduce volume, flow rate, or pollutants from stormwater runoff. Stormwater facilities is interpreted broadly here to include any relevant stormwater assets. FDOT-District 2 linear treatment stormwater facilities and ponds were combined with all reservoir features from USGS National Hydrography Dataset.

**Sources:** Florida Department of Transportation – District 2, USGS National Hydrography Dataset (reservoirs)

# Wastewater Treatment Facilities and Lift Stations

**Description:** A plant or system for sewage treatment and disposal, not including septic systems, that consists of treatment works, disposal works and pumping stations.

**Sources:** Florida Department of Environmental Protection, Lift Stations from Putnam County and City of Palatka

# Water Utility Conveyance Systems

**Description:** Refers to above-ground public water supply for potable water supply (water tanks most commonly).

**Sources:** Florida Department of Environmental Protection

# Critical Community and Emergency Facilities

## Affordable Public Housing

**Description:** Refers to areas that provide safe rental housing for eligible low-income families, the elderly, and/or persons with disabilities.

Sources: Florida Housing Data Clearinghouse

## Colleges and Universities

**Description:** Refers to community colleges, technical schools, liberal arts colleges, and institutions that offer both undergraduate and graduate programs.

Sources: Florida Division of Emergency Management

# **Community Centers**

**Description:** Refers to facilities that allow members of the community to congregate, whether for recreation or education.

Sources: Florida Division of Emergency Management

#### **Correctional Facilities**

**Description:** Refers to a jail, prison, or other facility used to house people who have been arrested, detained, or convicted by a criminal justice agency or court.

Sources: Florida Division of Emergency Management

## **Disaster Recovery Centers**

**Description:** Disaster Recovery Centers provide disaster survivors with information from the relevant Florida state agencies and FEMA and the U.S. Small Business Administration.

Source: Florida Division of Emergency Management

# **Emergency Medical Service Facilities**

**Description:** Refers to an institution licensed to provide emergency medical services.

Sources: Florida Division of Emergency Management

## **Emergency Operation Centers**

**Description:** Refers to a central command and control facility responsible for carrying out emergency management and ensuring the mission continuity of operation.

Source: Florida Division of Emergency Management

#### Fire Stations

**Description:** Refers to a structure or other area for storing firefighting apparatuses such as fire engines and related vehicles, personal protective equipment, fire hoses and other specialized equipment.

Sources: Florida Division of Emergency Management, Putnam County

#### **Health Care Facilities**

**Description:** A building where there is provision of care or treatment of diseases, whether physical, mental, emotional, or some other physiological or psychological condition.

**Sources:** Florida Division of Emergency Management

# Hospitals

**Description:** Refers to an institution providing medical treatment, surgical treatment, and nursing care for sick or injured people.

Sources: Florida Division of Emergency Management

#### Law Enforcement Facilities

**Description:** Refers to a place of operation for a municipal police department, county sheriff's office or other law enforcement agency.

Sources: Florida Division of Emergency Management, Putnam County

#### **Local Government Facilities**

**Description:** A building or facility constructed by, on behalf of, or for use by, a county, city, school district, school corporation or combination thereof, or an executive board, commission, bureau, division, office, or department of the state.

Sources: Florida Division of Emergency Management, Putnam County

## Risk Shelter Inventory

**Description:** Refers to one or more structures designed to provide persons with temporary protection from a storm.

Sources: Florida Division of Emergency Management

#### **Schools**

**Description:** Refers to facilities that provide education services, including public and private schools.

Sources: Florida Division of Emergency Management, Putnam County

## State Government Facilities

**Description:** Refers to a building, laboratory, facility, room, dormitory, hall, or other structure owned, licensed as a licensee, leased as a tenant, or lawfully occupied by an applicable government entity.

Sources: Florida Division of Emergency Management

## Natural, Cultural, and Historic Resources

#### **Conservation Lands**

**Description:** Refers to areas that have been set aside by either local or federal entities to conserve, protect, manage, or restore important ecosystems and habitats.

**Sources:** Florida Natural Areas Inventory (FNAI)

## Cultural and Historic Resources

**Description:** Sites, buildings, structures, and/or landscapes that are important to a community's history are considered cultural or historic resources. Includes data layers for Historic Bridges, Historic Cemeteries, Historic Structure Locations, and Resource Groups in Florida.

Sources: Bureau of Archaeological Research

#### **Parks**

**Description:** Refers to open space for community members to enjoy the outdoors. Spatial data layers include Florida State Parks and also structures/buildings on state park lands.

**Sources:** Florida Department of Environmental Protection

#### **Shorelines**

**Description:** Refers to the line along which a large body of water meets the land.

Sources: Florida Fish and Wildlife Conservation Commission

#### **Surface Waters**

**Description:** Refers to water on the surface, contained in built infrastructure or natural features.

Sources: USGS National Hydrography Dataset

# Wetlands

Description: Refers to areas that are saturated enough by surface water or ground water to support a

prevalence of vegetation usually found in wetland/saturated soils.

**Sources:** Florida Department of Environmental Protection

# **Appendix B: Exposure Analysis Maps**

See next pages for flood extent maps.

These maps are in order of the 19 flood scenarios below, and for each scenario there are 11 maps:

- 1 map of full County extent
- 5 maps of gridded zoom extent to cover each portion of the County in more detail (more zoomed in)
- 5 maps zoomed to each of the 5 municipality boundaries.

#### The flood scenarios in the order shown in the map series are:

- 1. Current 100-yr flood event; rain-driven
- 2. 2070 100-yr flood event; rain-driven
- 3. Current 500-yr flood event; rain-driven
- 4. 2070 500-yr flood event; rain-driven
- 5. Current high tide (HT) flooding
- 6. HT flooding + Int-Low in 2040
- 7. HT flooding + Int-High in 2040
- 8. HT flooding + Int-Low in 2070
- 9. HT flooding + Int-High in 2070
- 10. 25-year storm surge: no sea level rise (SLR)
- 11. 25-year storm surge + Int-Low in 2040
- 12. 25-year storm surge + Int-High in 2040
- 13. 25-year storm surge + Int-Low in 2070
- 14. 25-year storm surge + Int-High in 2070
- 15. 100-year storm surge: no sea level rise (SLR)
- 16. 100-year storm surge + Int-Low in 2040
- 17. 100-year storm surge + Int-High in 2040
- 18. 100-year storm surge + Int-Low in 2070
- 19. 100-year storm surge + Int-High in 2070

# 100-yr Rainfall Map Series

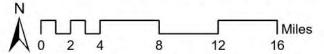
- Full County view (1 map)
- Gridded extent areas to cover County (5 maps)
- City extent views at 5 municipality locations (5 maps)

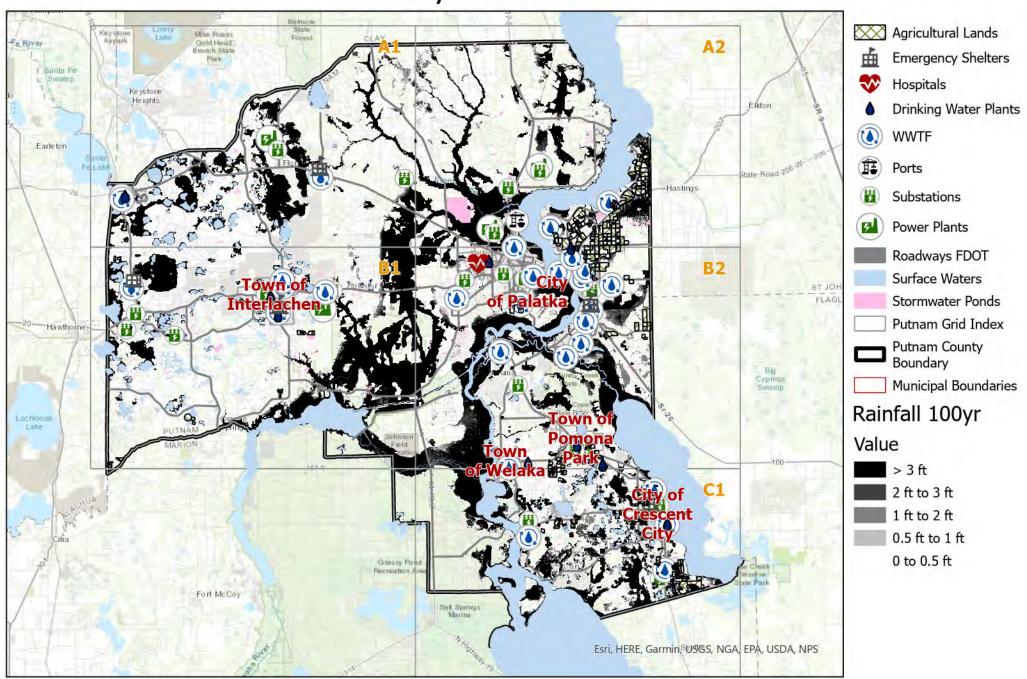
Exposure Analysis: Putnam County, Florida









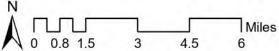


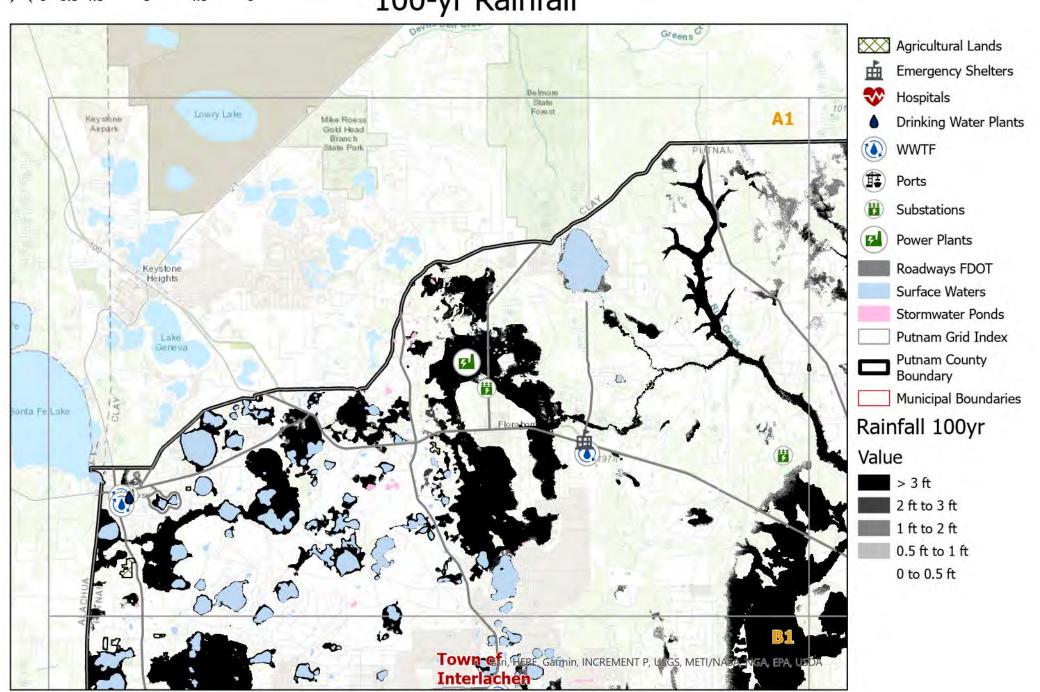
Exposure Analysis: Putnam County, Florida









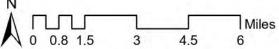


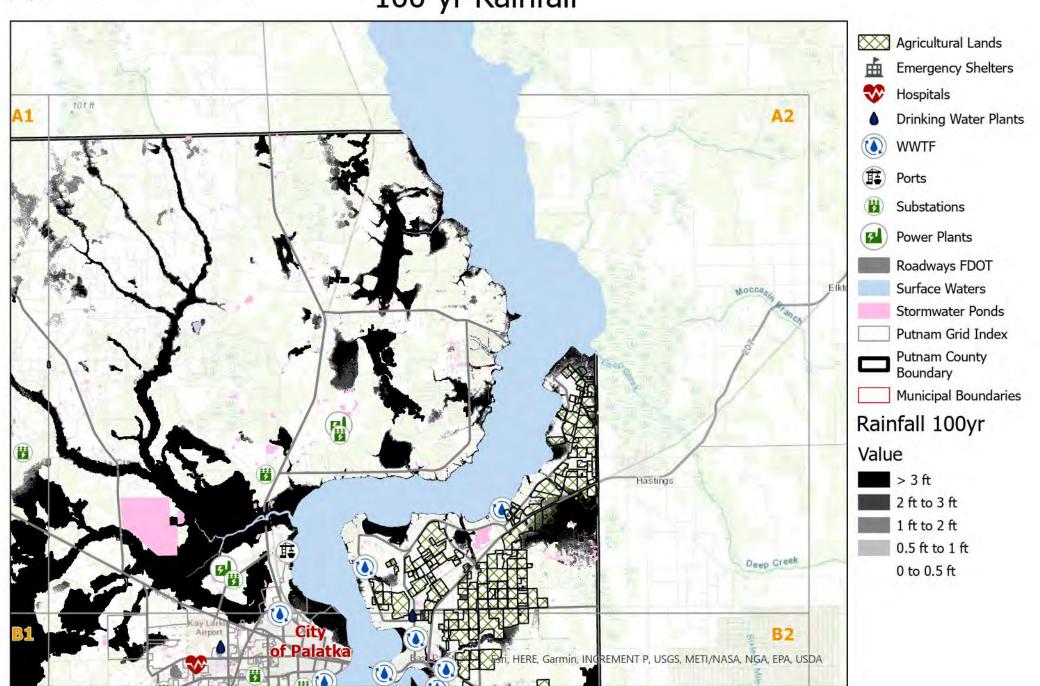
Exposure Analysis: Putnam County, Florida









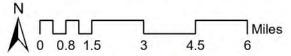


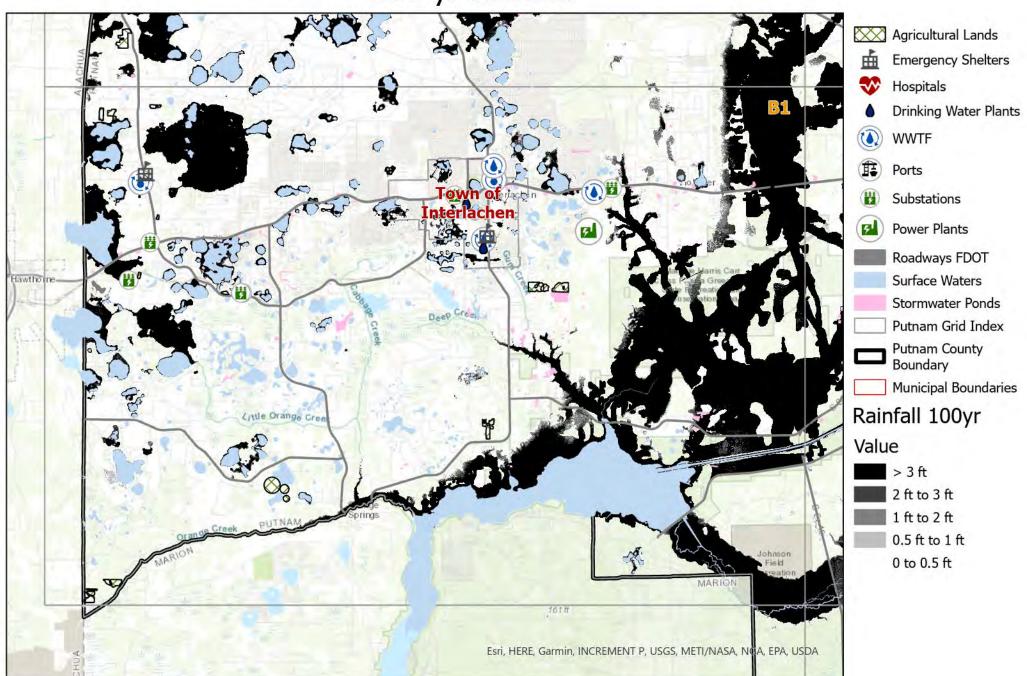
Exposure Analysis: Putnam County, Florida









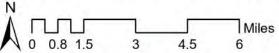


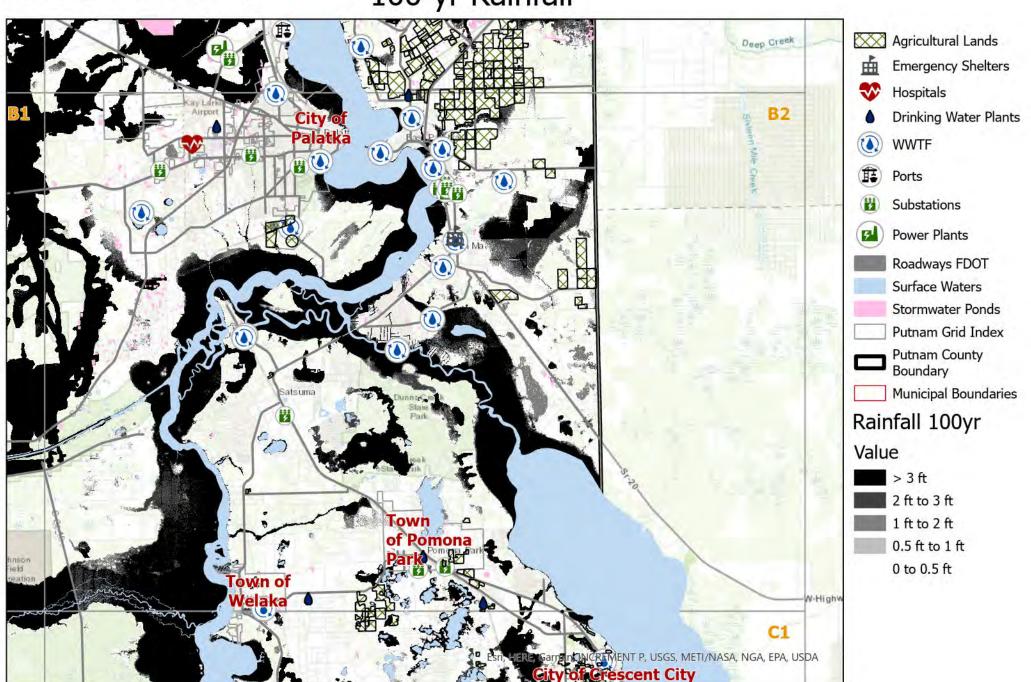
Exposure Analysis: Putnam County, Florida









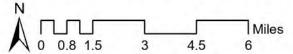


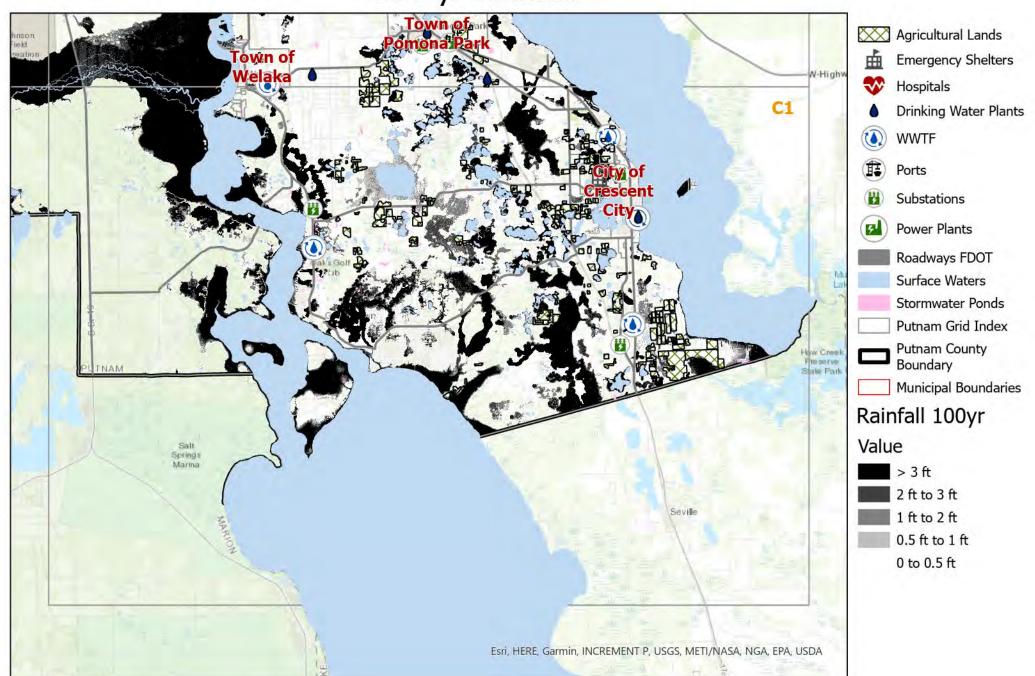
Exposure Analysis: Putnam County, Florida









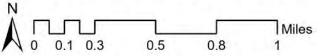


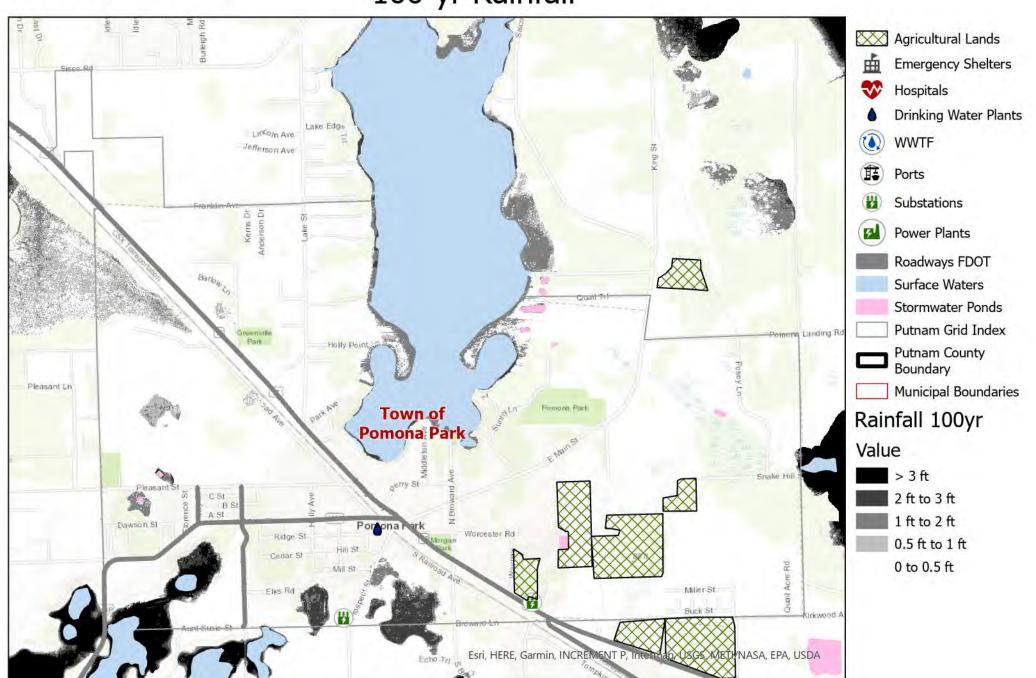
Exposure Analysis: Putnam County, Florida









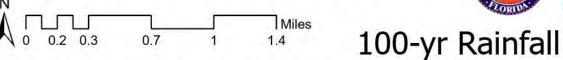


Exposure Analysis: Putnam County, Florida









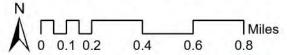


Exposure Analysis: Putnam County, Florida









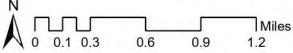


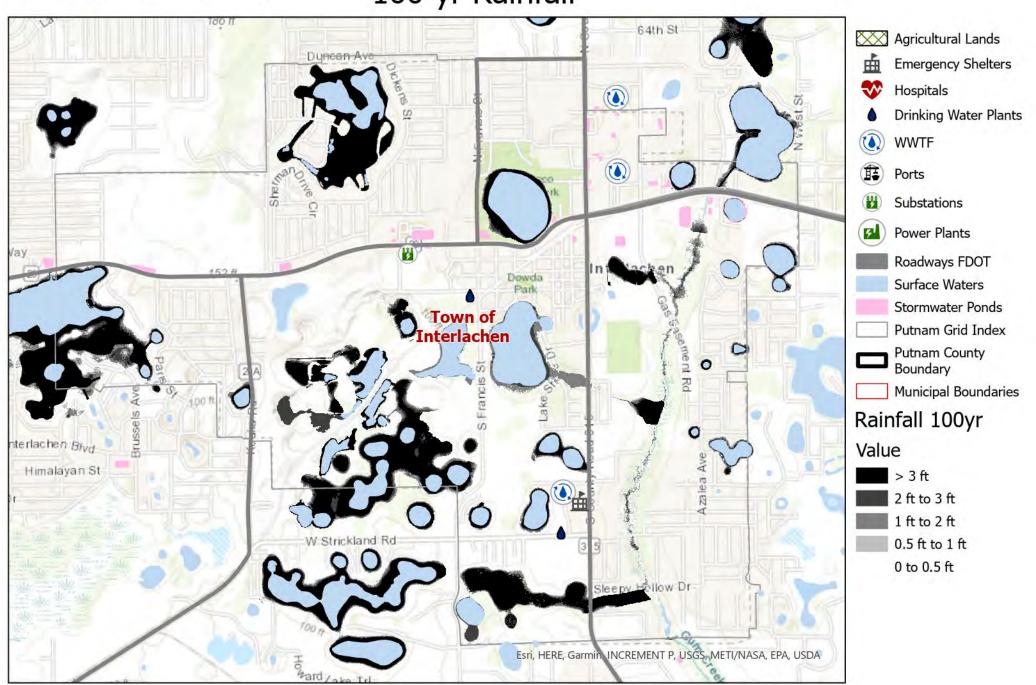
Exposure Analysis: Putnam County, Florida









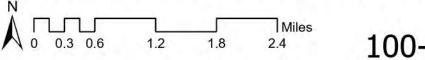


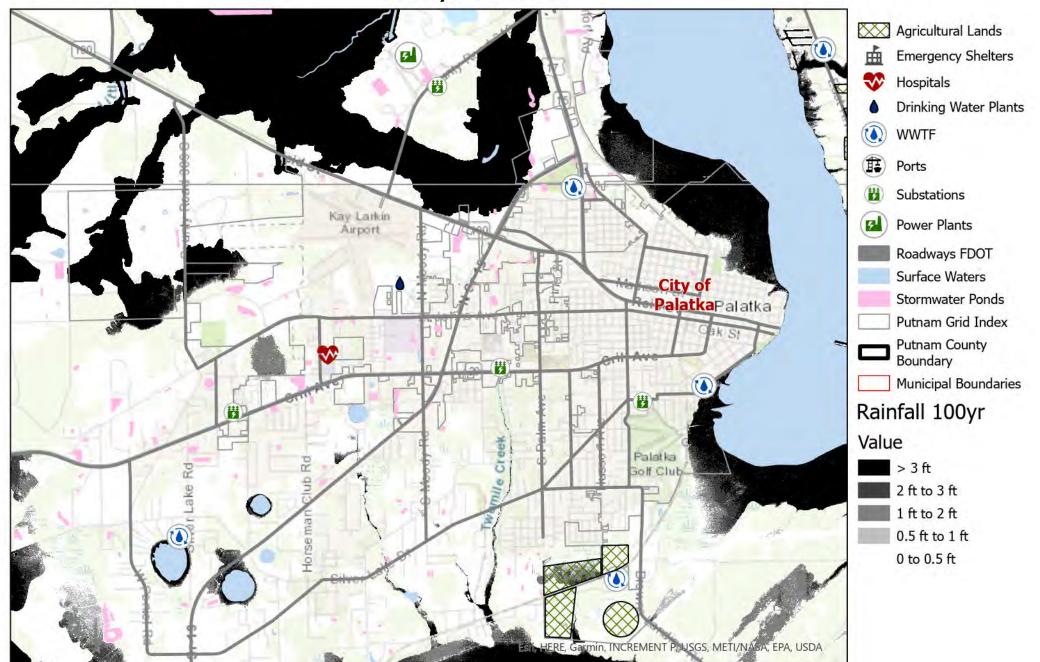
Exposure Analysis: Putnam County, Florida











# 2070: 100-yr Rainfall Map Series

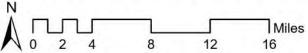
- Full County view (1 map)
- Gridded extent areas to cover County (5 maps)
- City extent views at 5 municipality locations (5 maps)

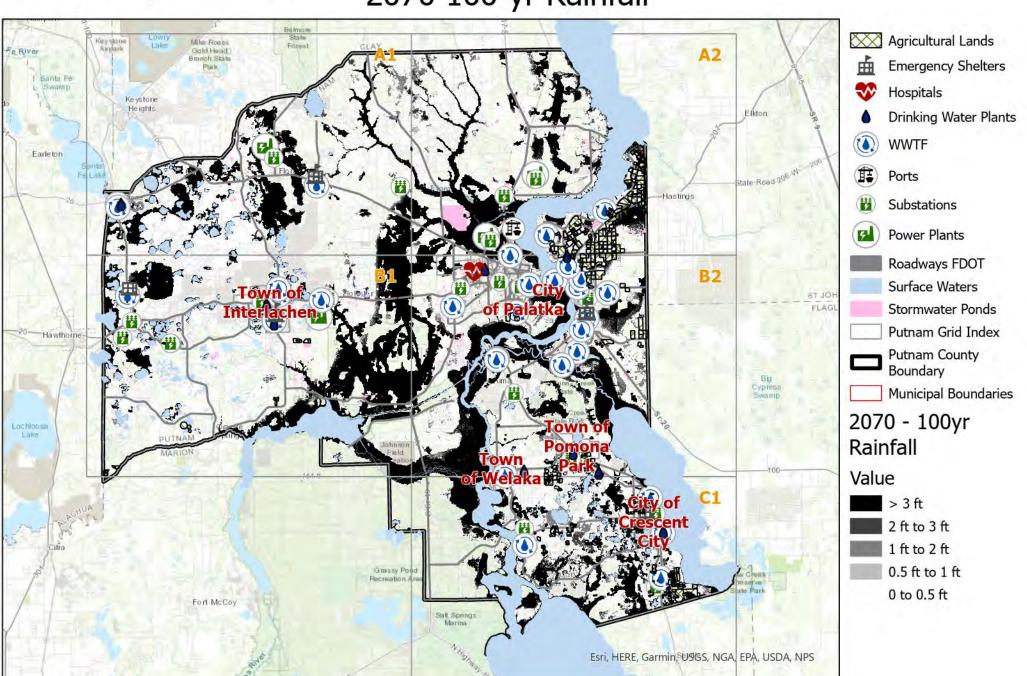
Exposure Analysis: Putnam County, Florida









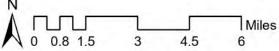


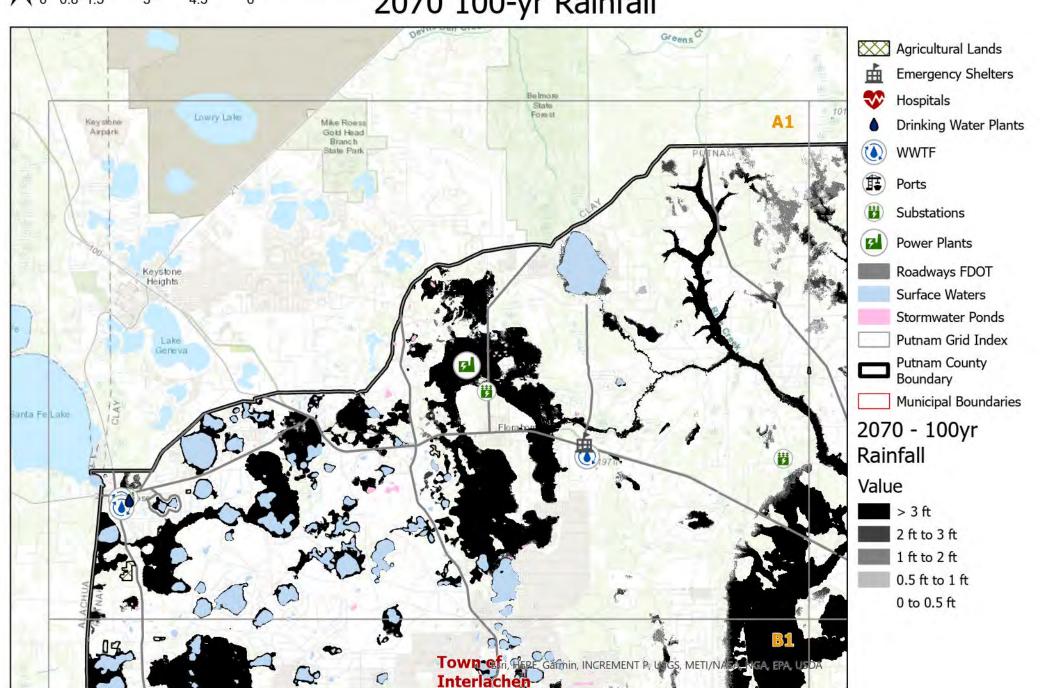
Exposure Analysis: Putnam County, Florida









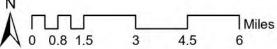


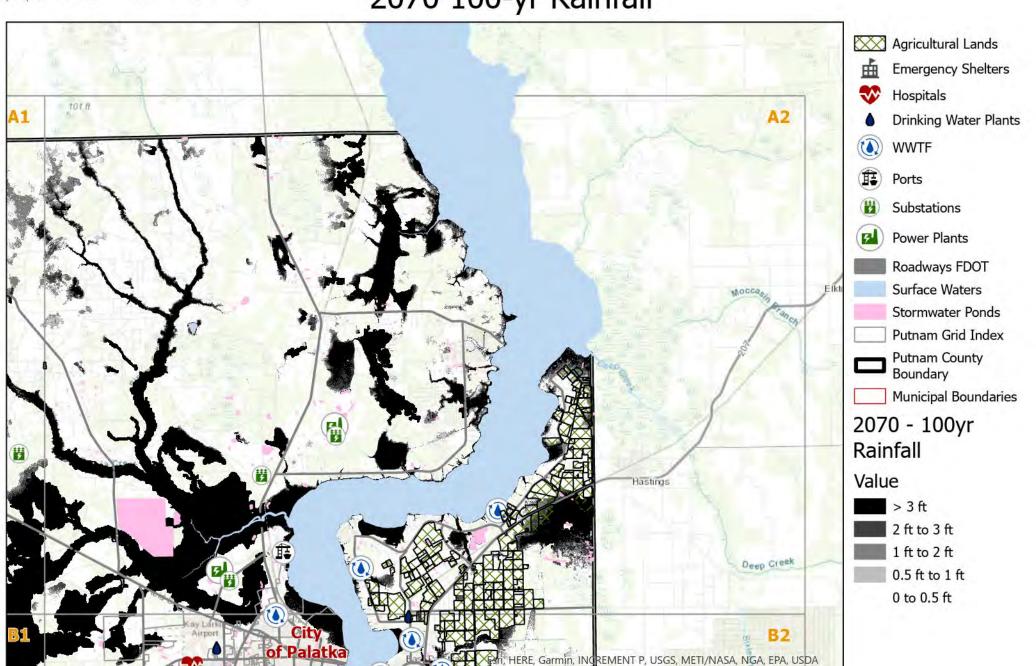
Exposure Analysis: Putnam County, Florida









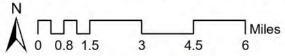


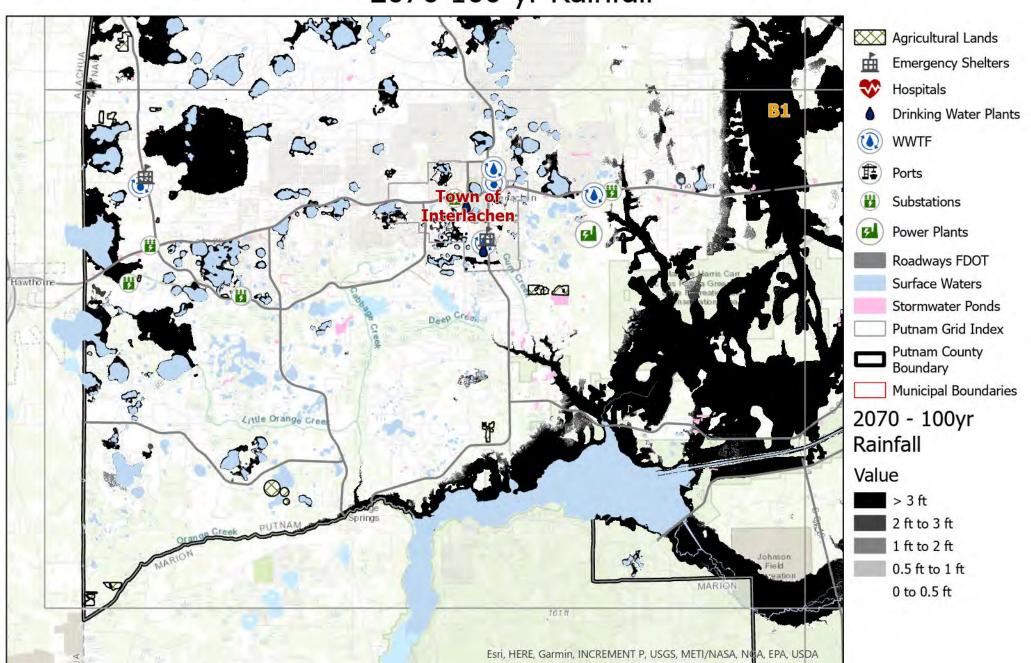
Exposure Analysis: Putnam County, Florida











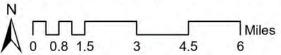
Exposure Analysis: Putnam County, Florida

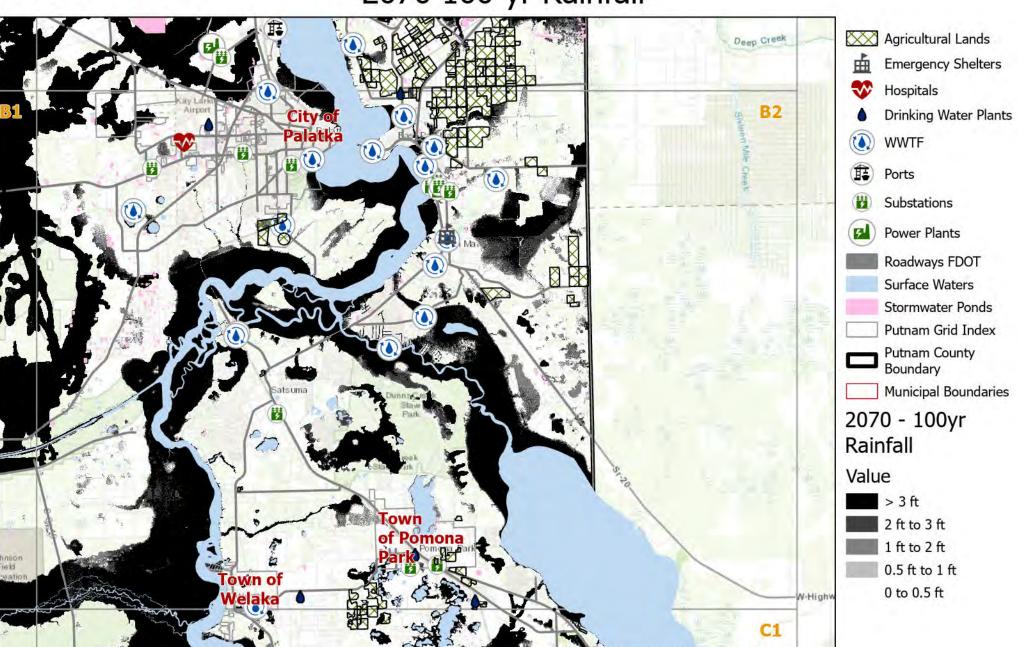




USGS, METI/NASA, NGA, EPA, USDA





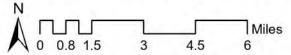


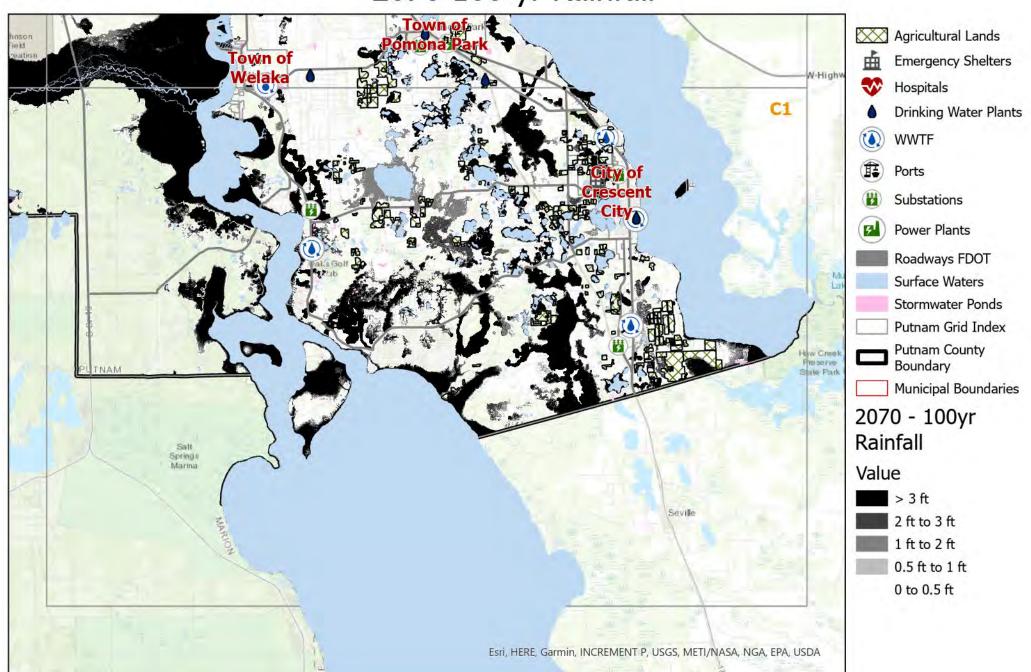
Exposure Analysis: Putnam County, Florida









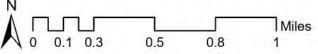


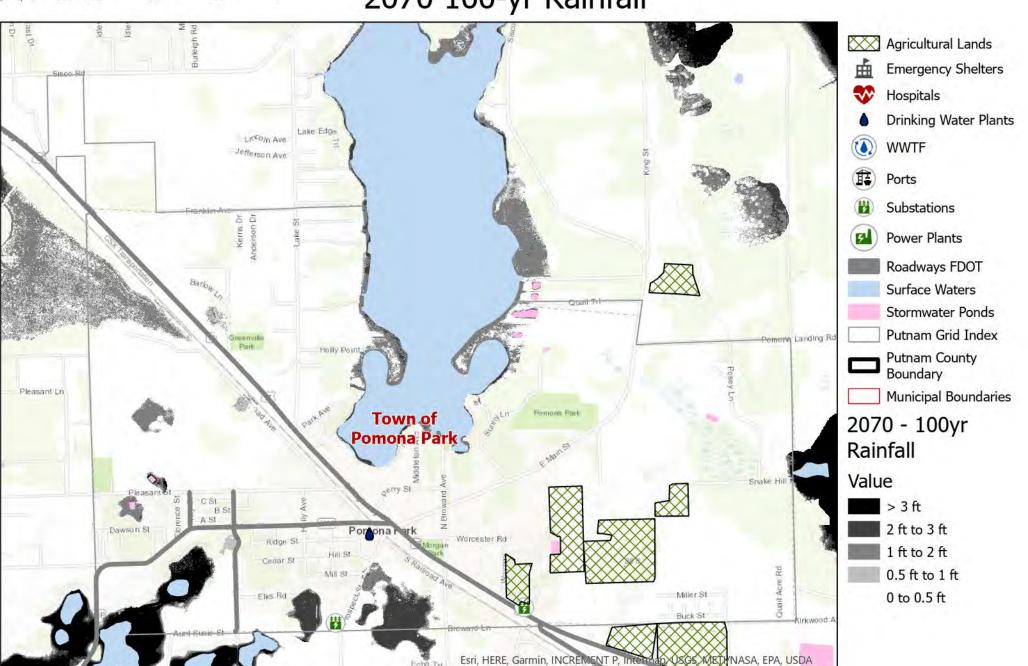
Exposure Analysis: Putnam County, Florida









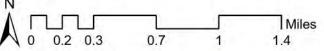


Exposure Analysis: Putnam County, Florida









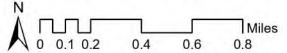


Exposure Analysis: Putnam County, Florida









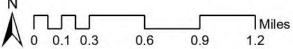


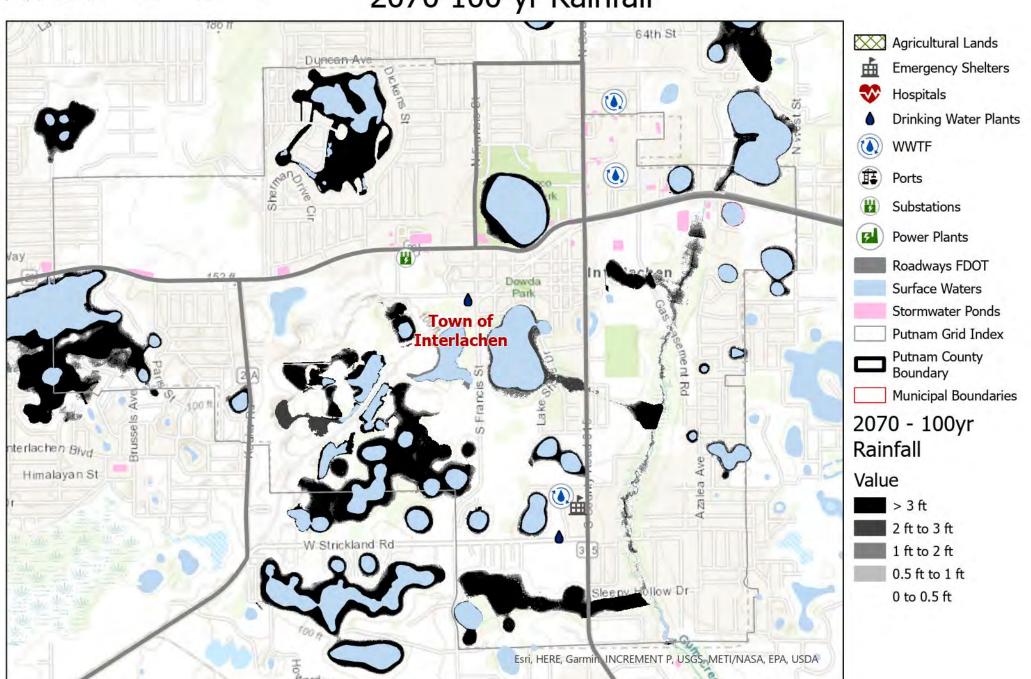
Exposure Analysis: Putnam County, Florida









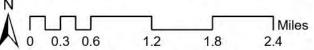


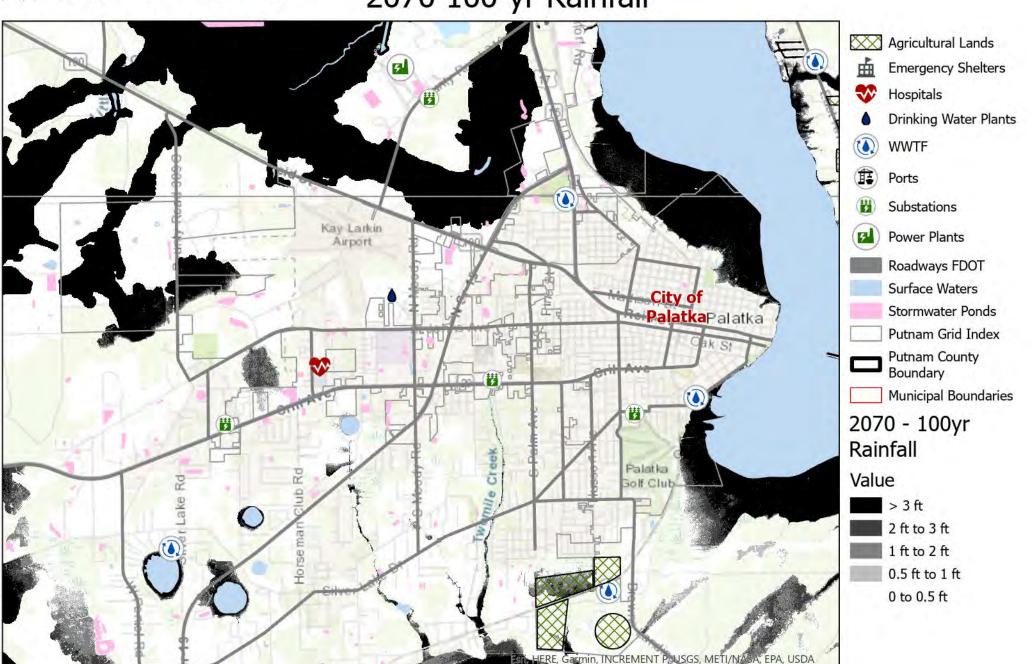
Exposure Analysis: Putnam County, Florida











# 500-yr Rainfall Map Series

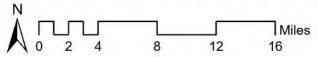
- Full County view (1 map)
- Gridded extent areas to cover County (5 maps)
- City extent views at 5 municipality locations (5 maps)

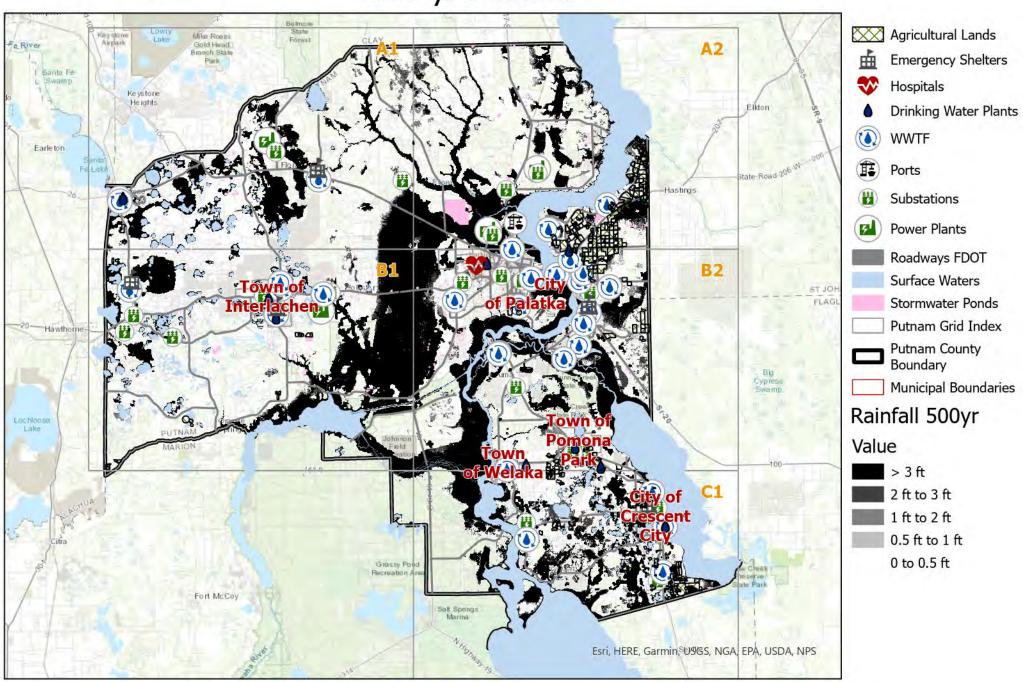
Exposure Analysis: Putnam County, Florida









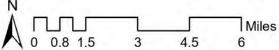


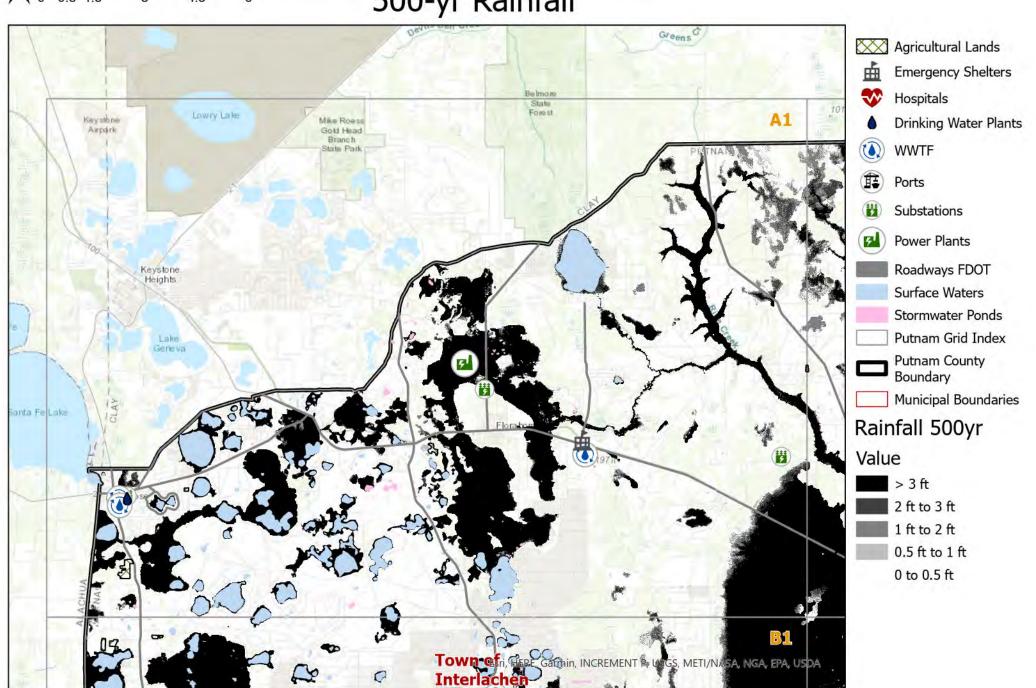
Exposure Analysis: Putnam County, Florida









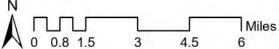


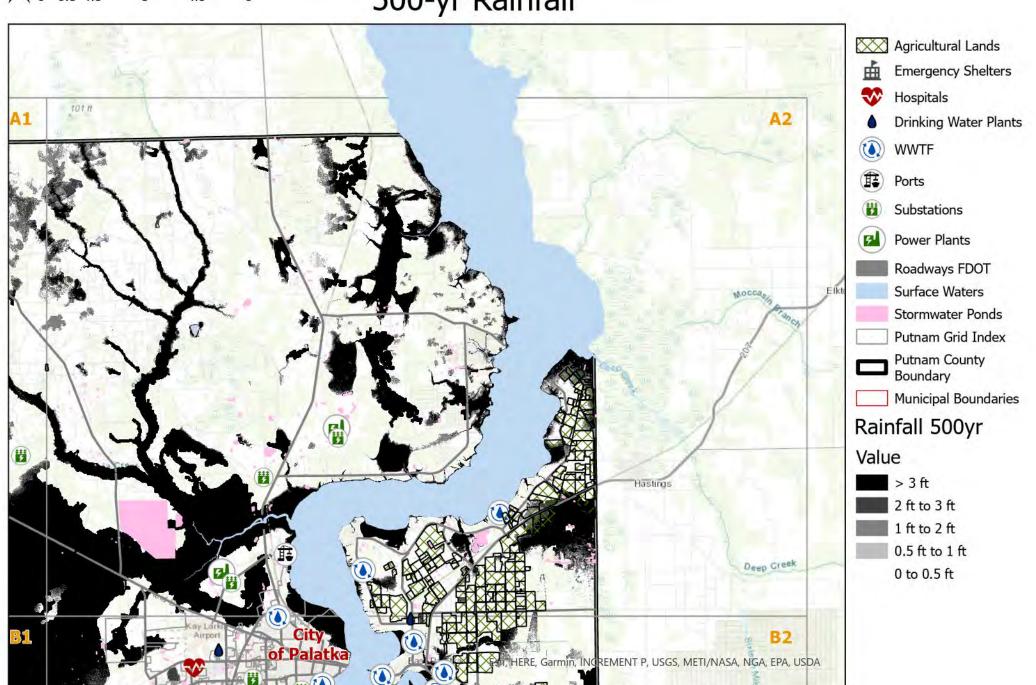
Exposure Analysis: Putnam County, Florida









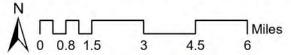


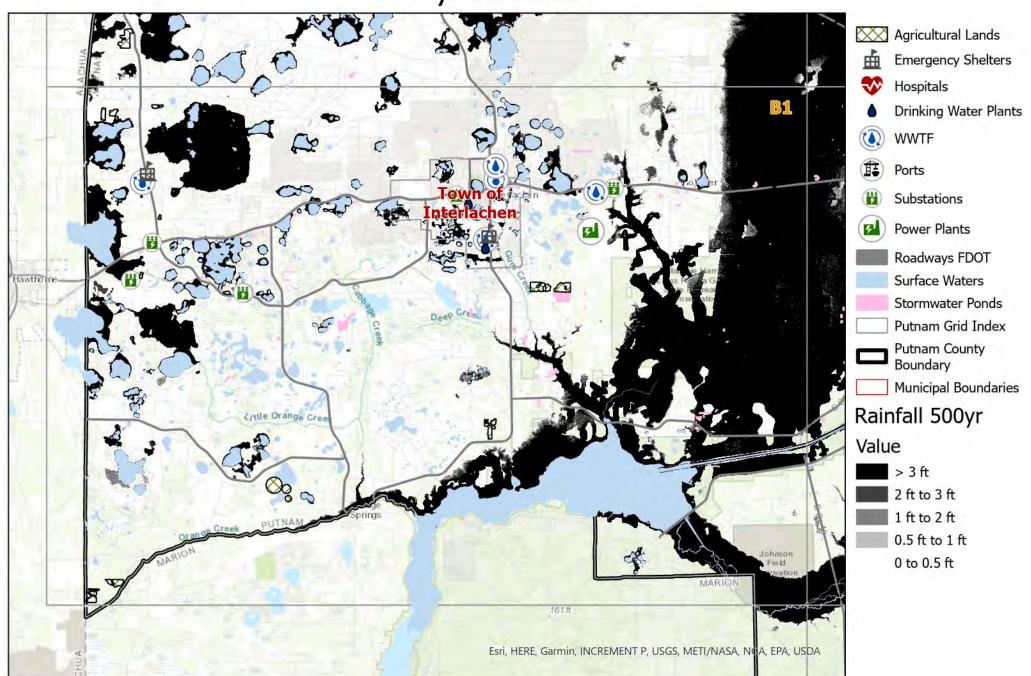
Exposure Analysis: Putnam County, Florida









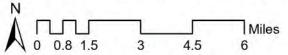


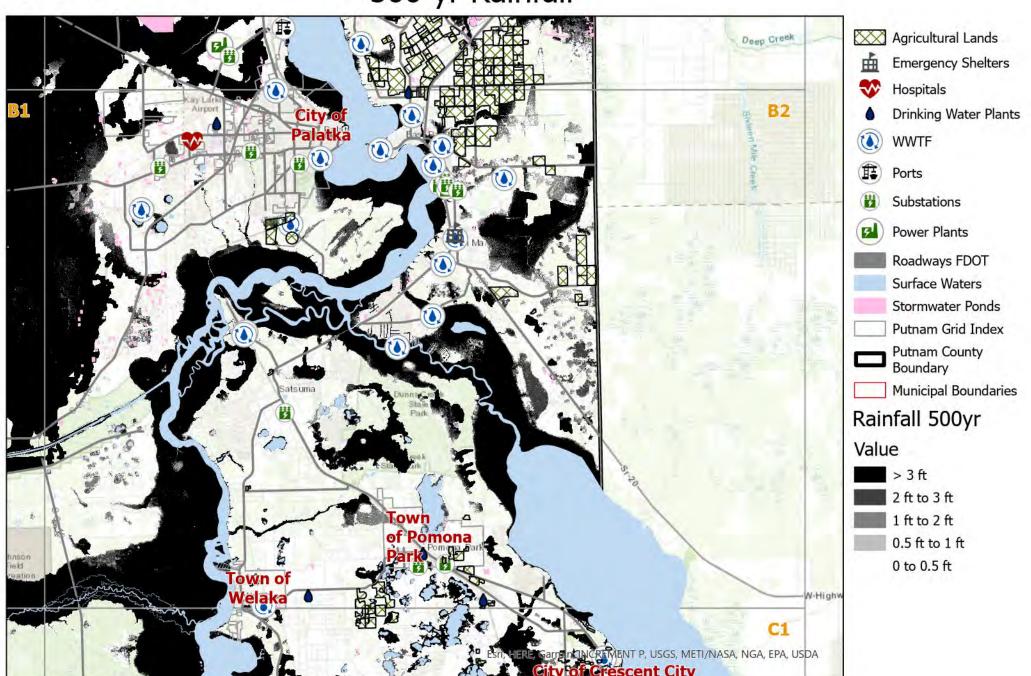
Exposure Analysis: Putnam County, Florida









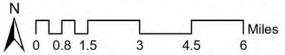


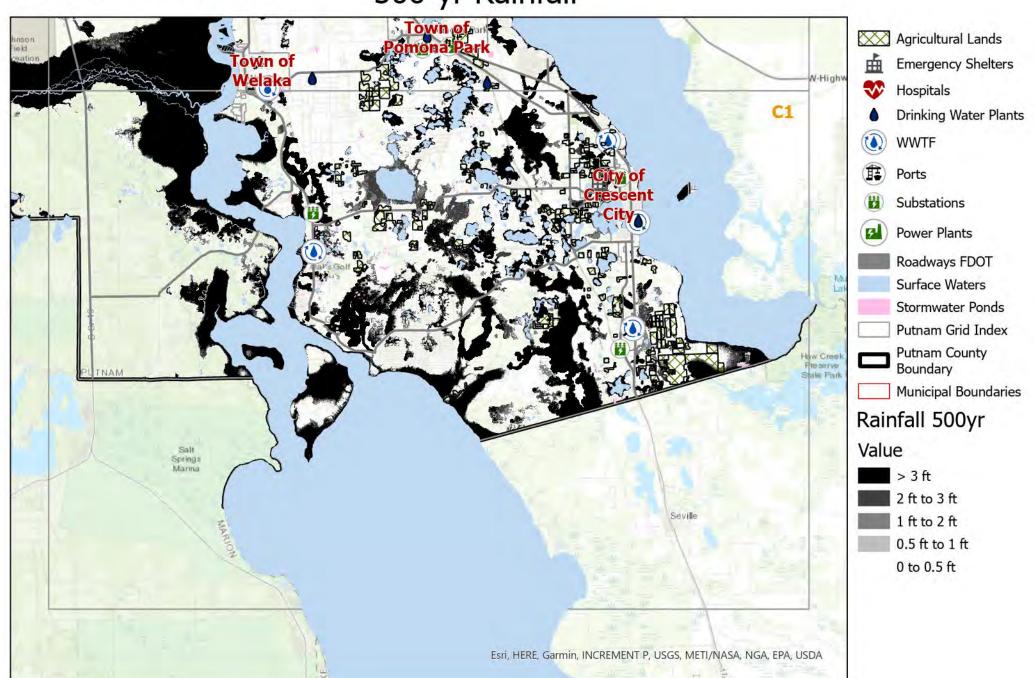
Exposure Analysis: Putnam County, Florida









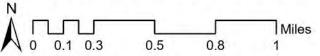


Exposure Analysis: Putnam County, Florida









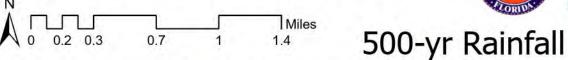


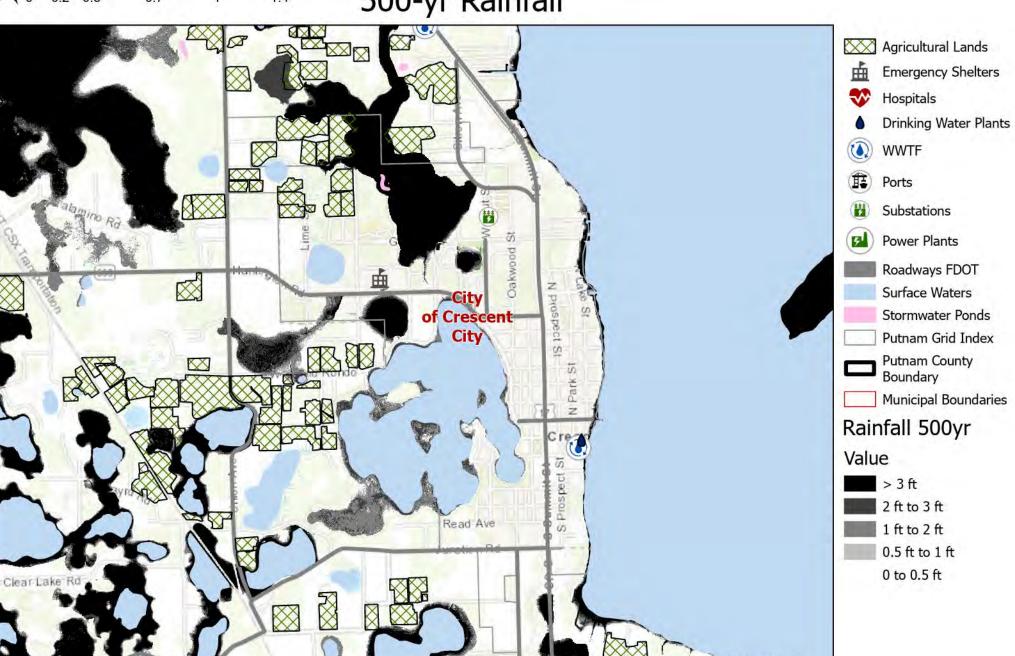
Exposure Analysis: Putnam County, Florida









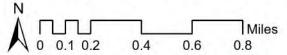


Exposure Analysis: Putnam County, Florida









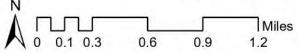


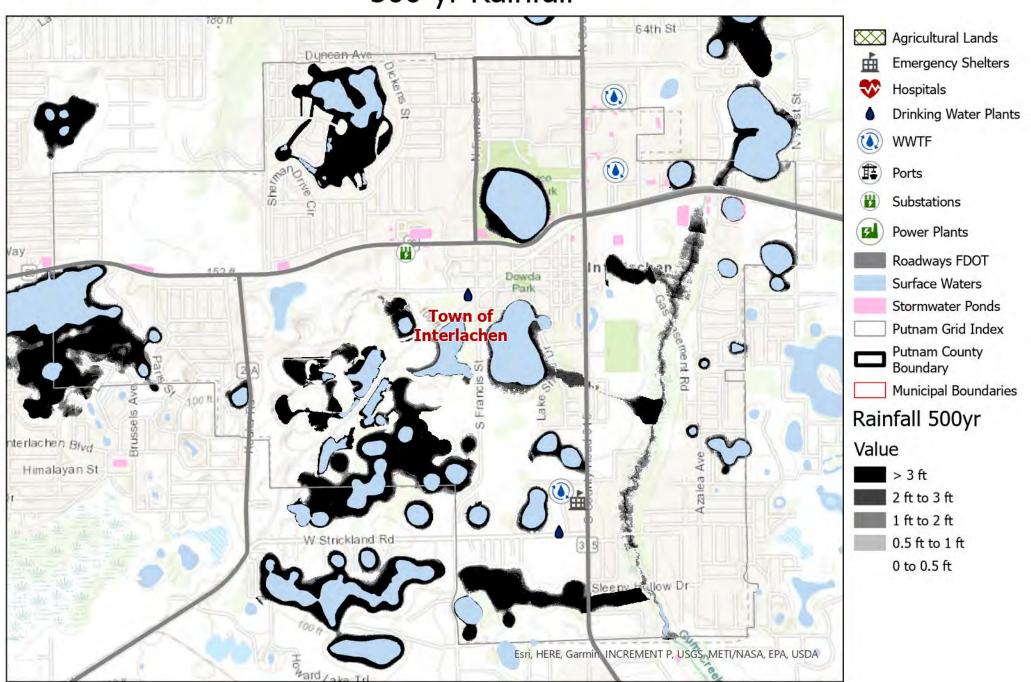
Exposure Analysis: Putnam County, Florida









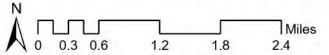


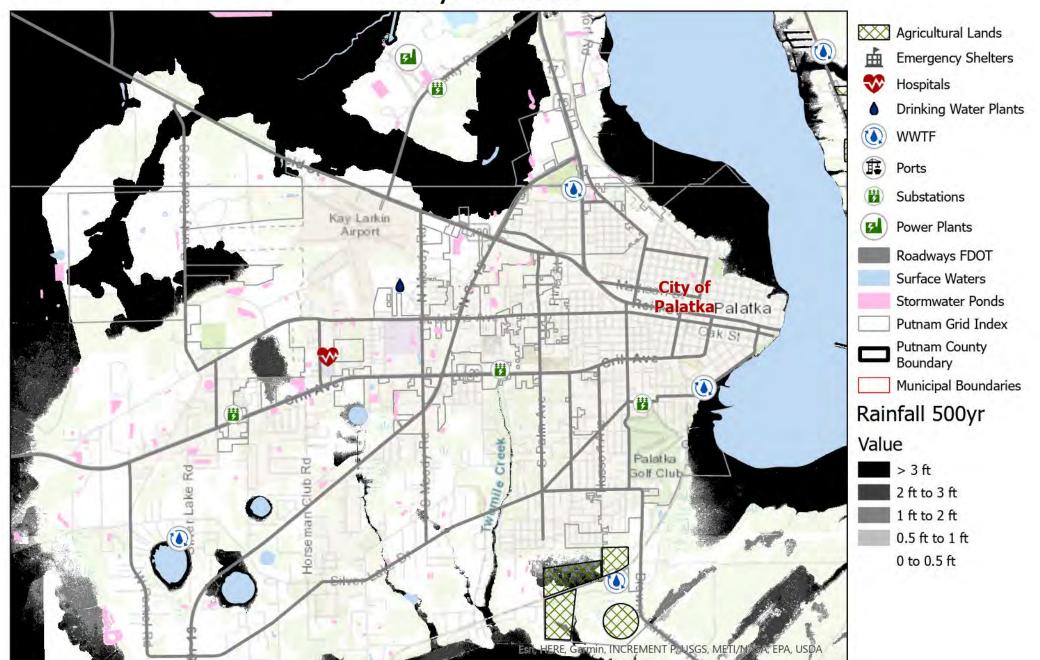
Exposure Analysis: Putnam County, Florida











# 2070: 500-yr Rainfall Map Series

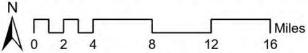
- Full County view (1 map)
- Gridded extent areas to cover County (5 maps)
- City extent views at 5 municipality locations (5 maps)

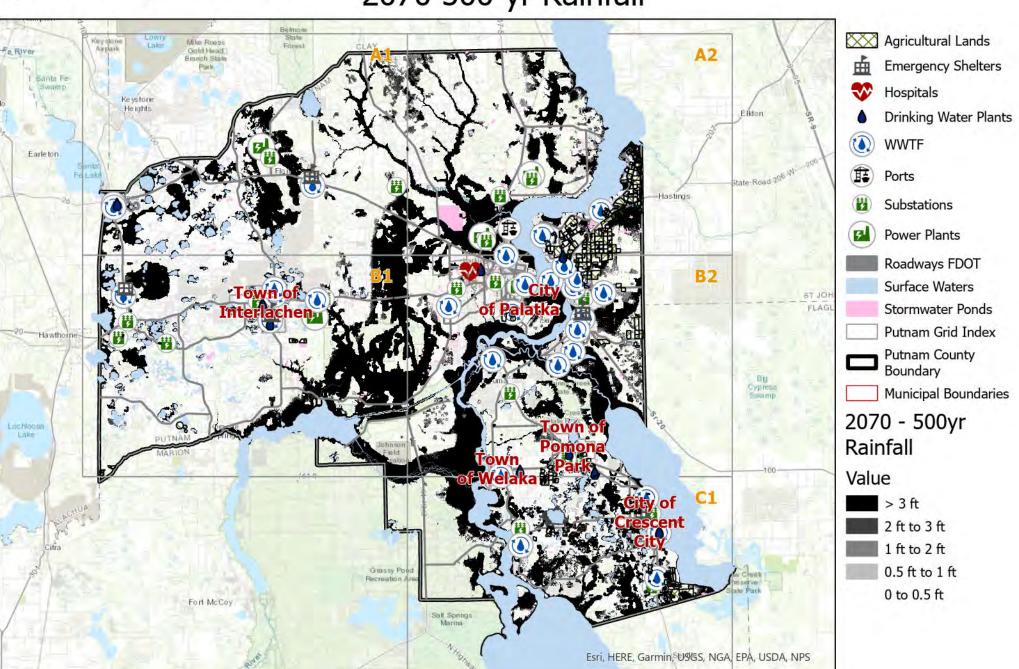
Exposure Analysis: Putnam County, Florida









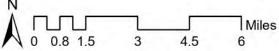


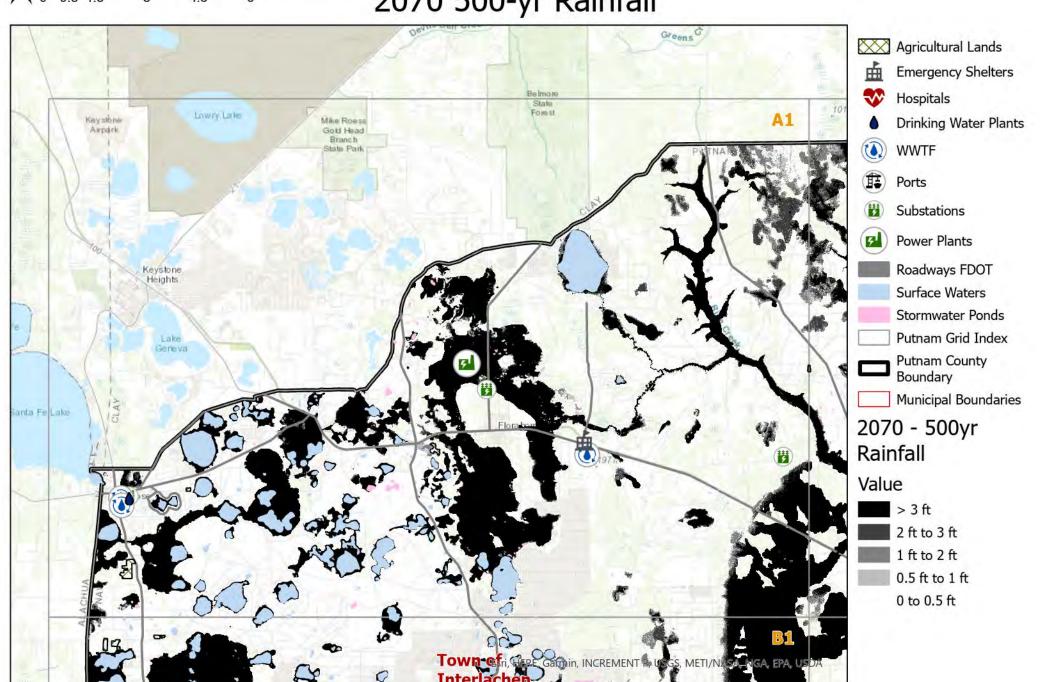
Exposure Analysis: Putnam County, Florida









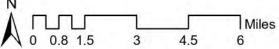


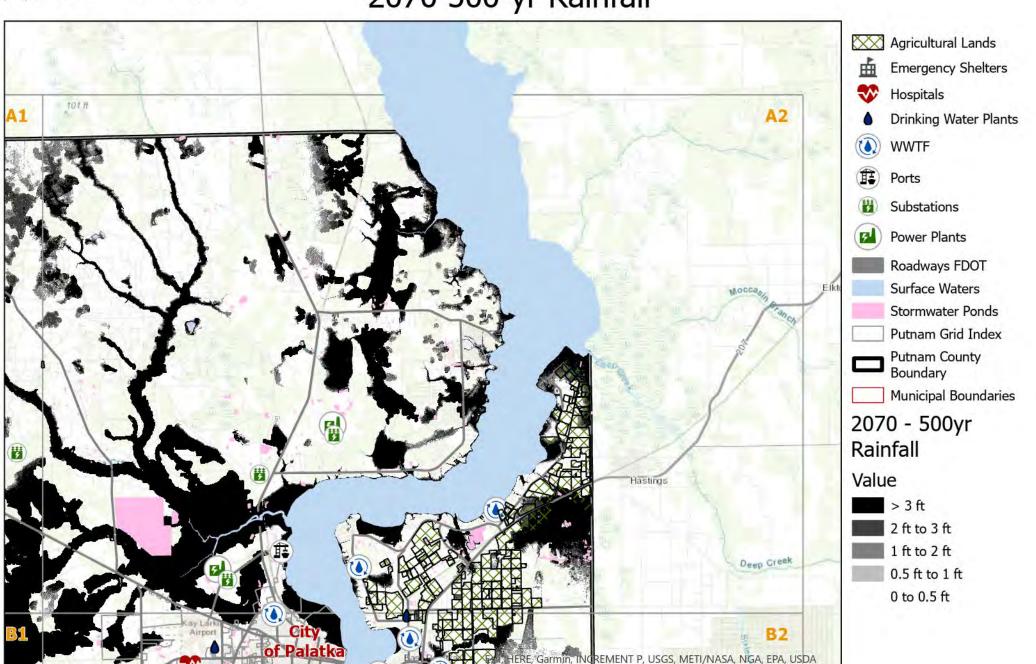
Exposure Analysis: Putnam County, Florida









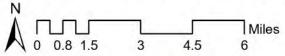


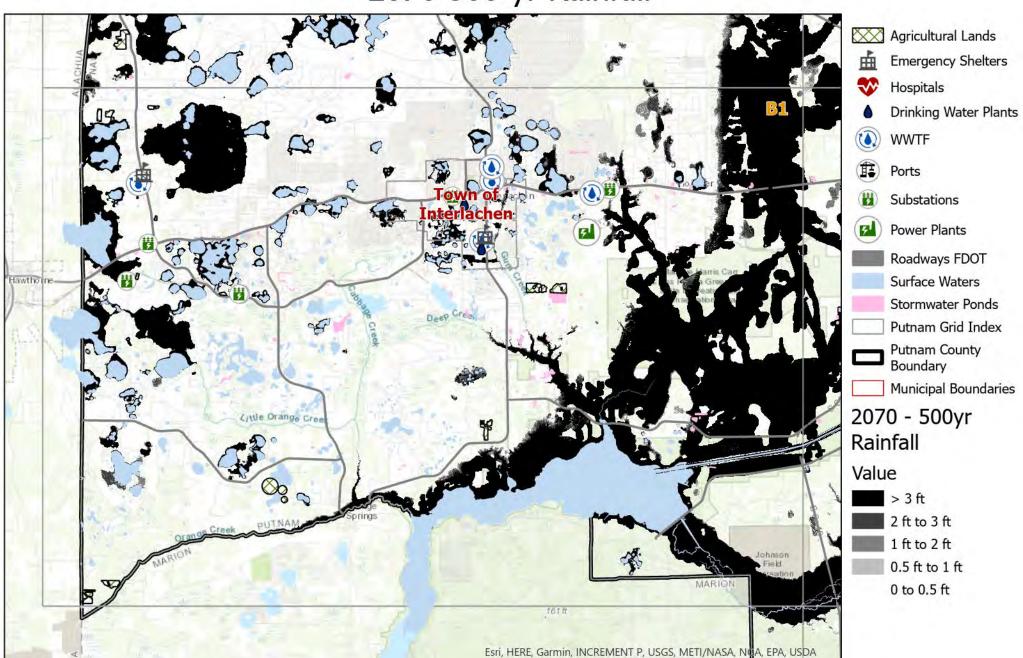
Exposure Analysis: Putnam County, Florida











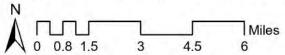
Exposure Analysis: Putnam County, Florida

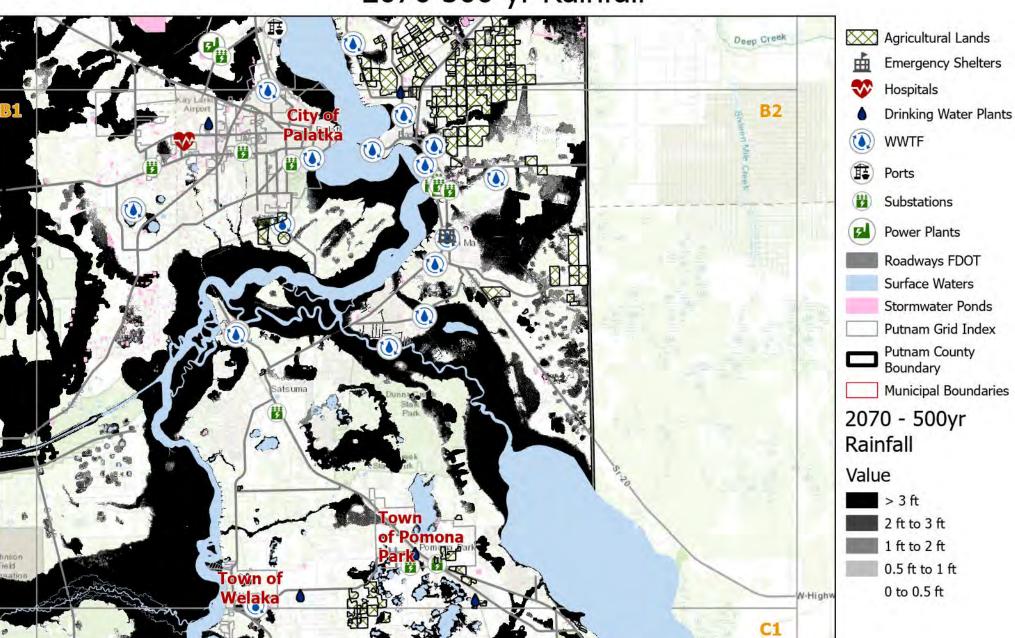




USGS, METI/NASA, NGA, EPA, USDA





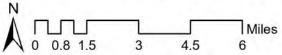


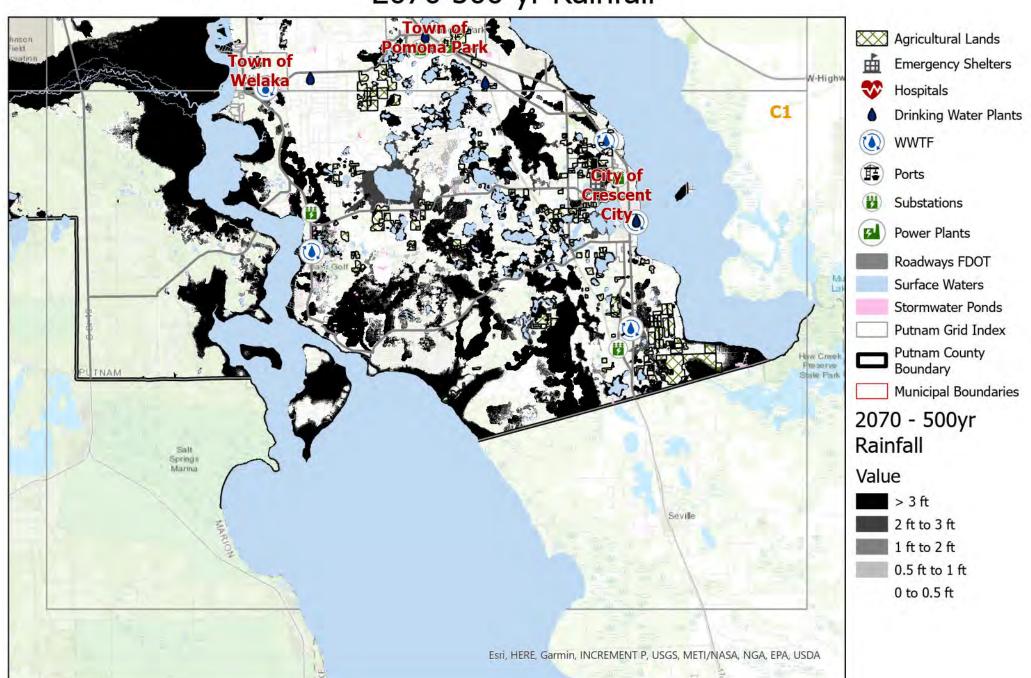
Exposure Analysis: Putnam County, Florida









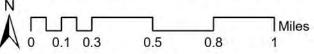


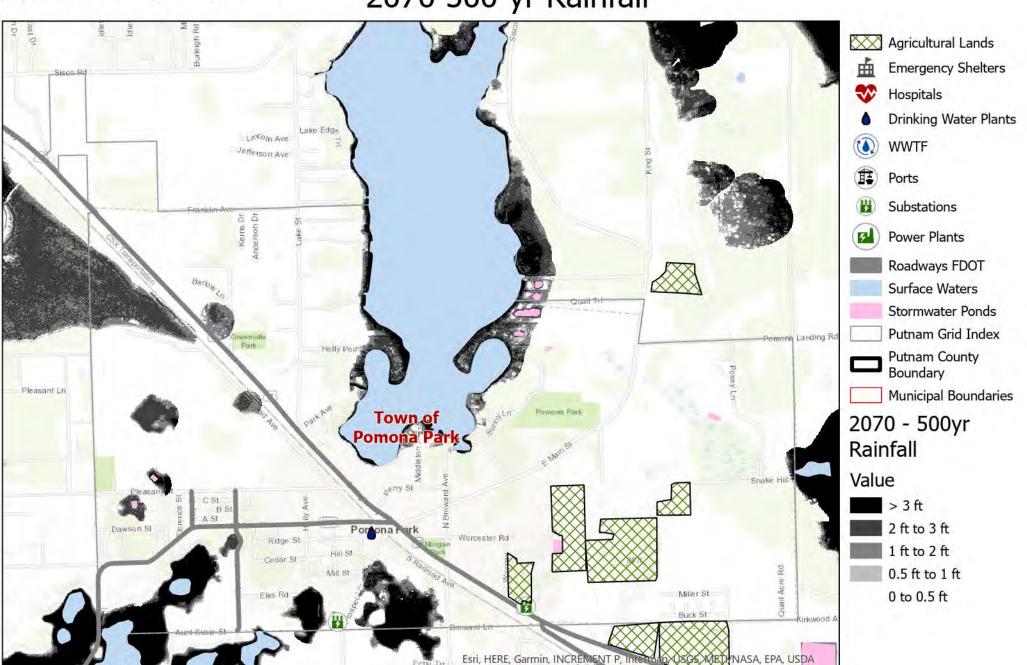
Exposure Analysis: Putnam County, Florida









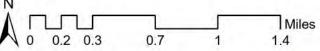


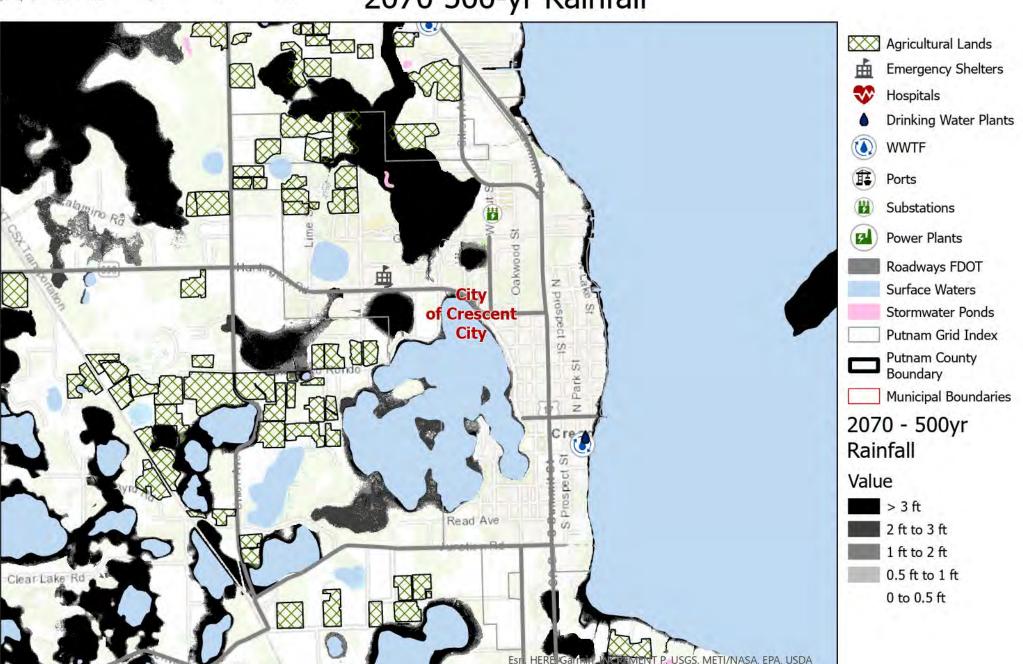
Exposure Analysis: Putnam County, Florida









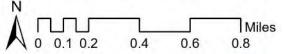


Exposure Analysis: Putnam County, Florida









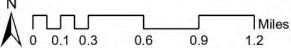


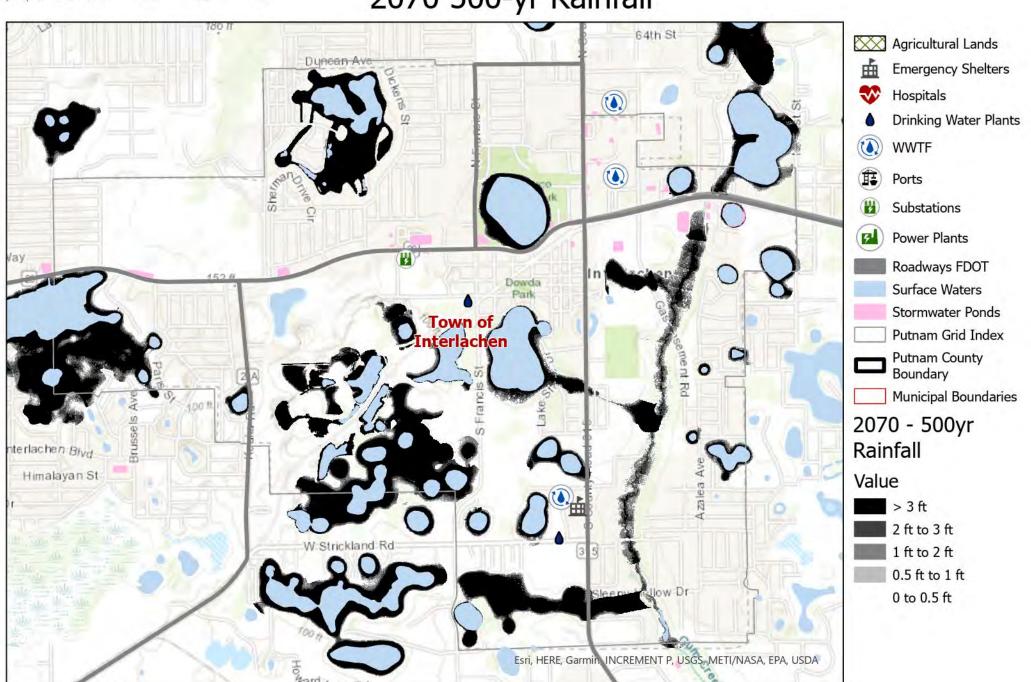
Exposure Analysis: Putnam County, Florida









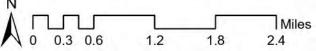


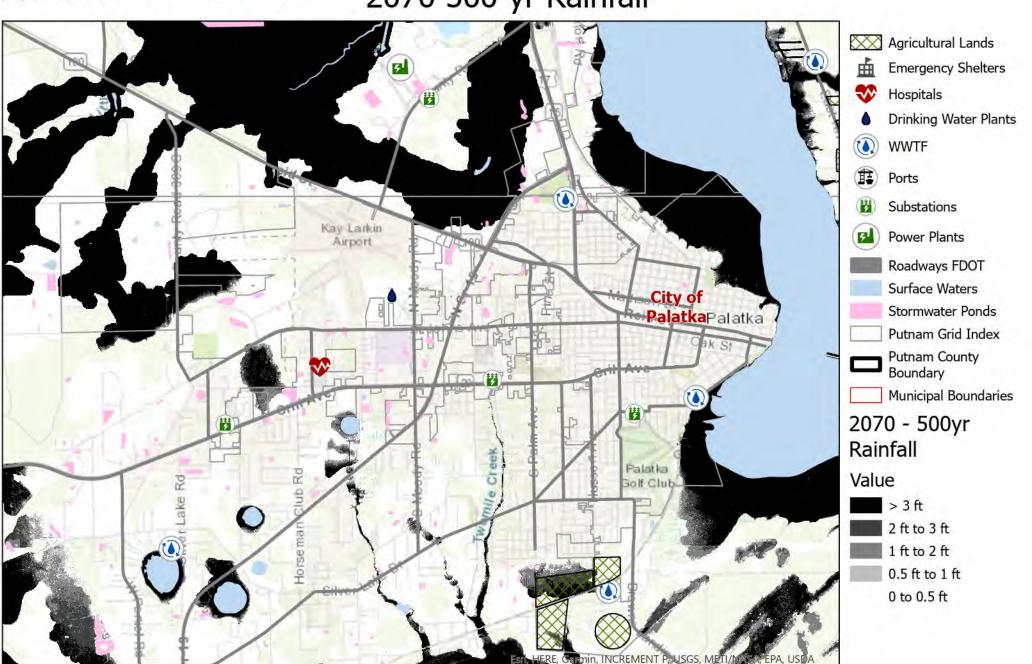
Exposure Analysis: Putnam County, Florida











# High Tide Map Series: Current

(high tide defined as 2' above MHHW – similar to "king tide")

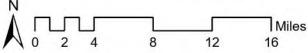
- Full County view (1 map)
- Gridded extent areas to cover County (5 maps)
- City extent views at 5 municipality locations (5 maps)

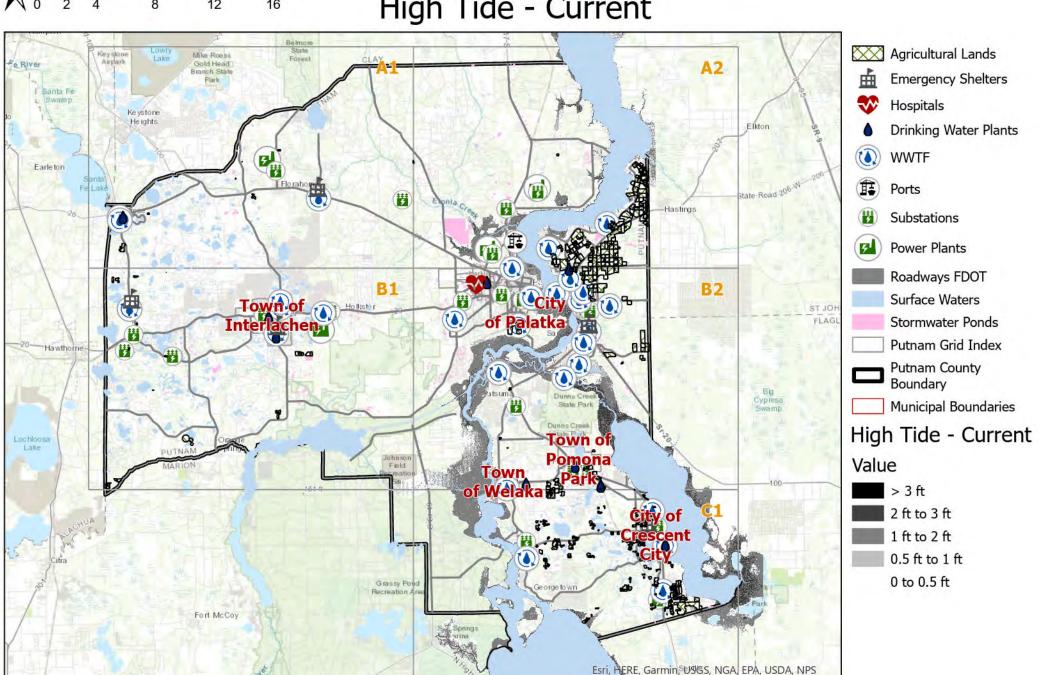
Exposure Analysis: Putnam County, Florida









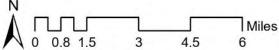


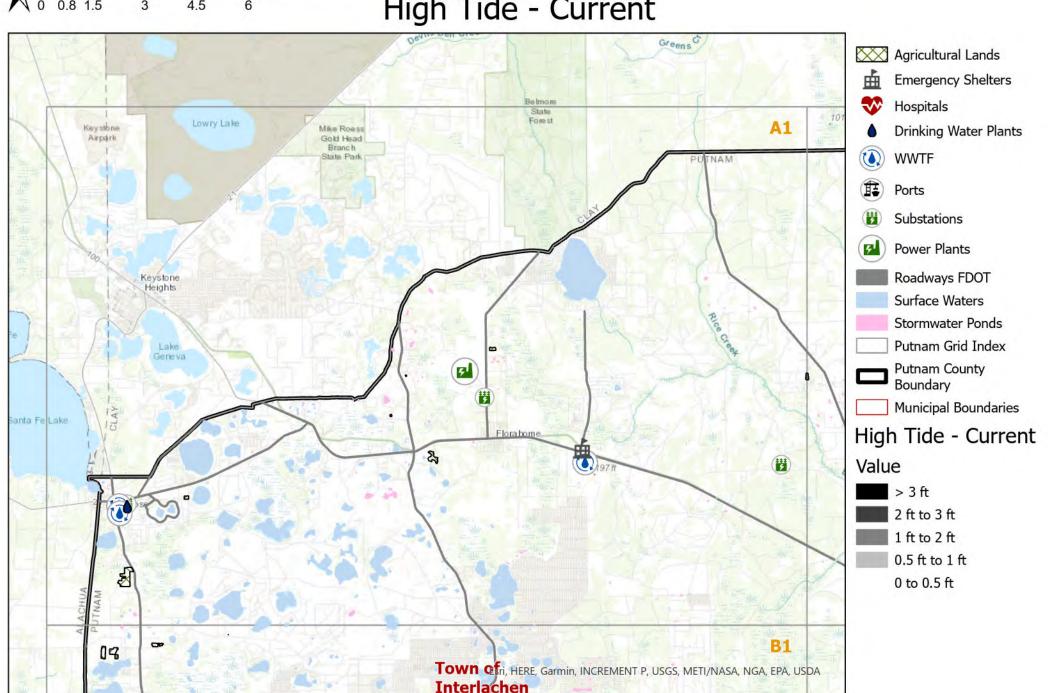
Exposure Analysis: Putnam County, Florida









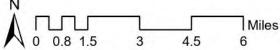


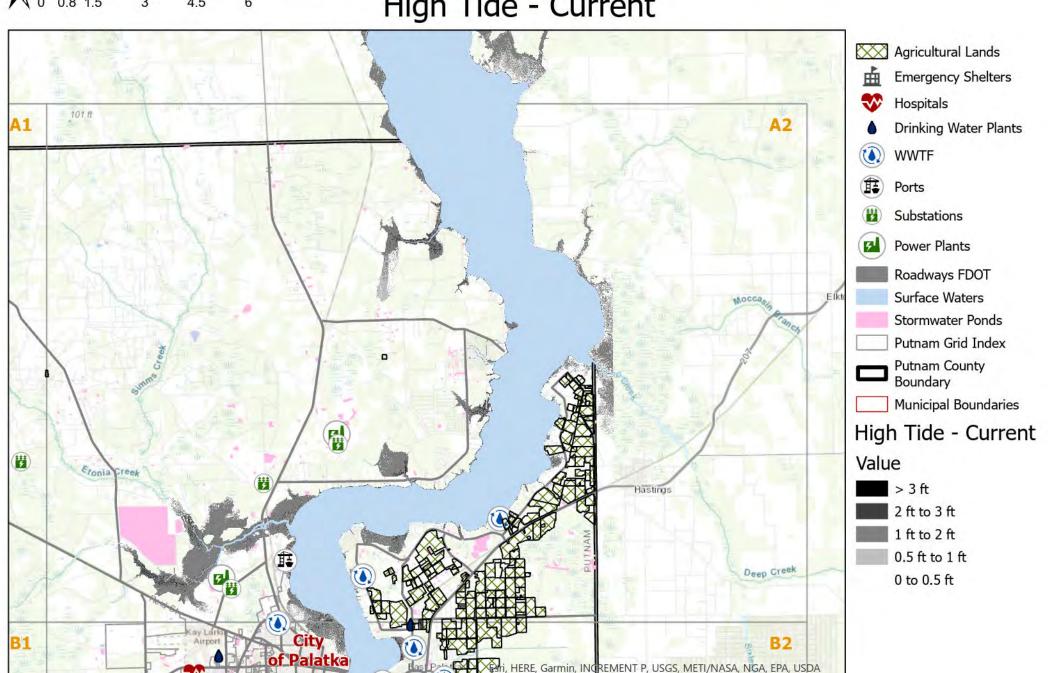
Exposure Analysis: Putnam County, Florida









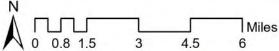


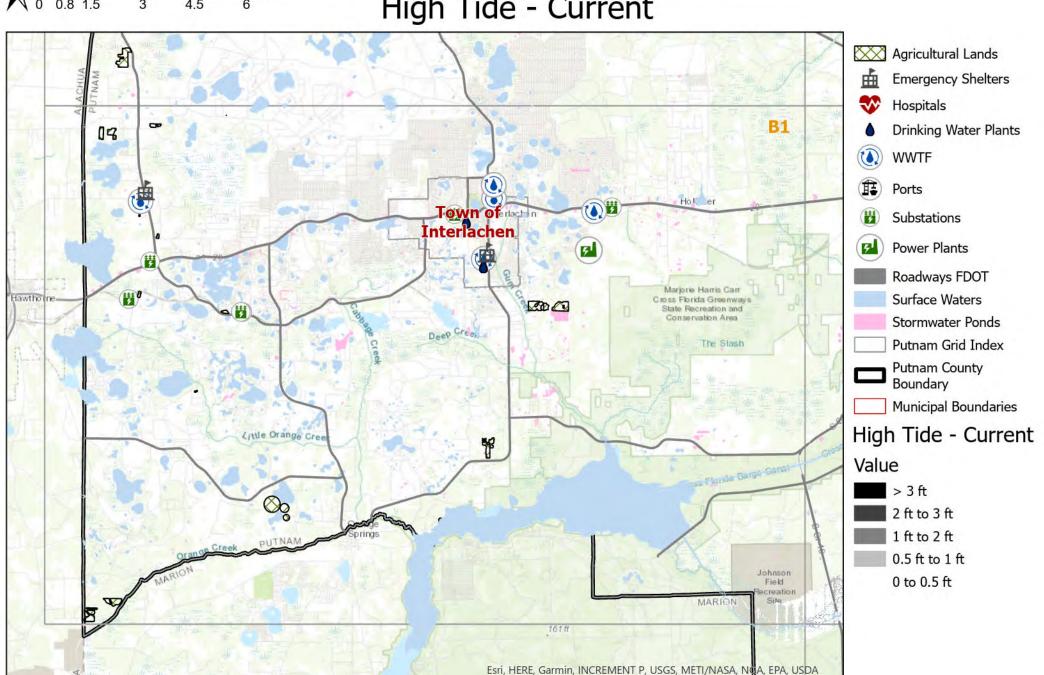
Exposure Analysis: Putnam County, Florida











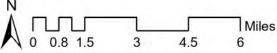
Exposure Analysis: Putnam County, Florida





of Crescent City





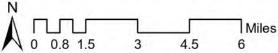


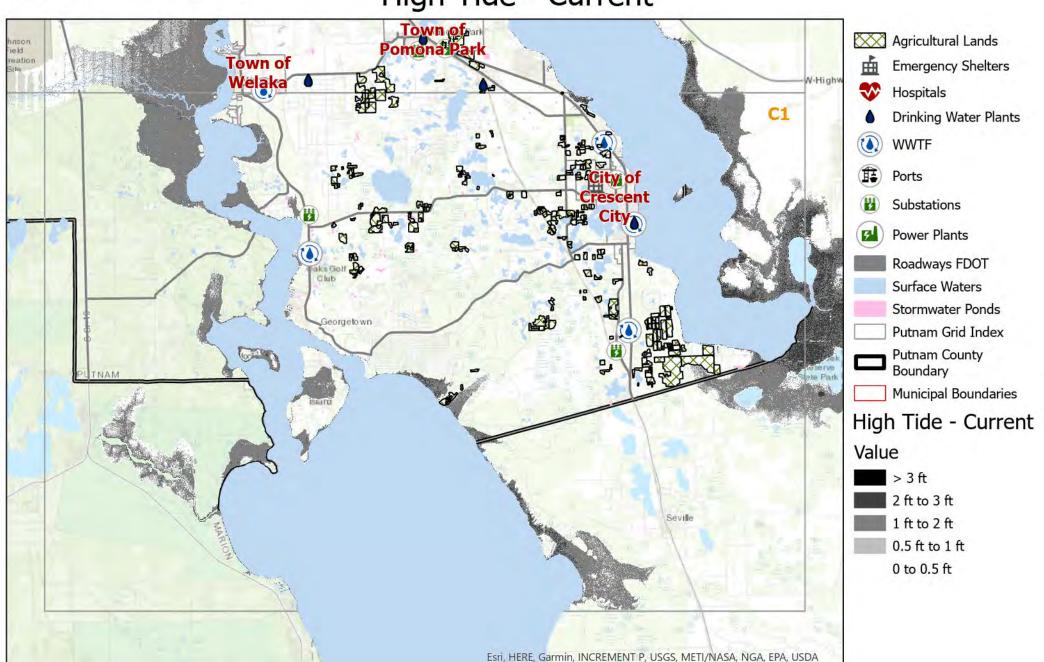
Exposure Analysis: Putnam County, Florida









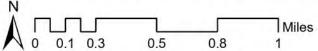


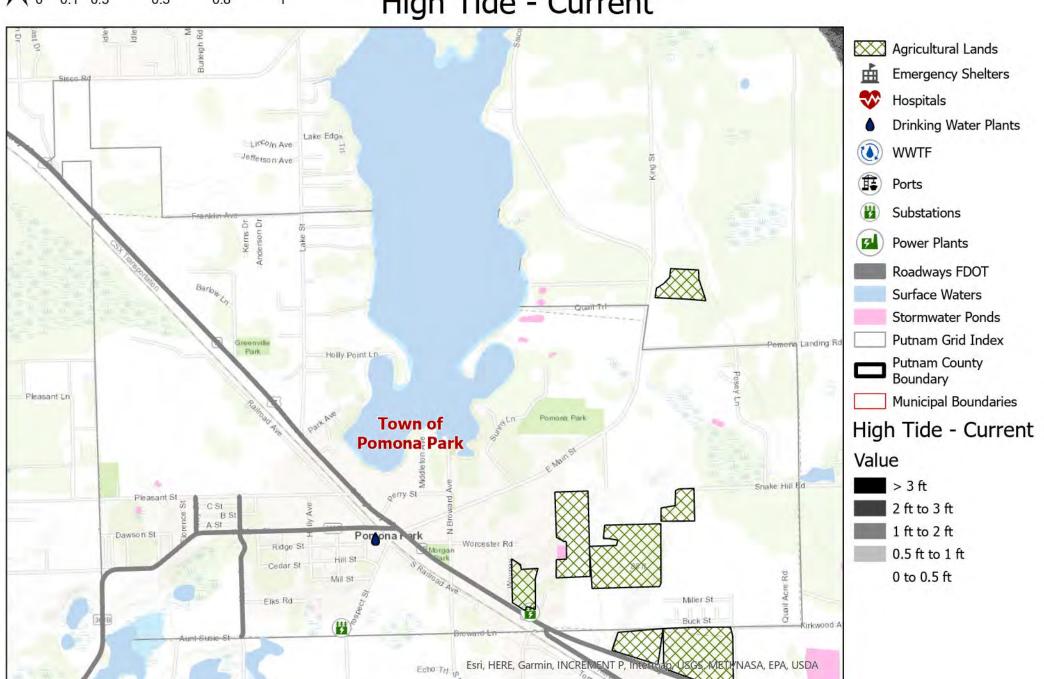
Exposure Analysis: Putnam County, Florida











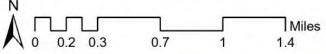
Exposure Analysis: Putnam County, Florida

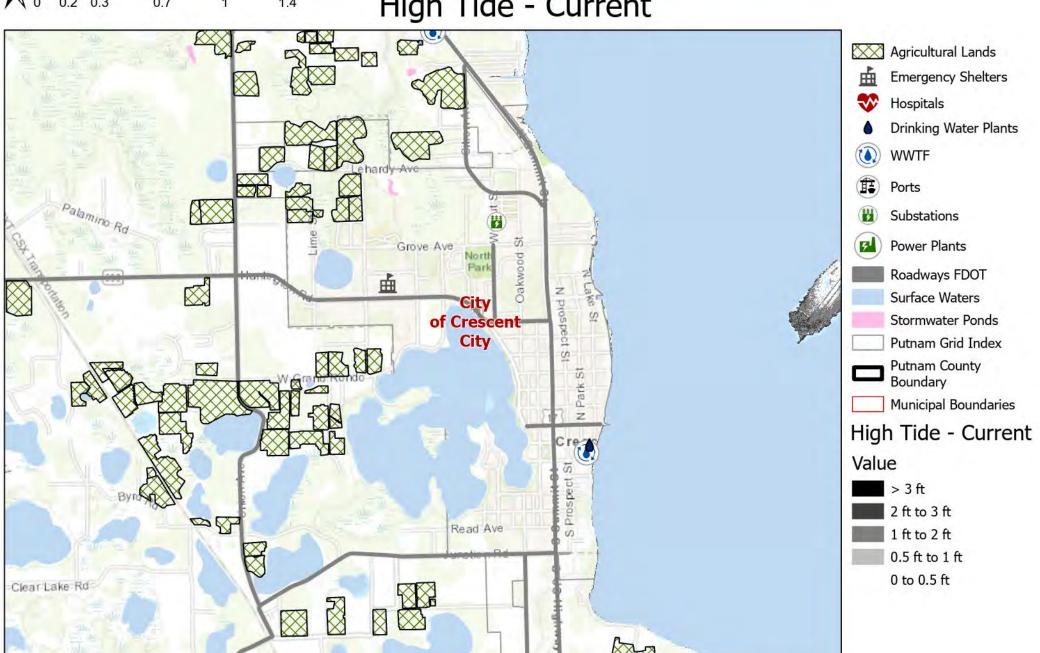




P. USGS, METI/NASA, EPA, USDA







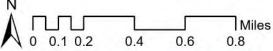
Exposure Analysis: Putnam County, Florida

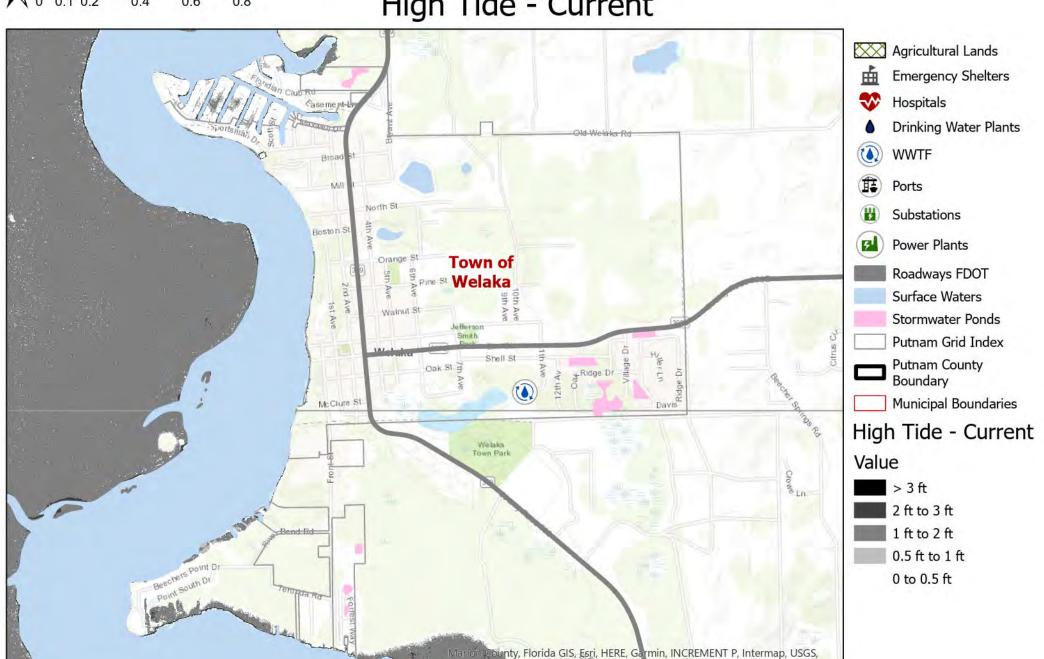






METI/NASA, EPA, USDA



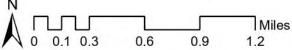


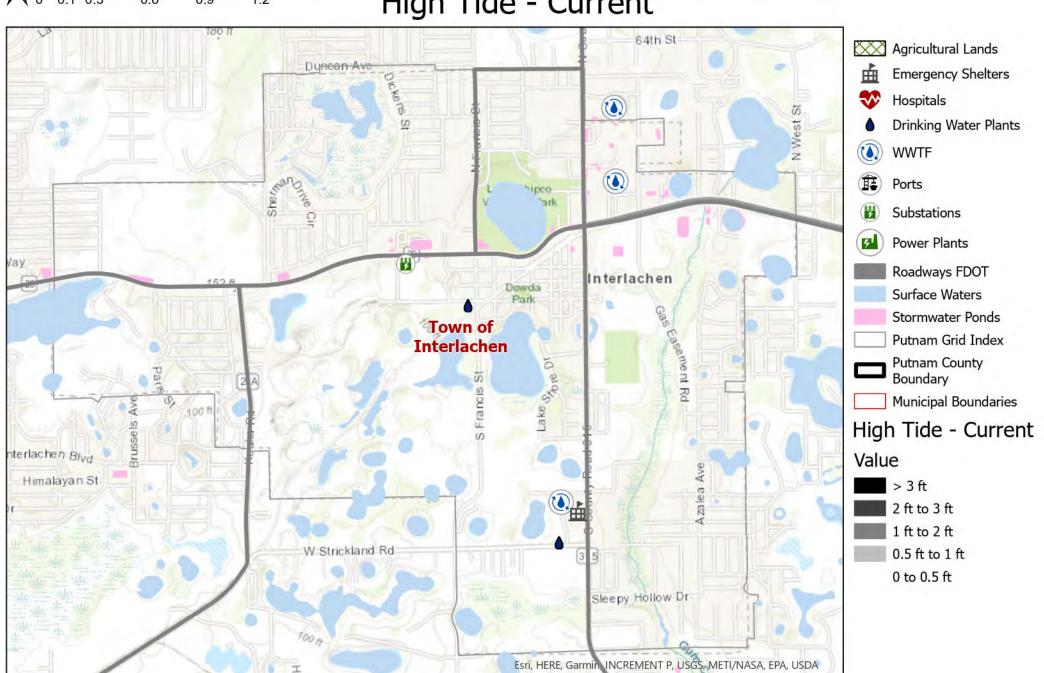
Exposure Analysis: Putnam County, Florida











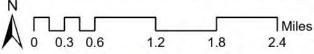
Exposure Analysis: Putnam County, Florida

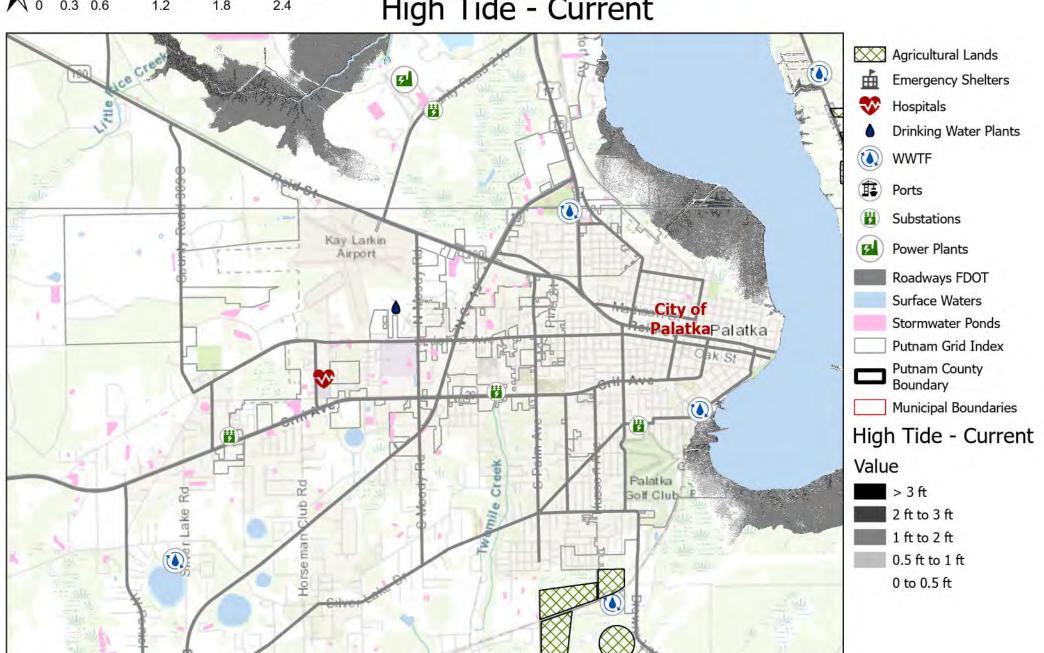




HERE, Garmin, INCREMENT P. USGS, METI/NASA, EPA, USDA







# High Tide Map Series: 2040 Int. Low

(high tide defined as 2' above MHHW – similar to "king tide")

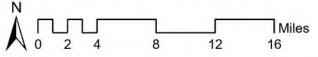
- Full County view (1 map)
- Gridded extent areas to cover County (5 maps)
- City extent views at 5 municipality locations (5 maps)

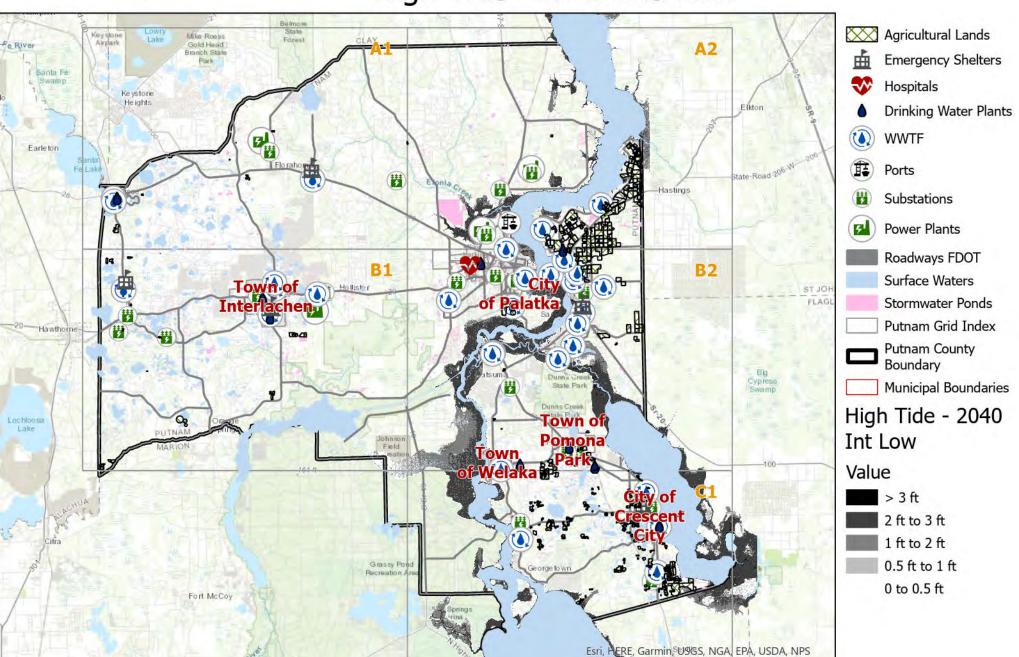
Exposure Analysis: Putnam County, Florida









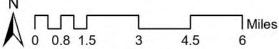


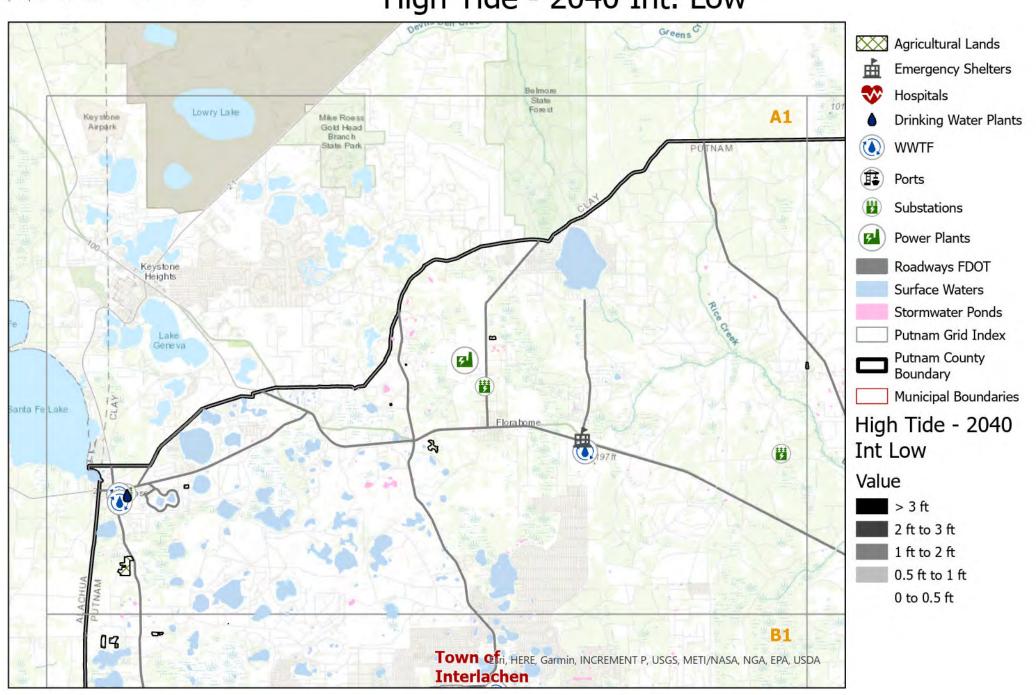
Exposure Analysis: Putnam County, Florida









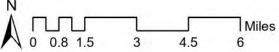


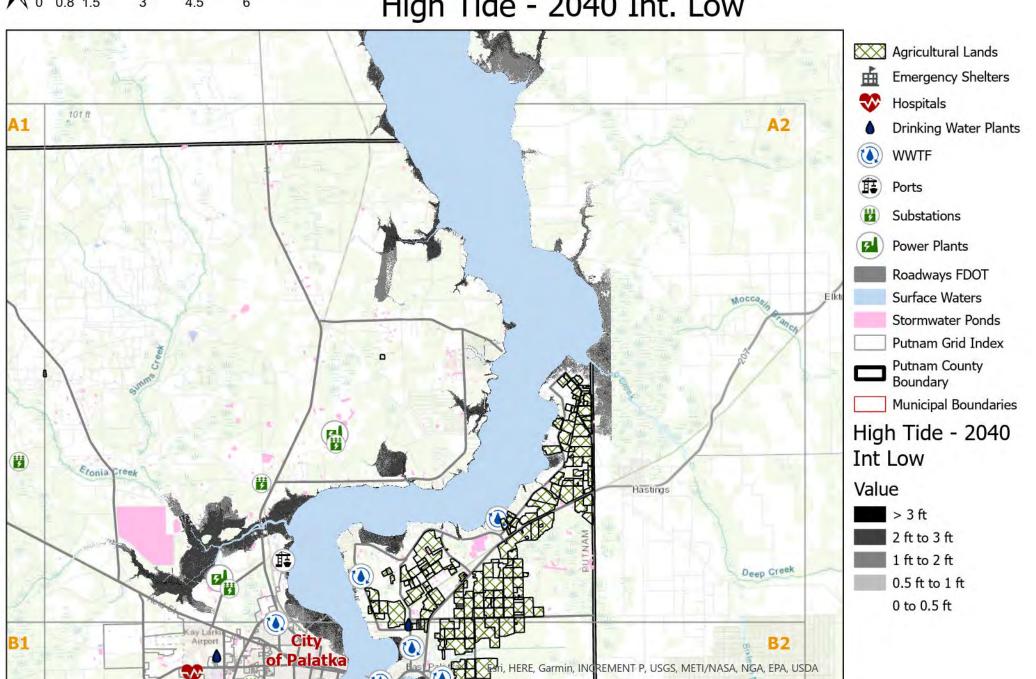
Exposure Analysis: Putnam County, Florida









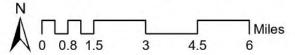


Exposure Analysis: Putnam County, Florida











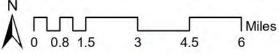
Exposure Analysis: Putnam County, Florida

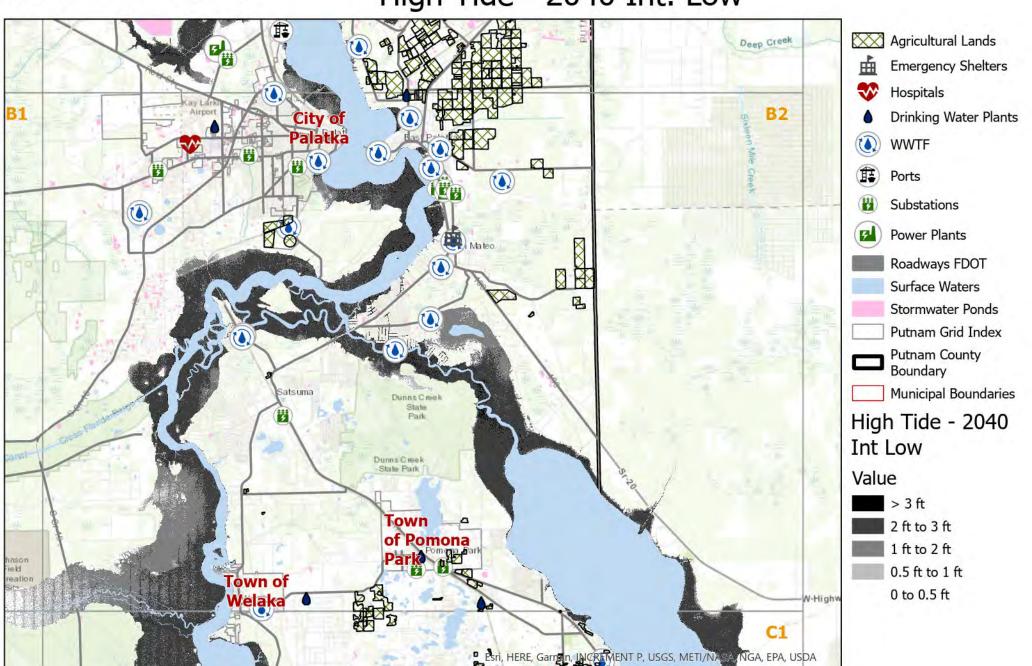




Crescent City





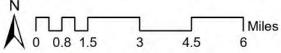


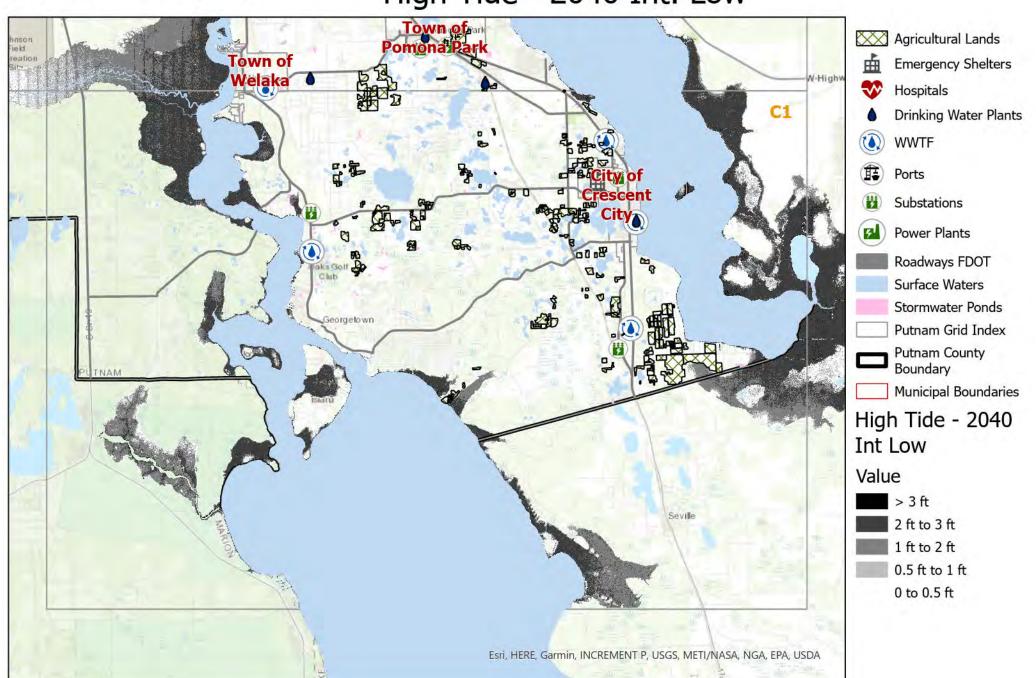
Exposure Analysis: Putnam County, Florida











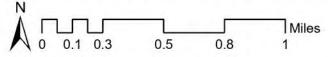
Exposure Analysis: Putnam County, Florida











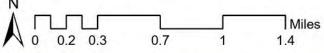


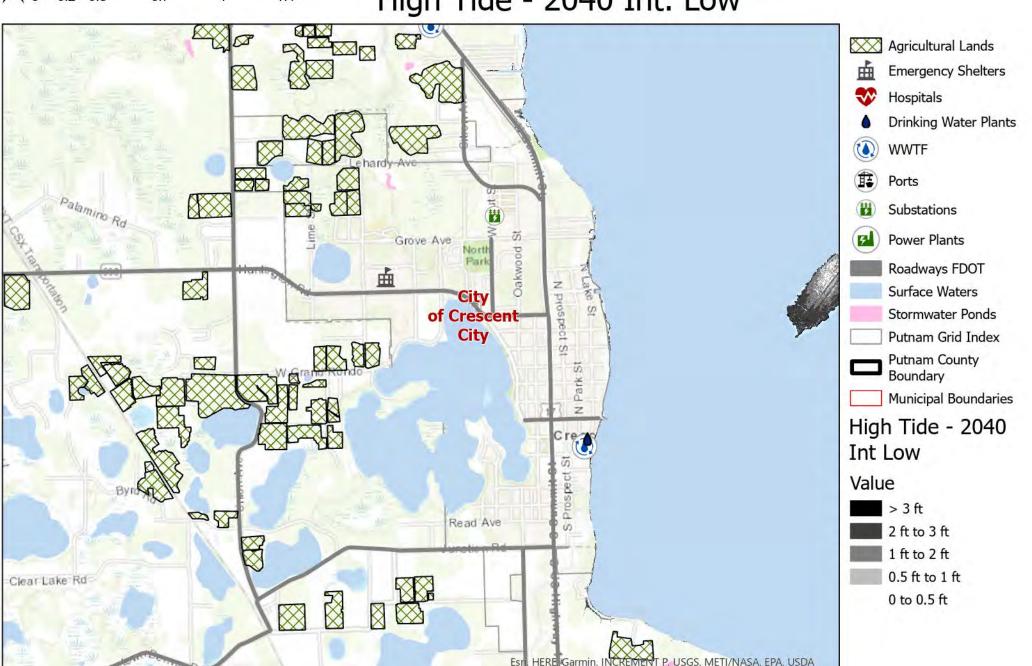
Exposure Analysis: Putnam County, Florida









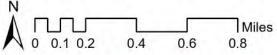


Exposure Analysis: Putnam County, Florida









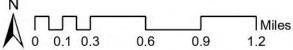


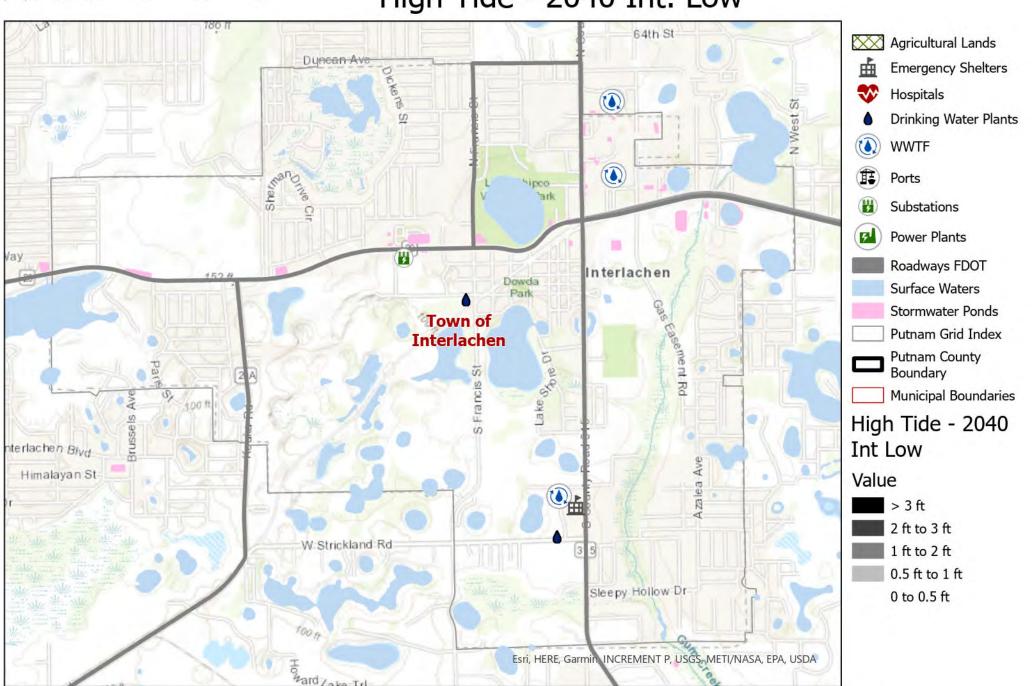
Exposure Analysis: Putnam County, Florida









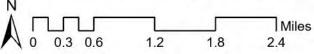


Exposure Analysis: Putnam County, Florida











# High Tide Map Series: 2040 Int. High

(high tide defined as 2' above MHHW – similar to "king tide")

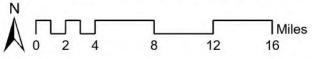
- Full County view (1 map)
- Gridded extent areas to cover County (5 maps)
- City extent views at 5 municipality locations (5 maps)

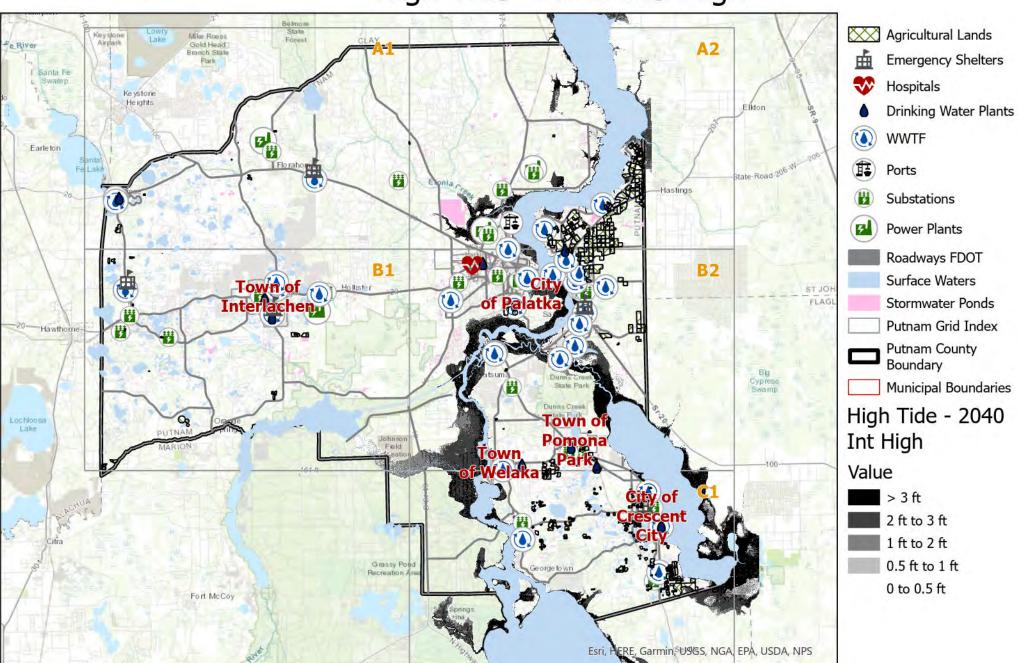
Exposure Analysis: Putnam County, Florida









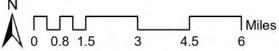


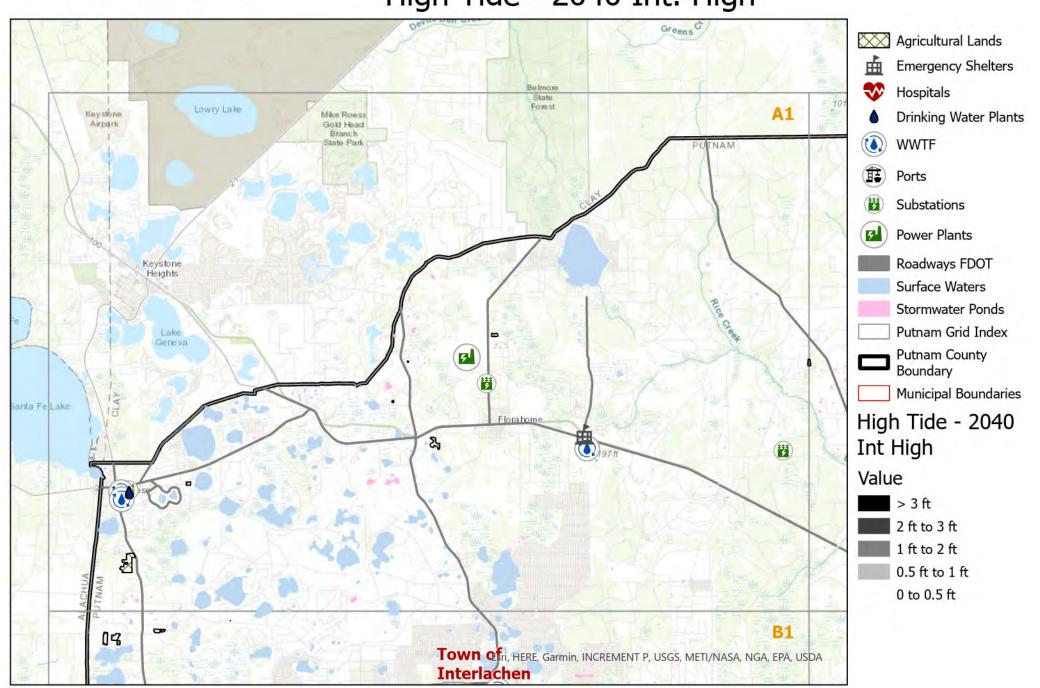
Exposure Analysis: Putnam County, Florida









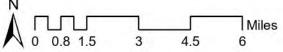


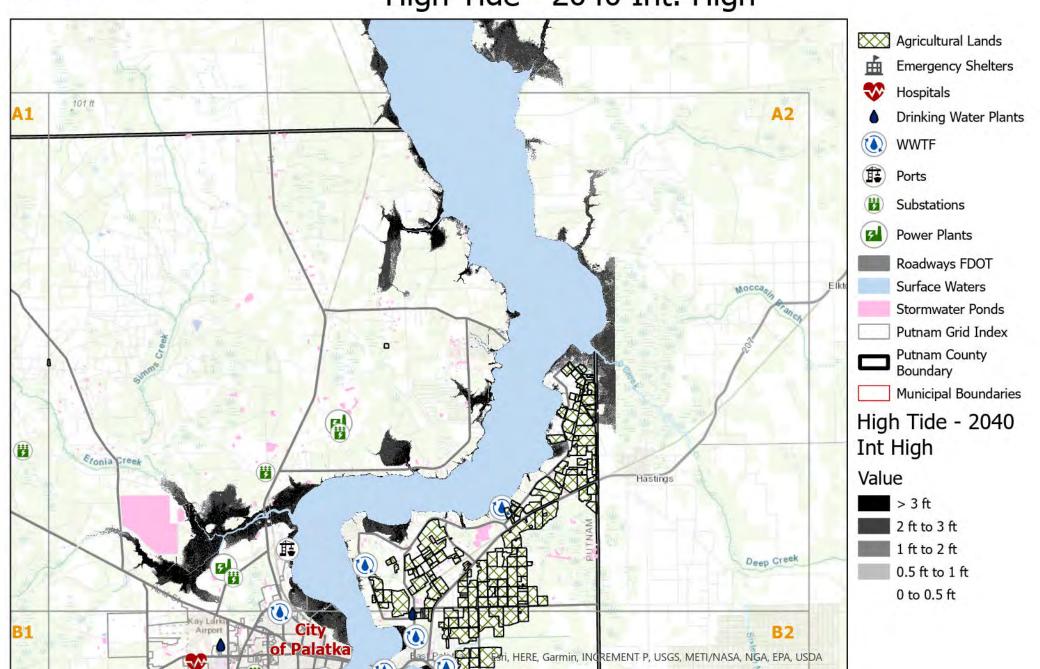
Exposure Analysis: Putnam County, Florida









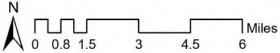


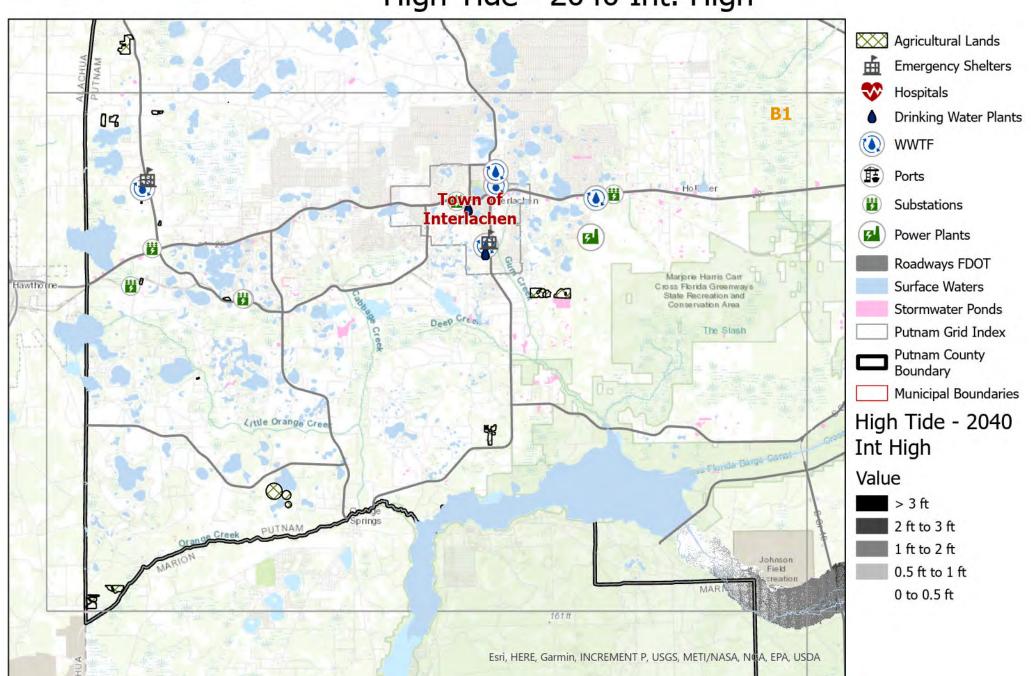
Exposure Analysis: Putnam County, Florida











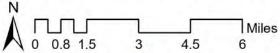
Exposure Analysis: Putnam County, Florida

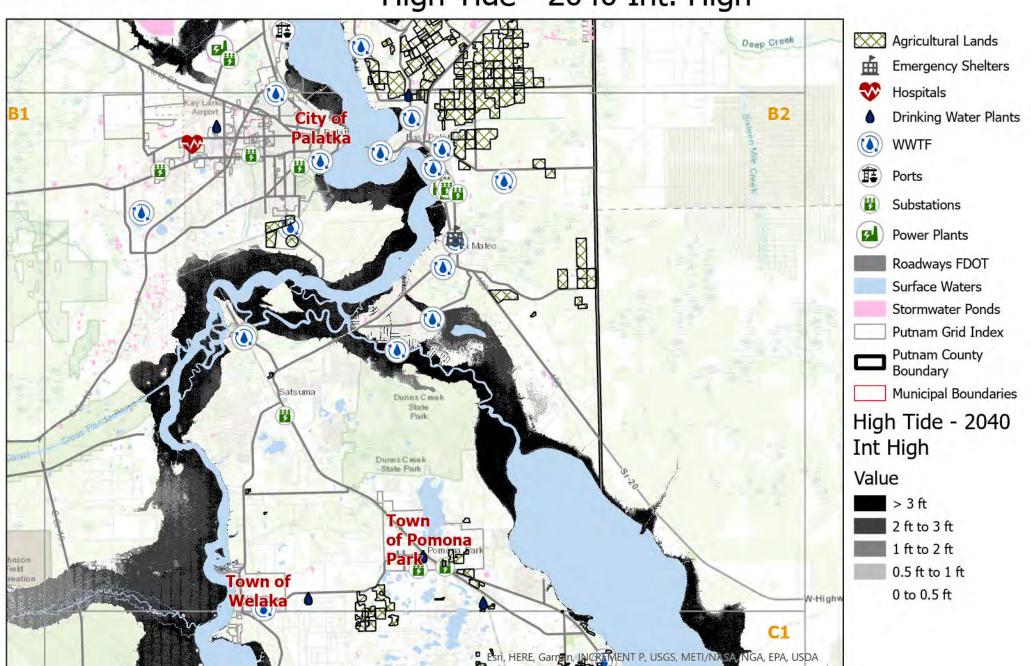




Crescent City





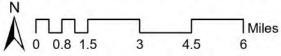


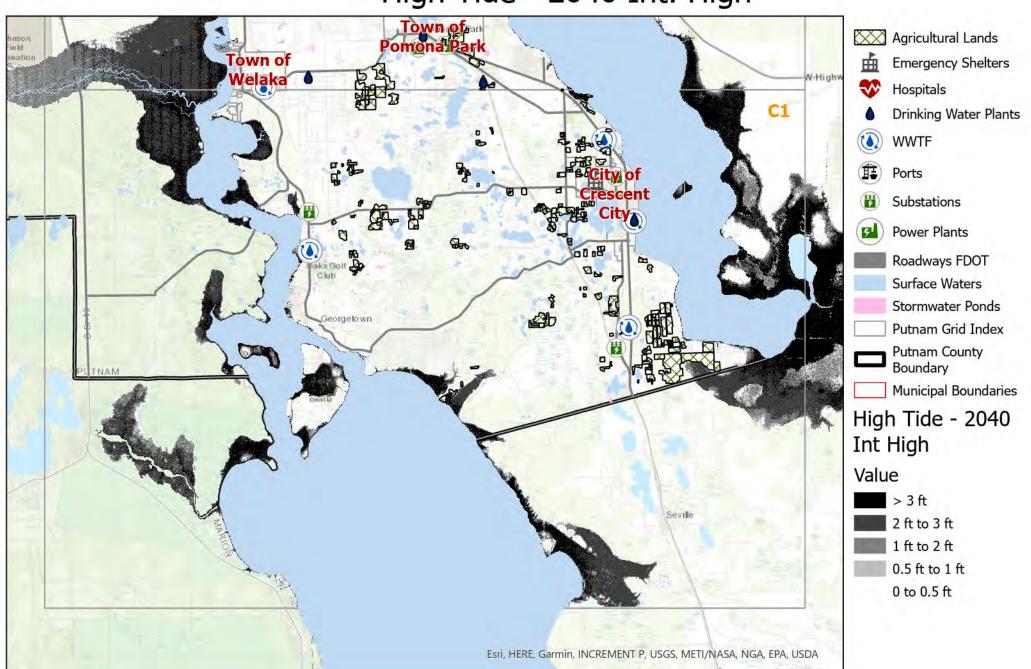
Exposure Analysis: Putnam County, Florida











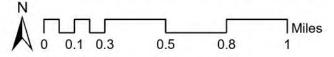
Exposure Analysis: Putnam County, Florida

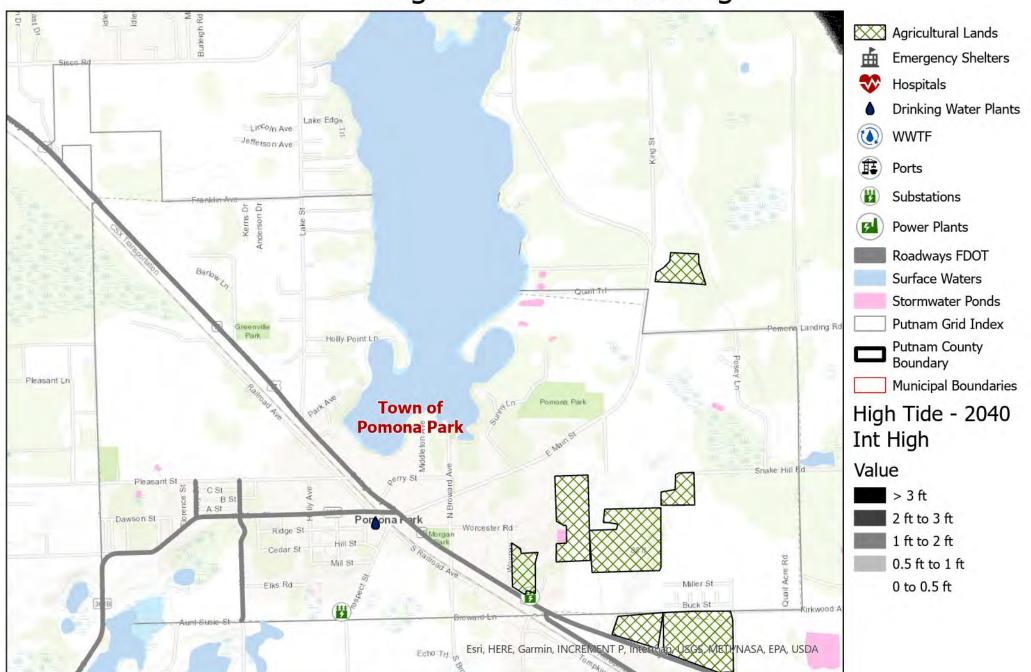










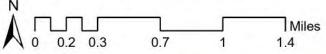


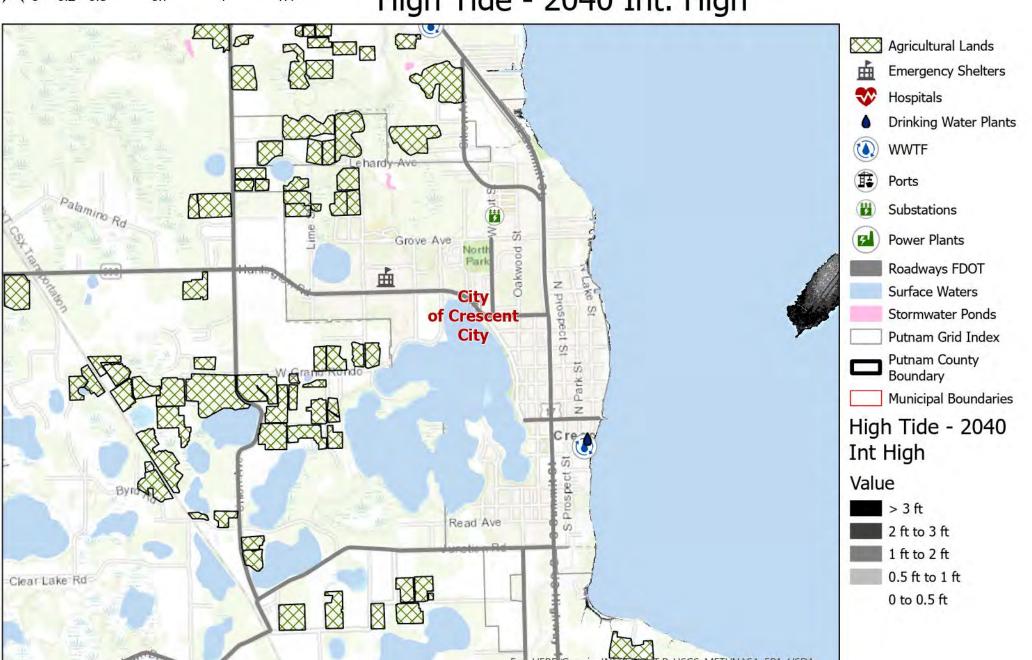
Exposure Analysis: Putnam County, Florida









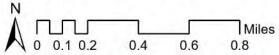


Exposure Analysis: Putnam County, Florida









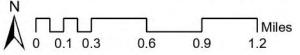


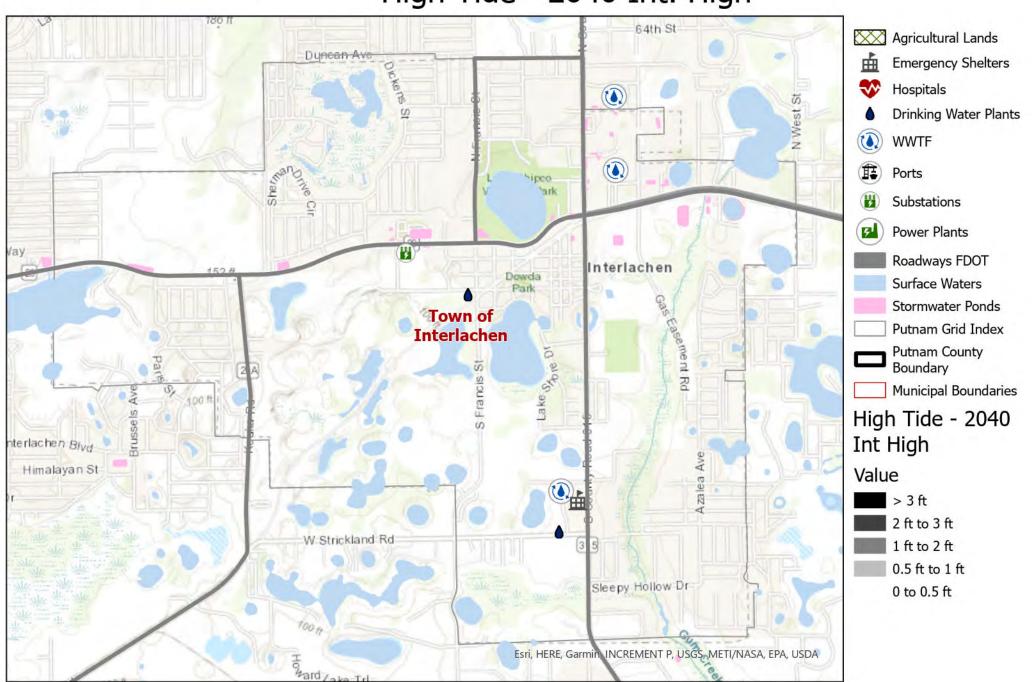
Exposure Analysis: Putnam County, Florida









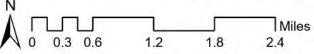


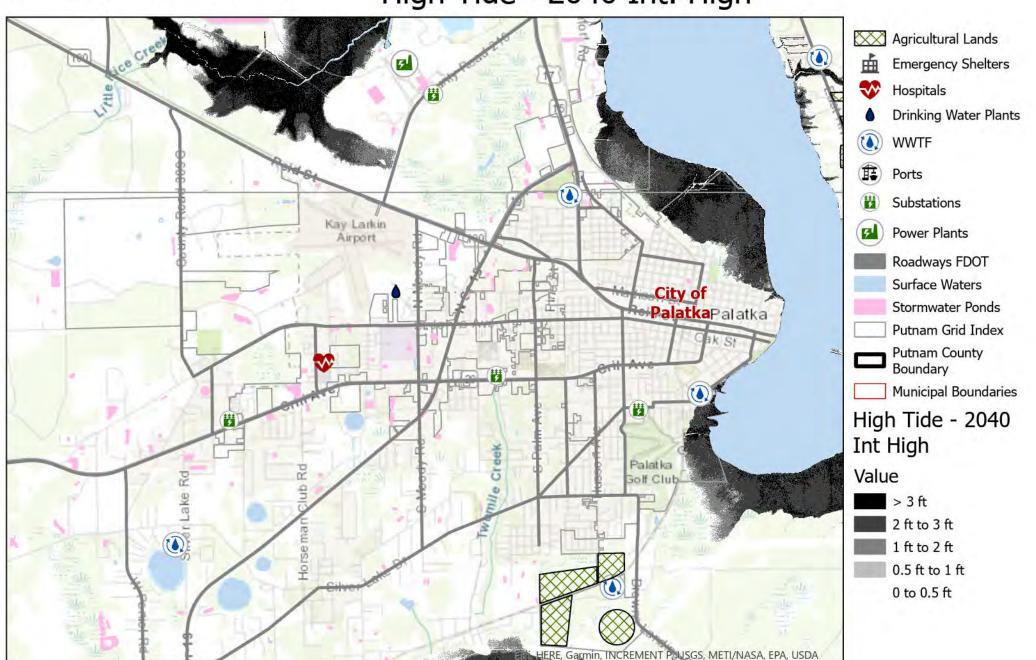
Exposure Analysis: Putnam County, Florida











# High Tide Map Series: 2070 Int. Low

(high tide defined as 2' above MHHW – similar to "king tide")

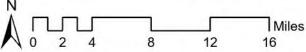
- Full County view (1 map)
- Gridded extent areas to cover County (5 maps)
- City extent views at 5 municipality locations (5 maps)

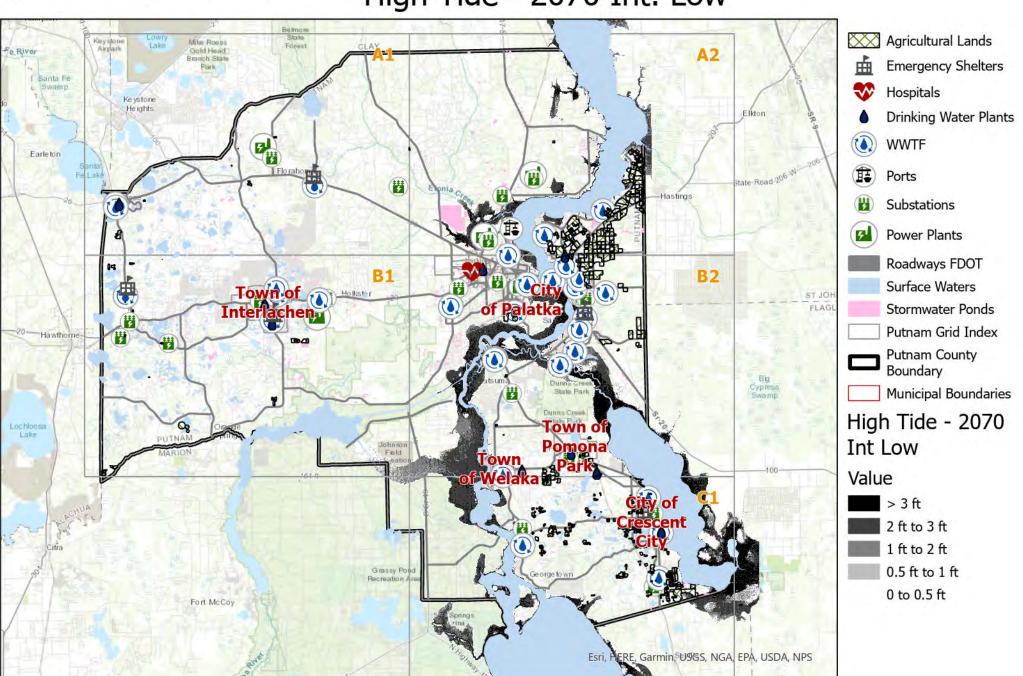
Exposure Analysis: Putnam County, Florida









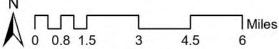


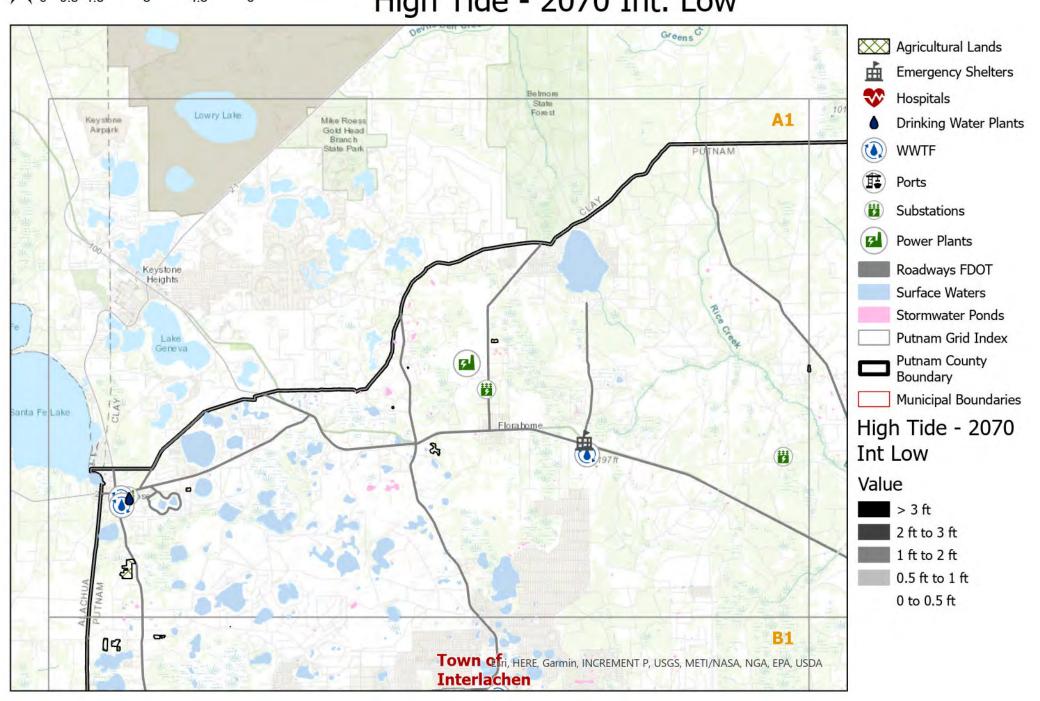
Exposure Analysis: Putnam County, Florida









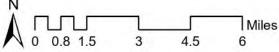


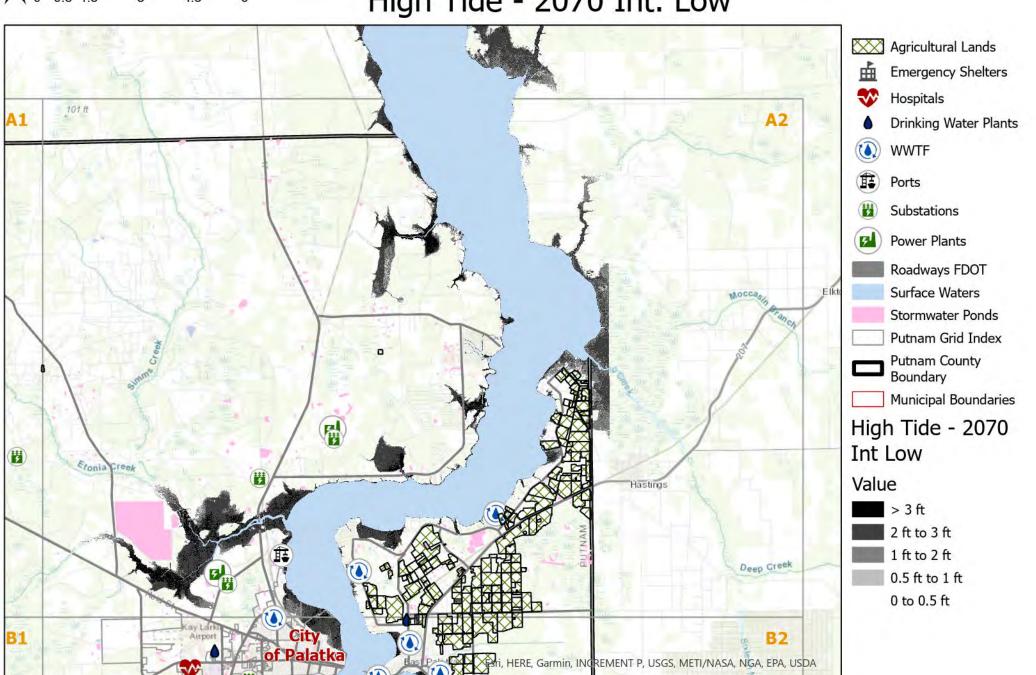
Exposure Analysis: Putnam County, Florida









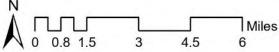


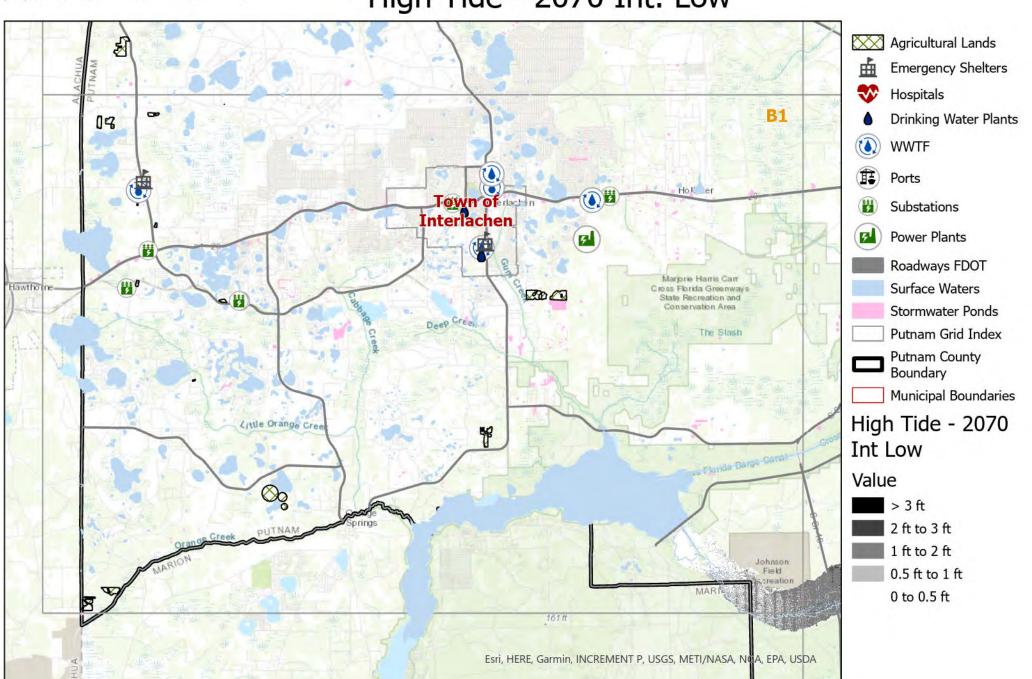
Exposure Analysis: Putnam County, Florida











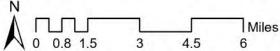
Exposure Analysis: Putnam County, Florida

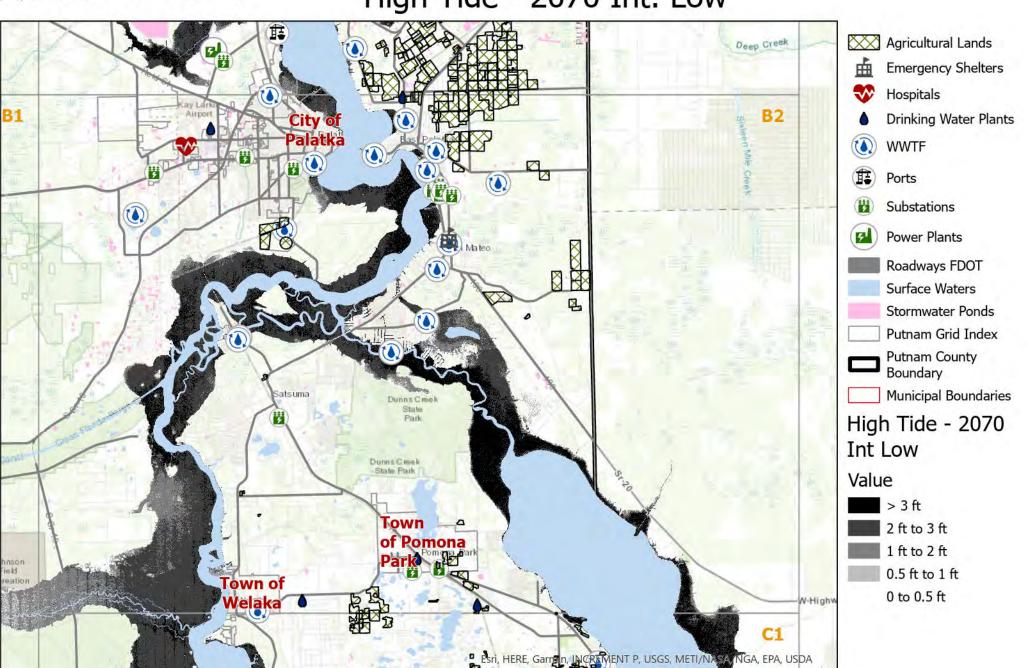




Crescent City







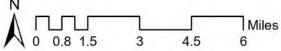
Exposure Analysis: Putnam County, Florida

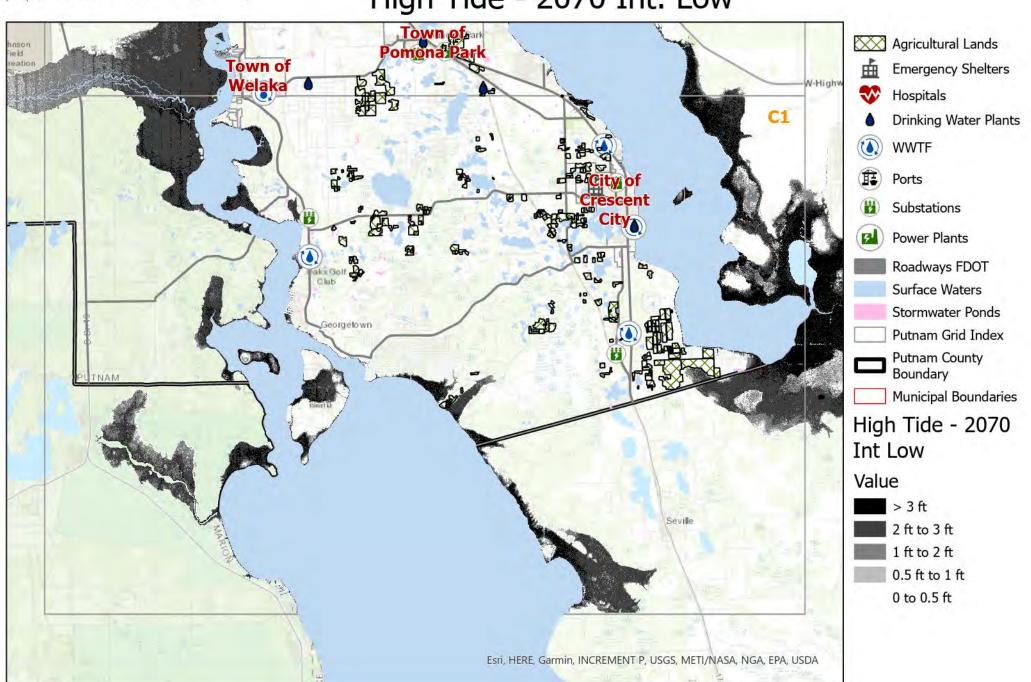












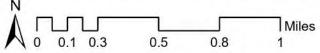
Exposure Analysis: Putnam County, Florida

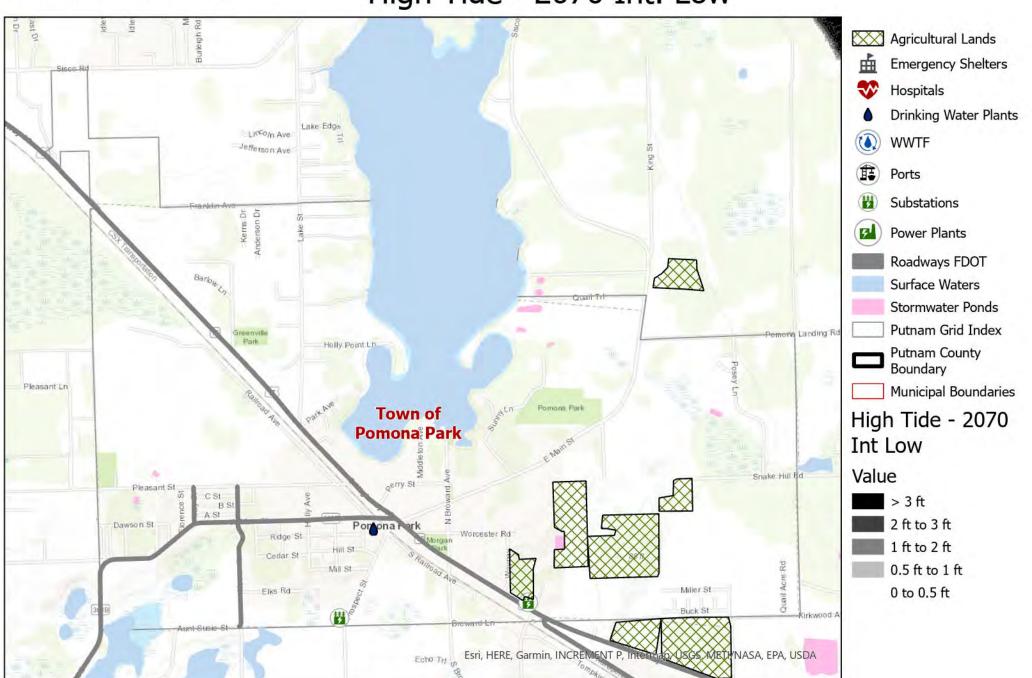










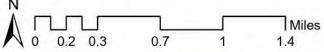


Exposure Analysis: Putnam County, Florida









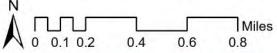


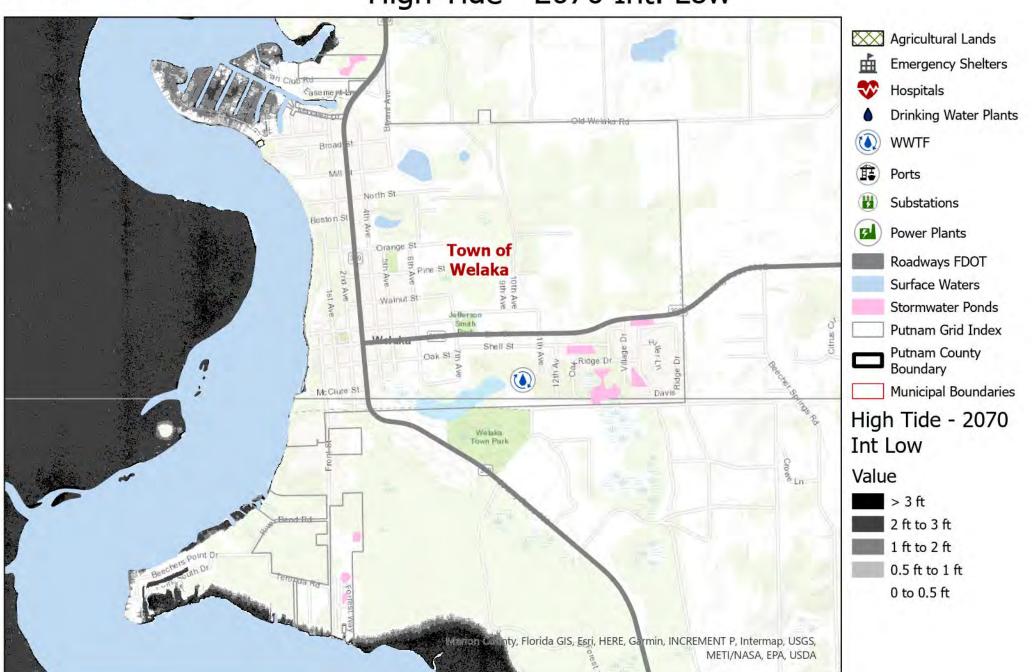
Exposure Analysis: Putnam County, Florida









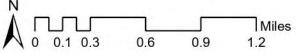


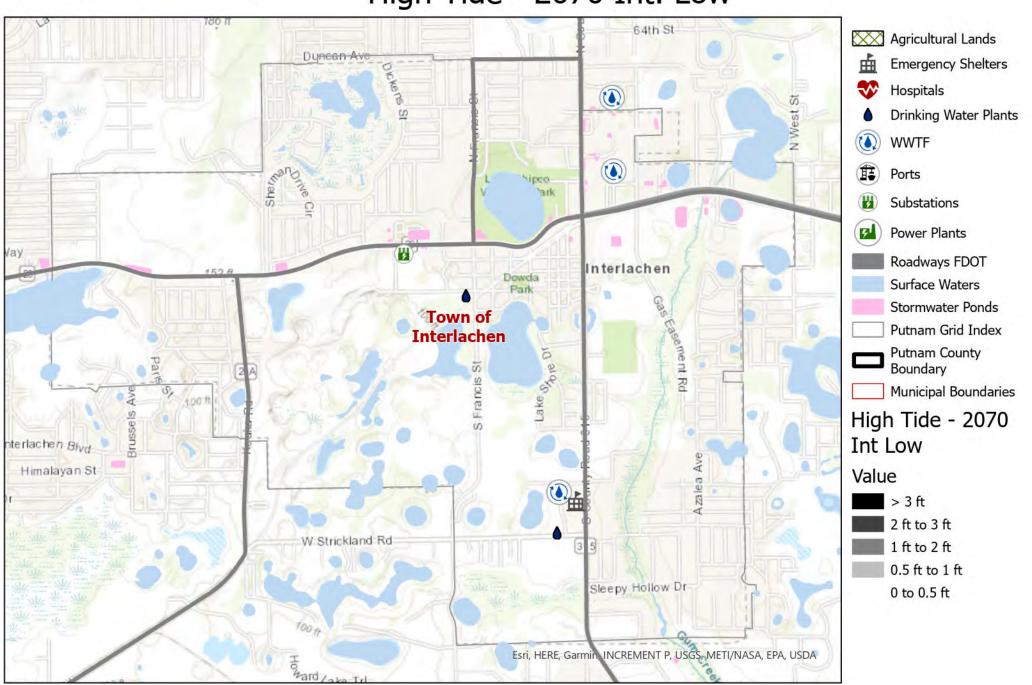
Exposure Analysis: Putnam County, Florida









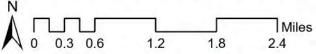


Exposure Analysis: Putnam County, Florida











# High Tide Map Series: 2070 Int. High

(high tide defined as 2' above MHHW – similar to "king tide")

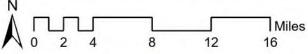
- Full County view (1 map)
- Gridded extent areas to cover County (5 maps)
- City extent views at 5 municipality locations (5 maps)

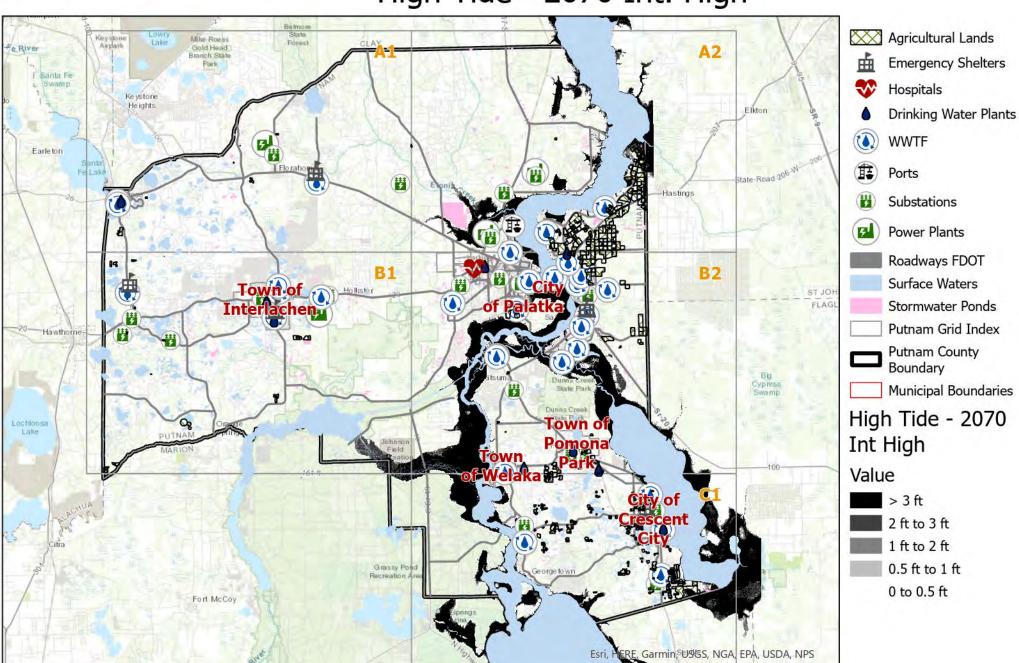
Exposure Analysis: Putnam County, Florida









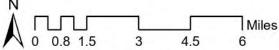


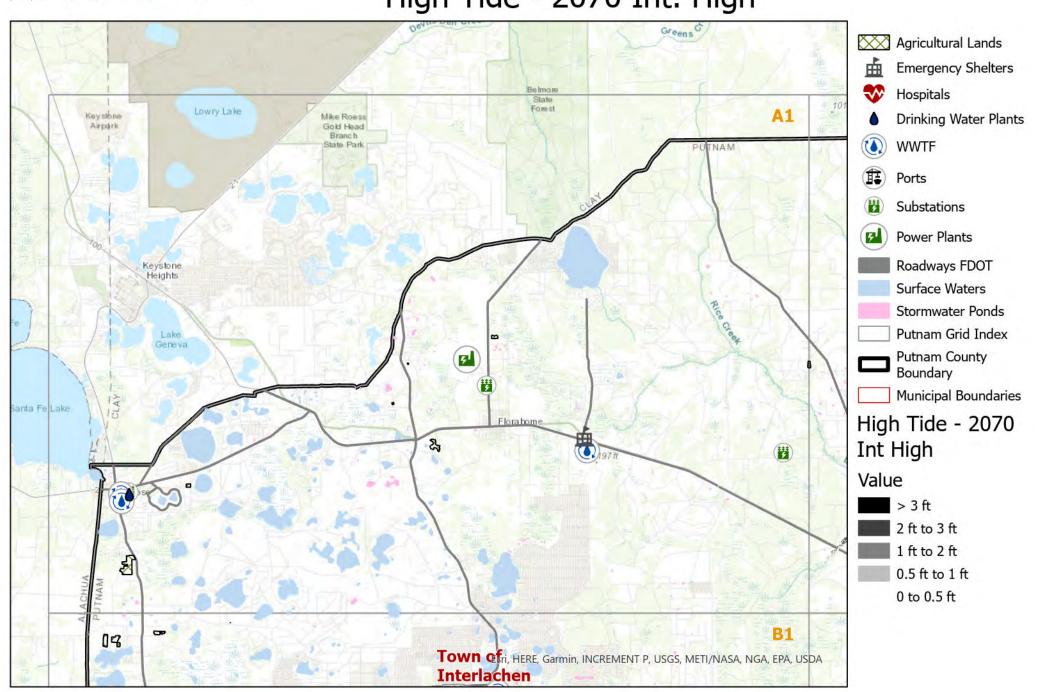
Exposure Analysis: Putnam County, Florida









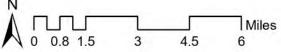


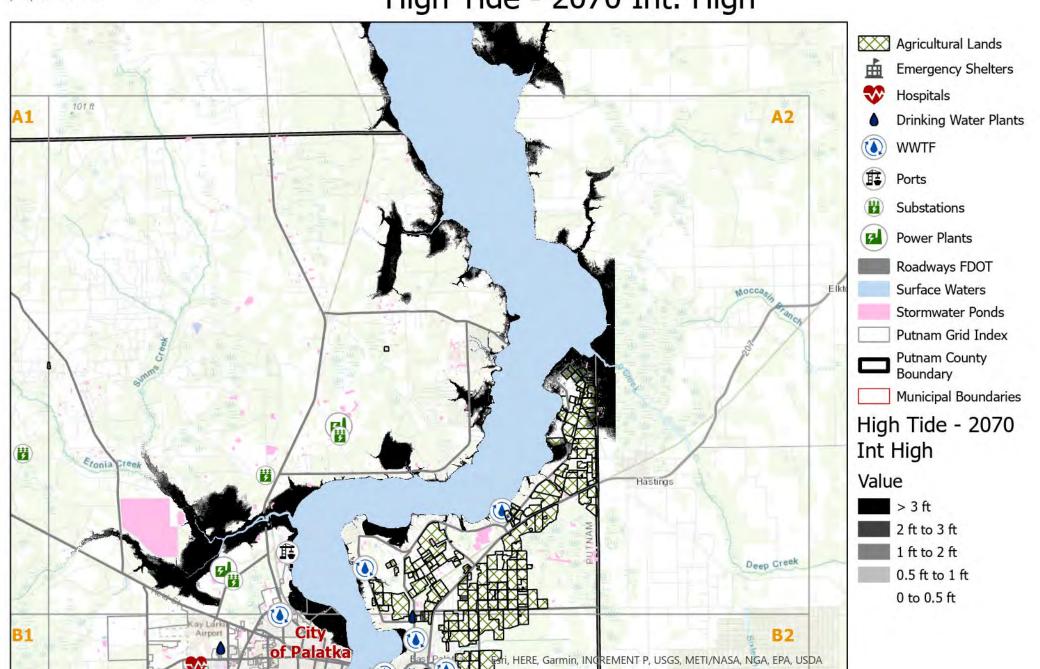
Exposure Analysis: Putnam County, Florida









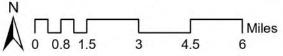


Exposure Analysis: Putnam County, Florida











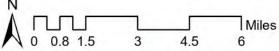
Exposure Analysis: Putnam County, Florida





Crescent City





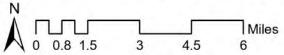


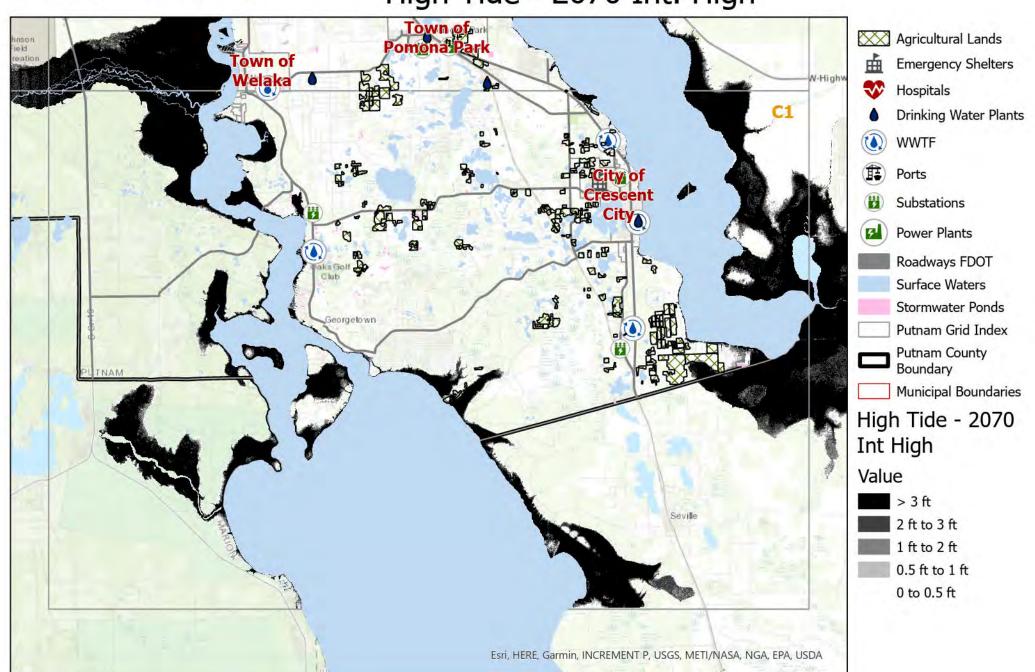
Exposure Analysis: Putnam County, Florida









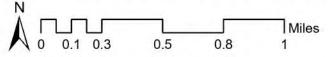


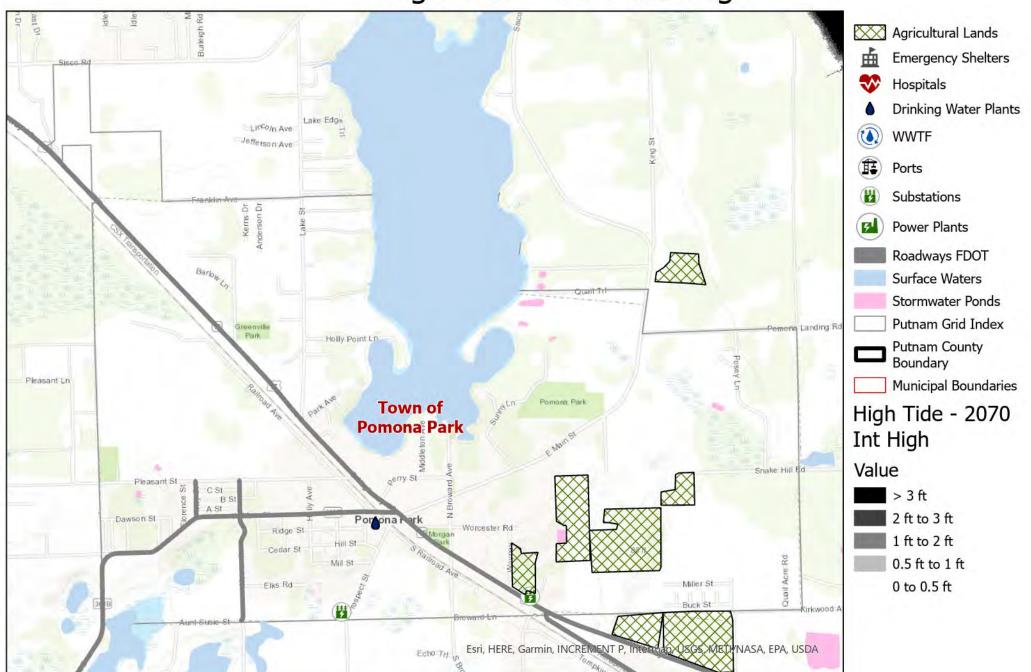
Exposure Analysis: Putnam County, Florida









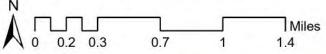


Exposure Analysis: Putnam County, Florida









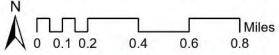


Exposure Analysis: Putnam County, Florida









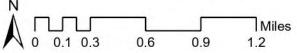


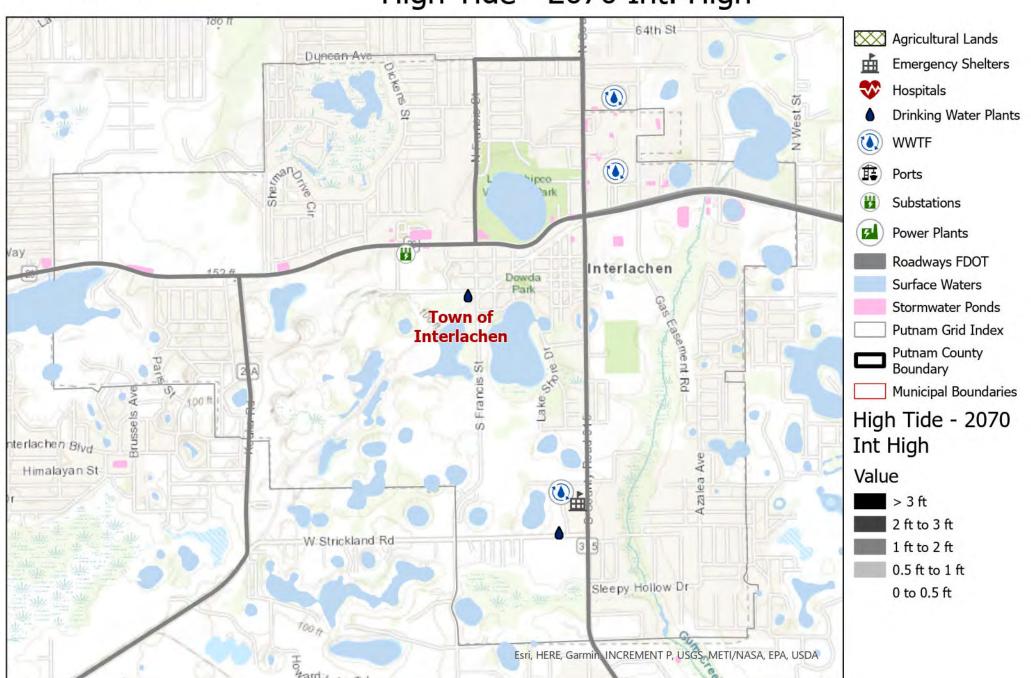
Exposure Analysis: Putnam County, Florida









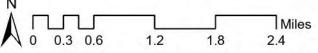


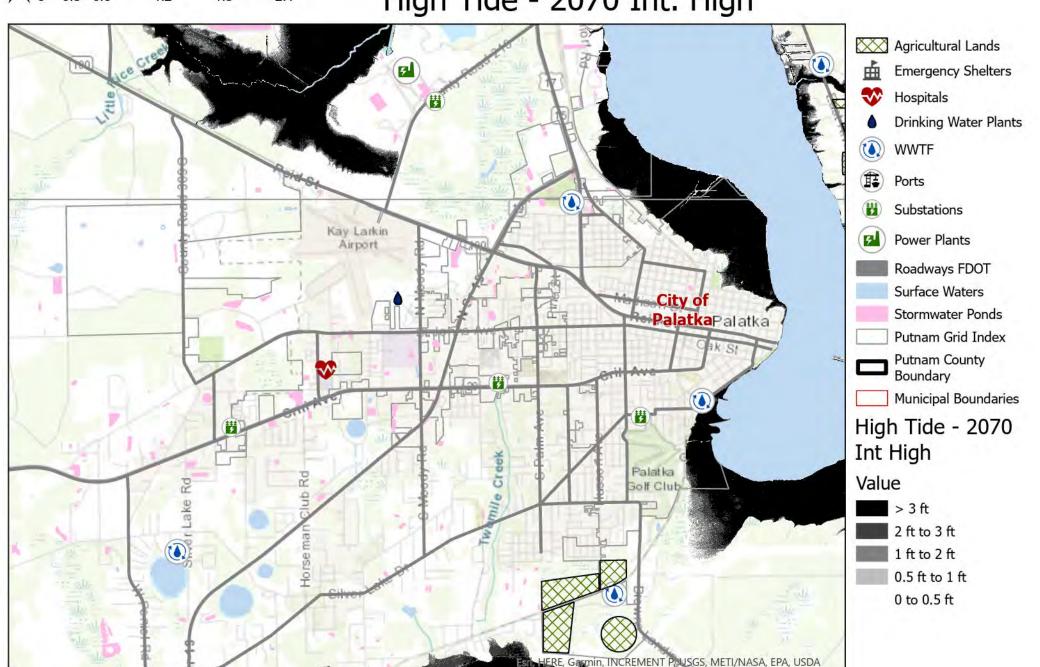
Exposure Analysis: Putnam County, Florida











# 25-yr Storm Surge; present; Map Series

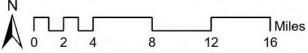
- Full County view (1 map)
- Gridded extent areas to cover County (5 maps)
- City extent views at 5 municipality locations (5 maps)

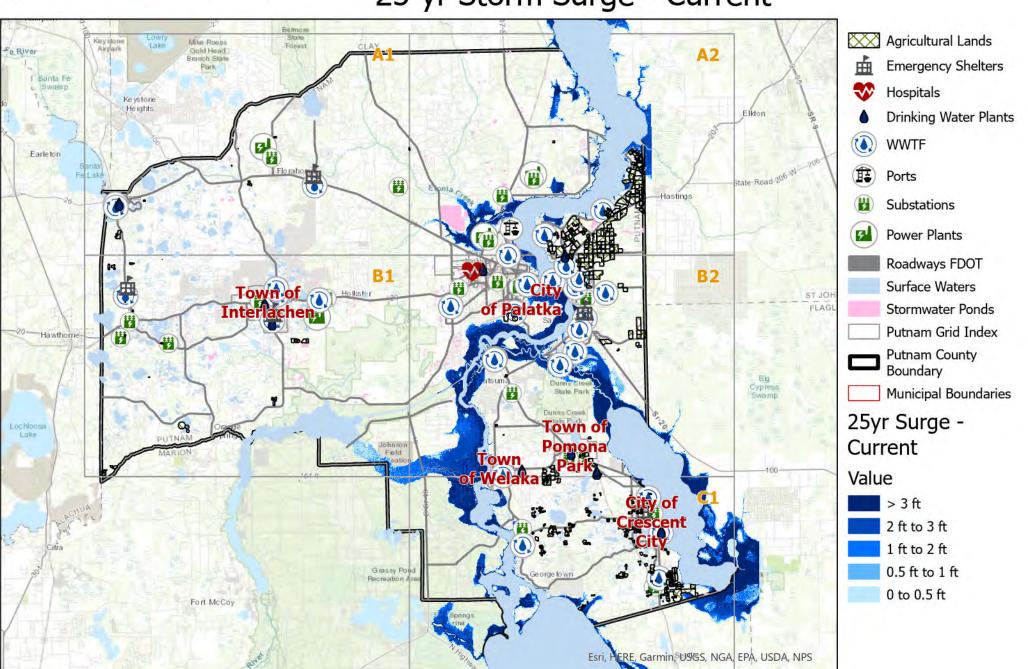
Exposure Analysis: Putnam County, Florida









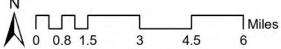


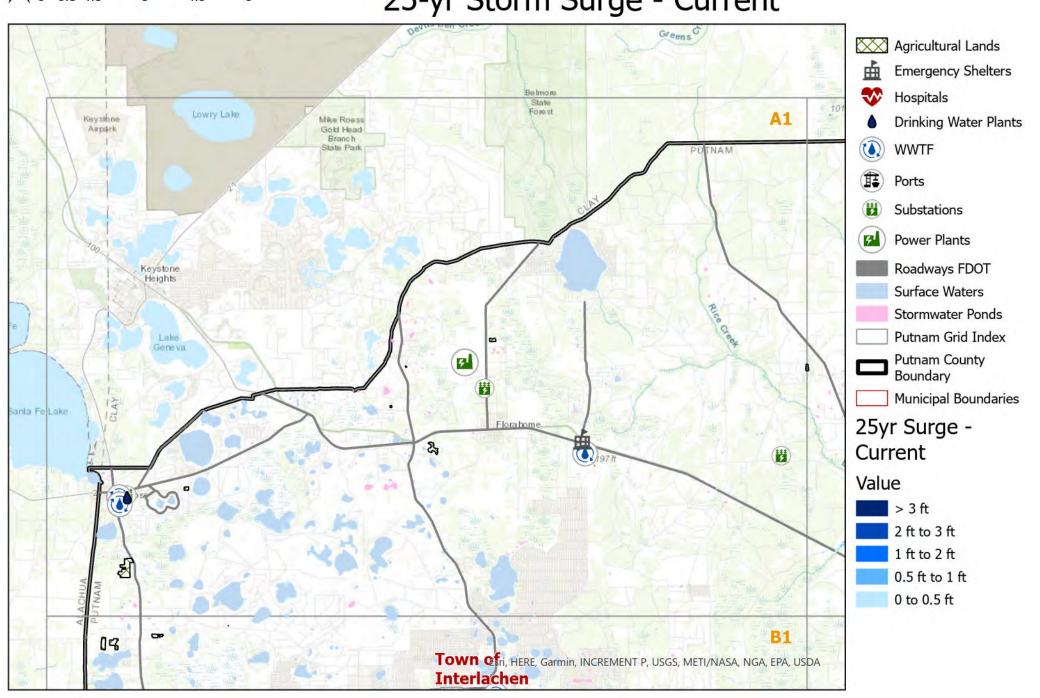
Exposure Analysis: Putnam County, Florida









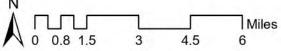


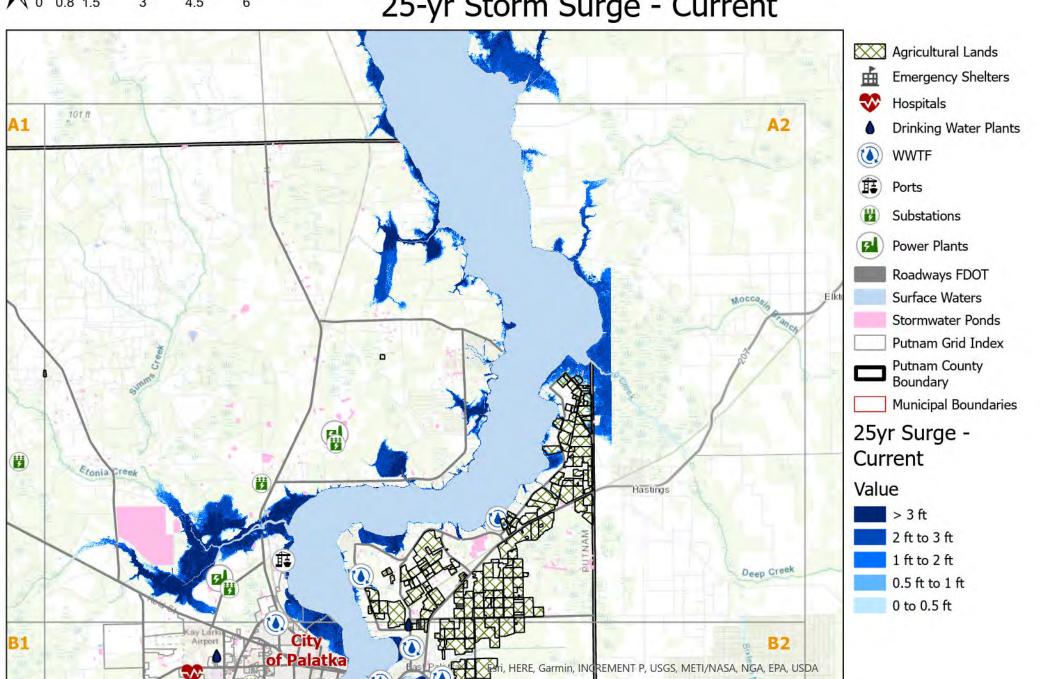
Exposure Analysis: Putnam County, Florida









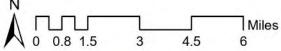


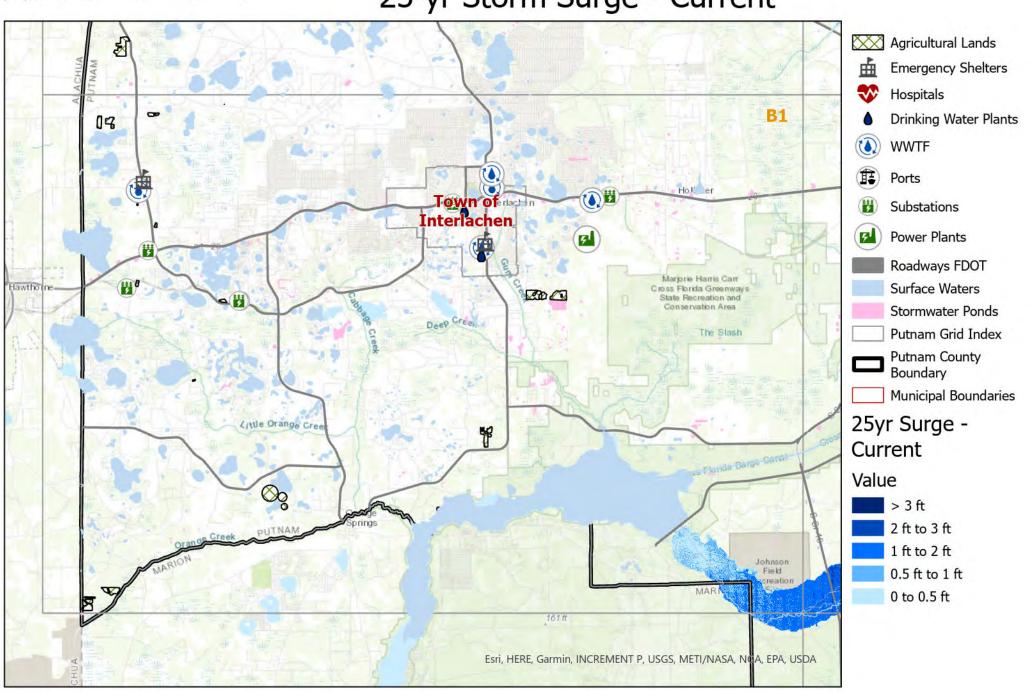
Exposure Analysis: Putnam County, Florida









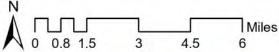


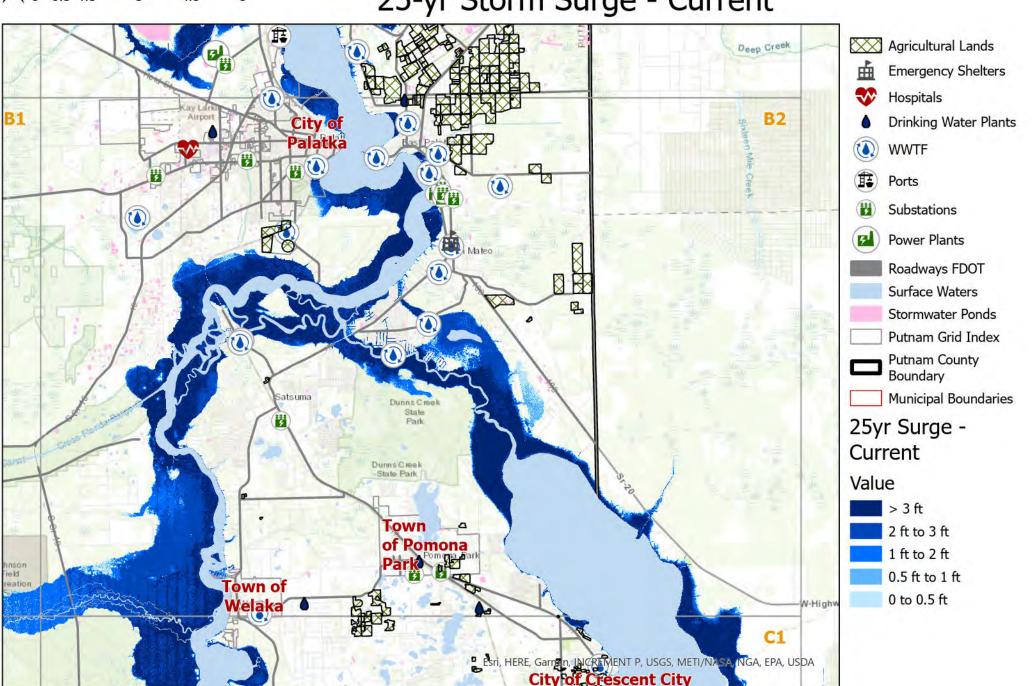
Exposure Analysis: Putnam County, Florida











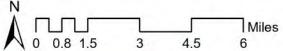
Exposure Analysis: Putnam County, Florida

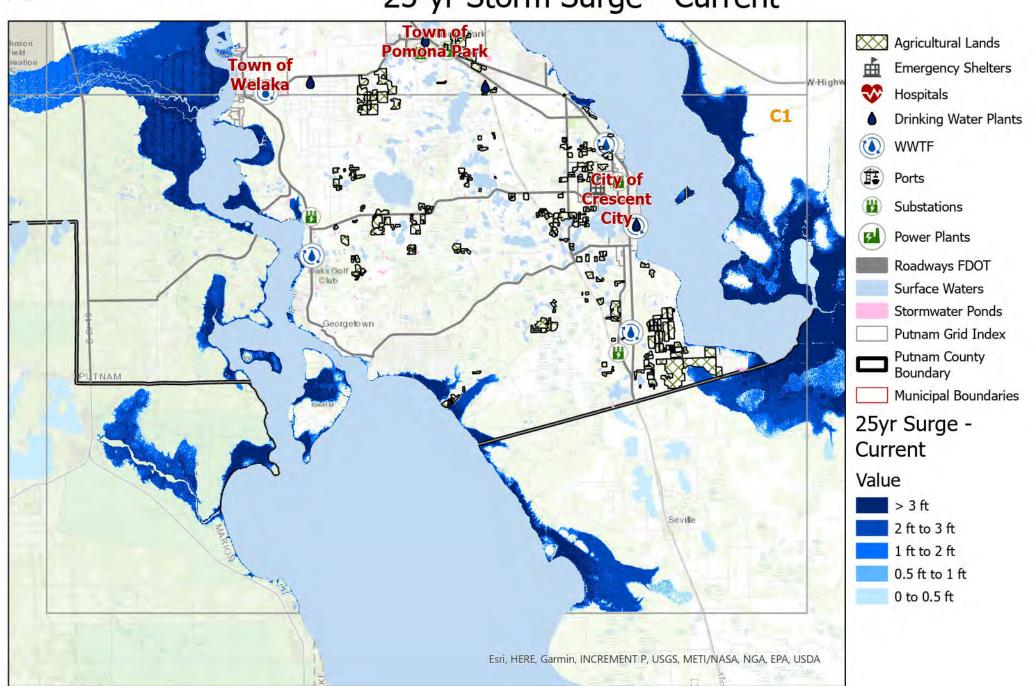










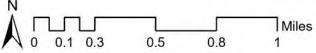


Exposure Analysis: Putnam County, Florida









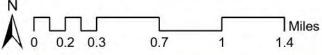


Exposure Analysis: Putnam County, Florida









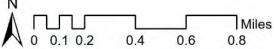


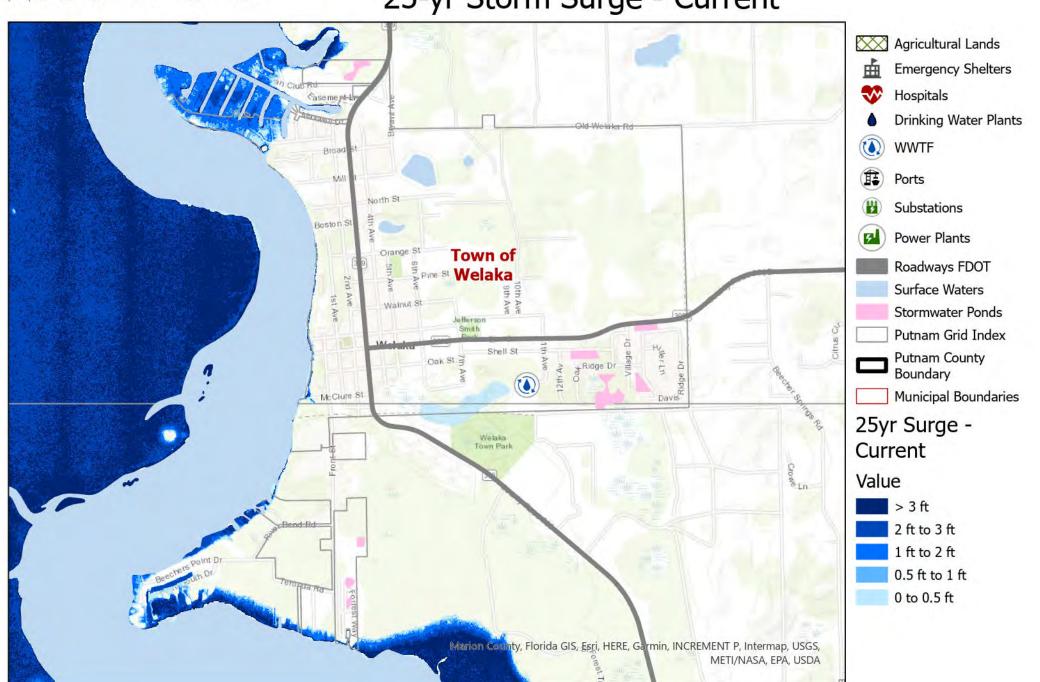
Exposure Analysis: Putnam County, Florida









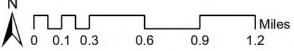


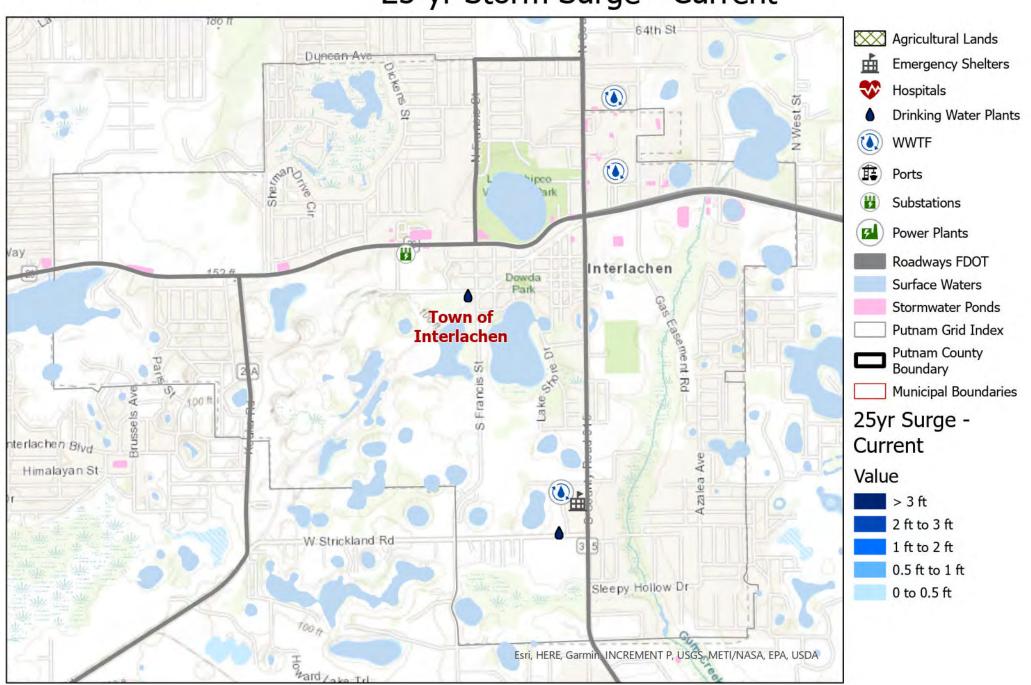
Exposure Analysis: Putnam County, Florida









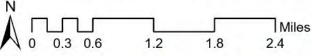


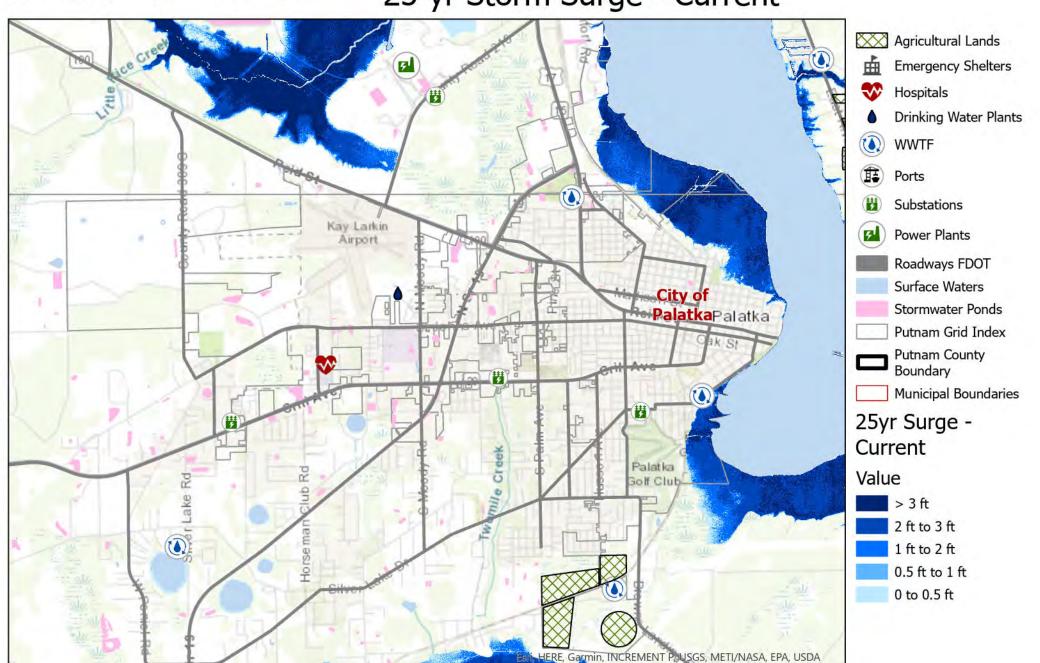
Exposure Analysis: Putnam County, Florida











## 25-yr Storm Surge; 2040 Int. Low; Map Series

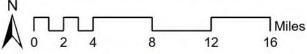
- Full County view (1 map)
- Gridded extent areas to cover County (5 maps)
- City extent views at 5 municipality locations (5 maps)

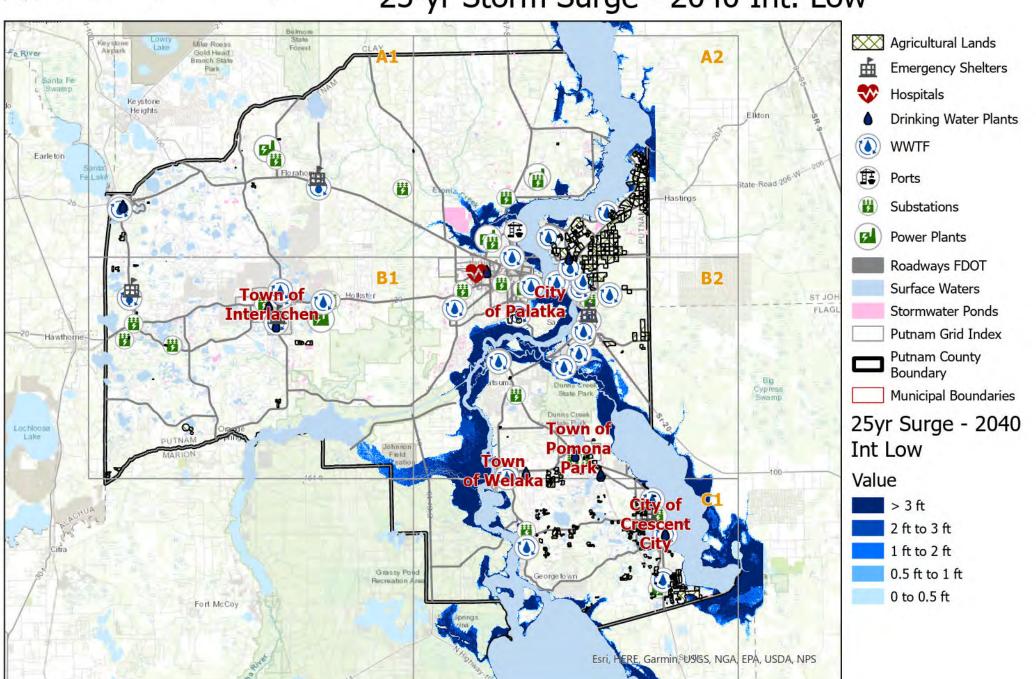
Exposure Analysis: Putnam County, Florida









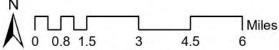


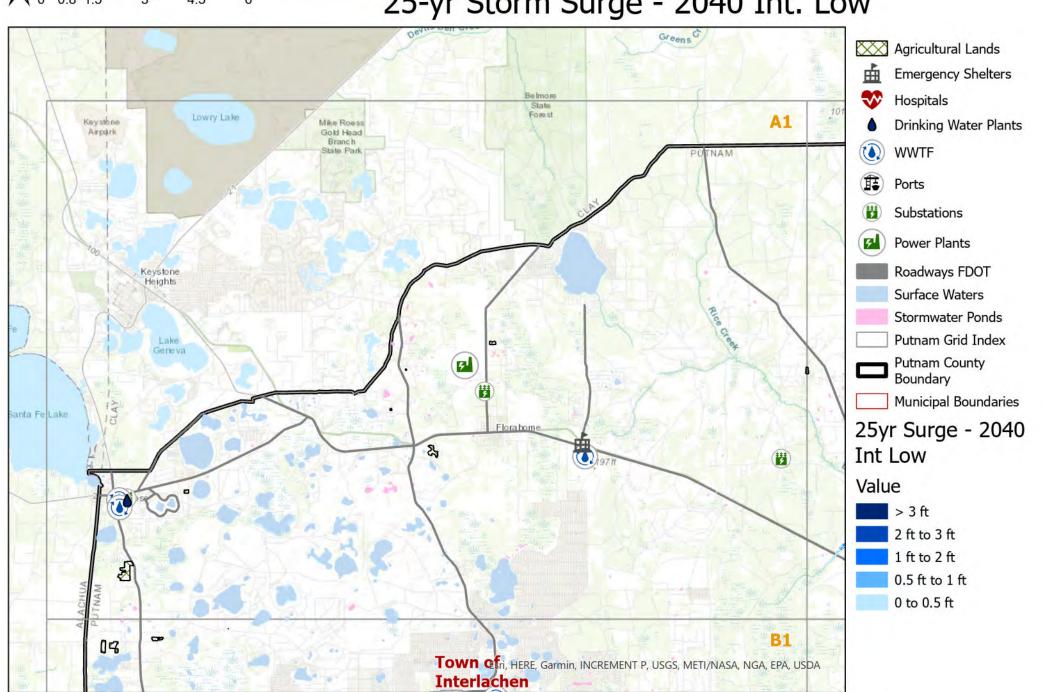
Exposure Analysis: Putnam County, Florida









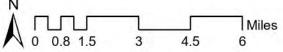


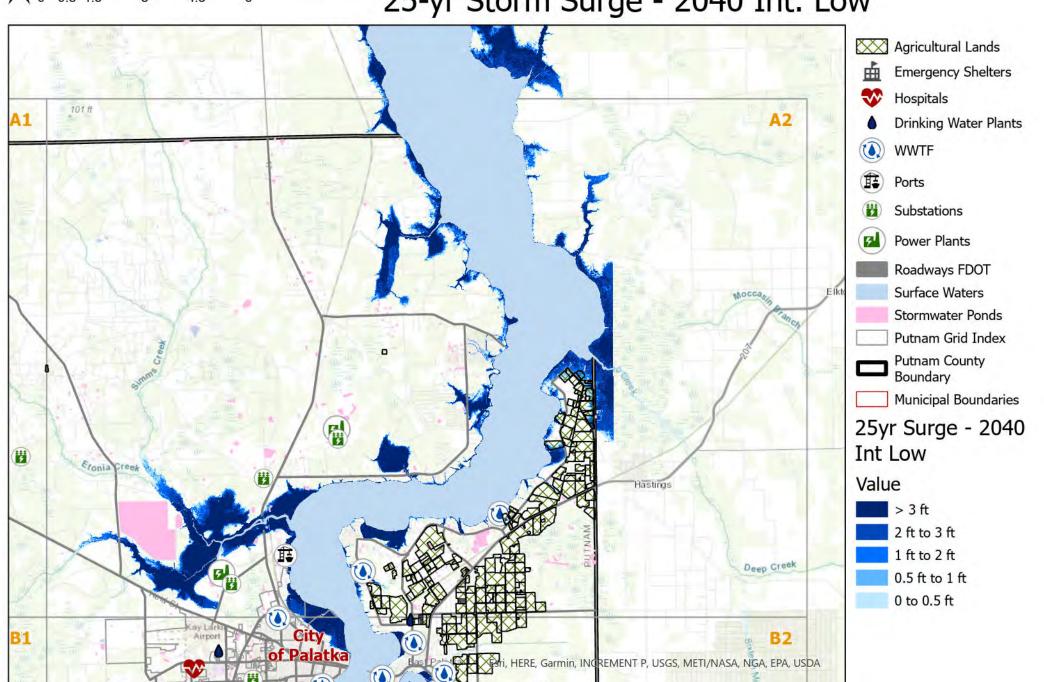
Exposure Analysis: Putnam County, Florida









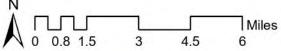


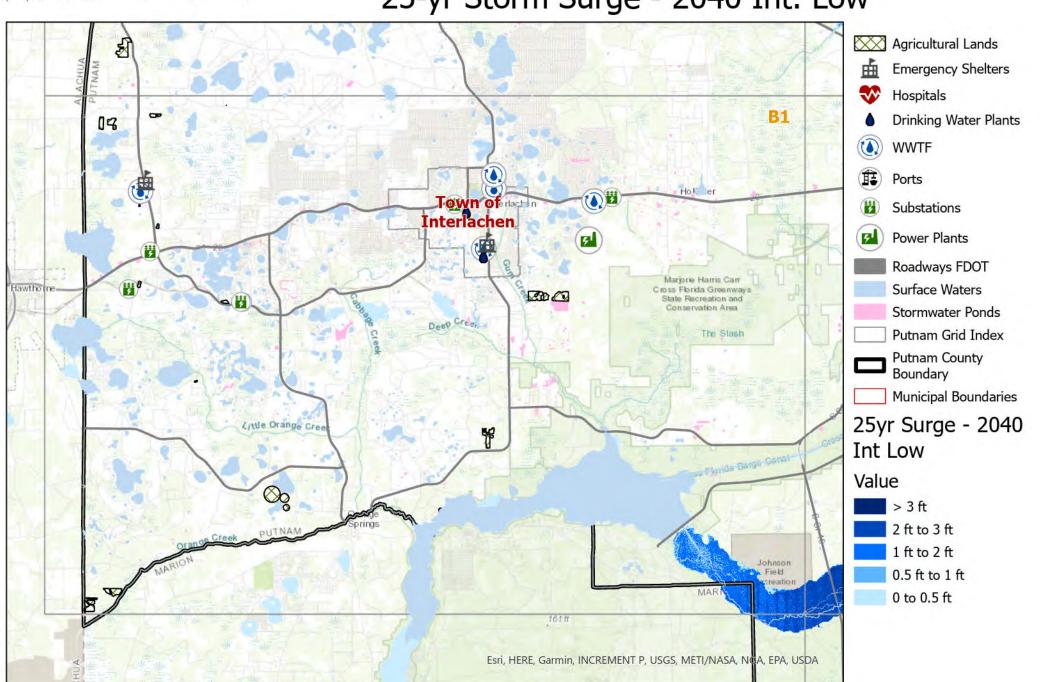
Exposure Analysis: Putnam County, Florida









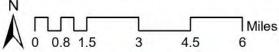


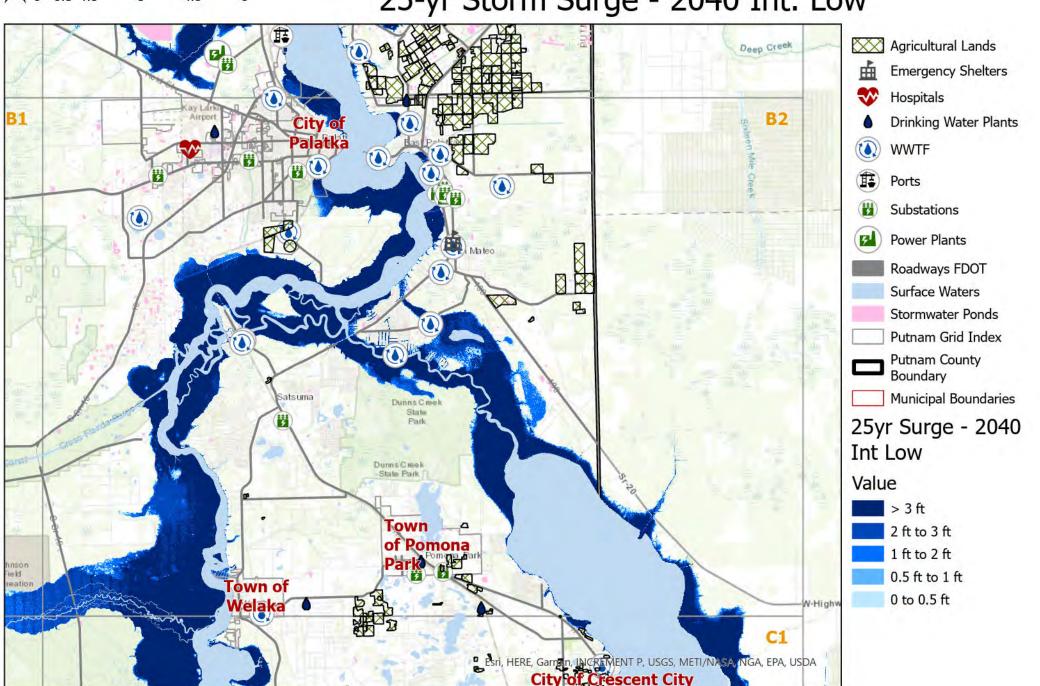
Exposure Analysis: Putnam County, Florida









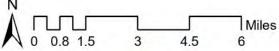


Exposure Analysis: Putnam County, Florida









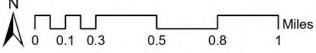


Exposure Analysis: Putnam County, Florida









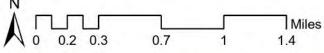


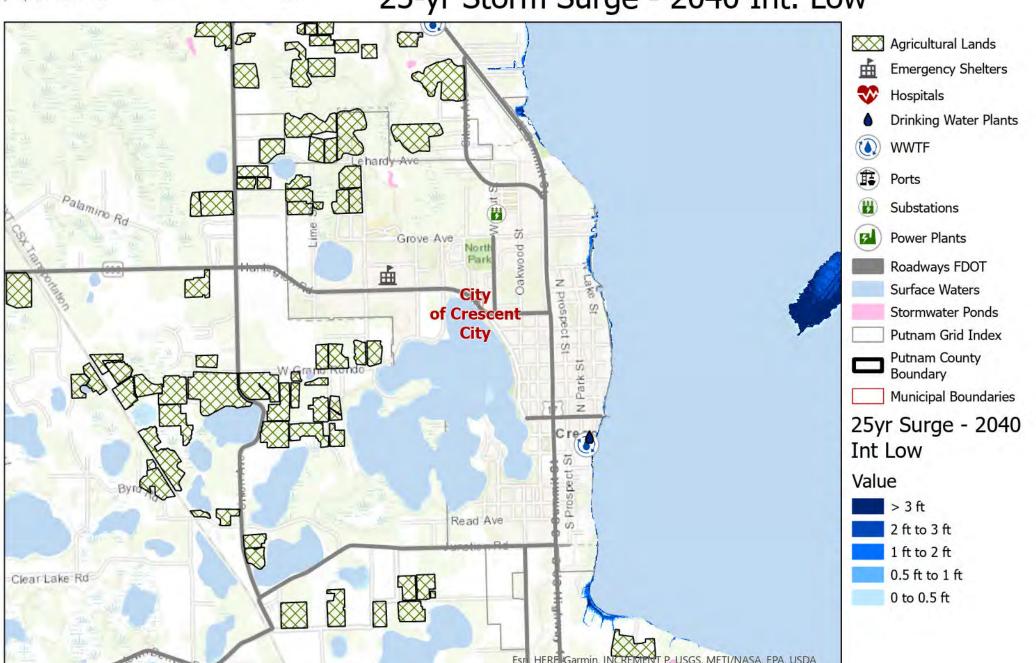
Exposure Analysis: Putnam County, Florida









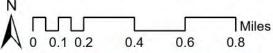


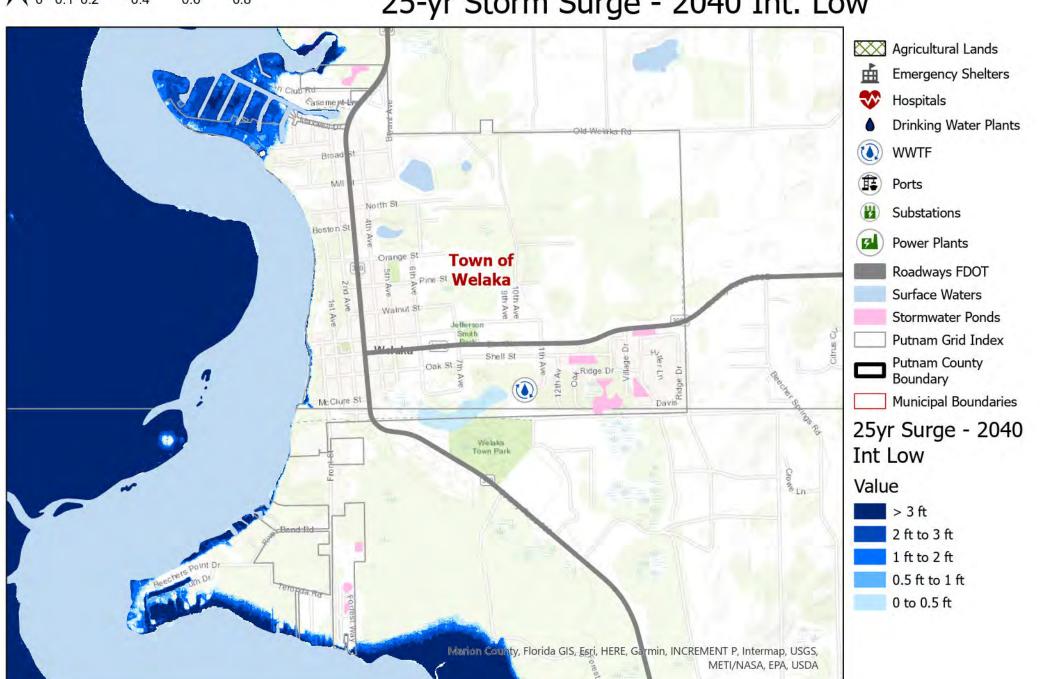
Exposure Analysis: Putnam County, Florida









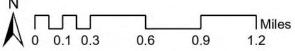


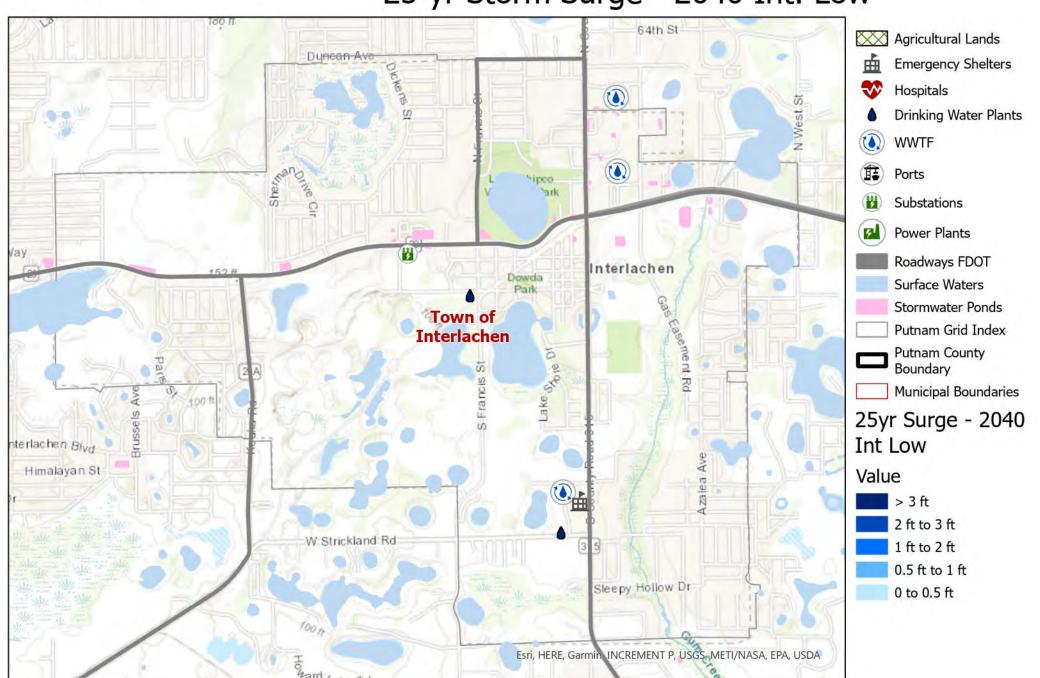
Exposure Analysis: Putnam County, Florida









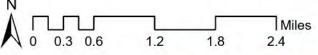


Exposure Analysis: Putnam County, Florida











# 25-yr Storm Surge; 2040 Int. High; Map Series

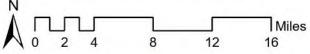
- Full County view (1 map)
- Gridded extent areas to cover County (5 maps)
- City extent views at 5 municipality locations (5 maps)

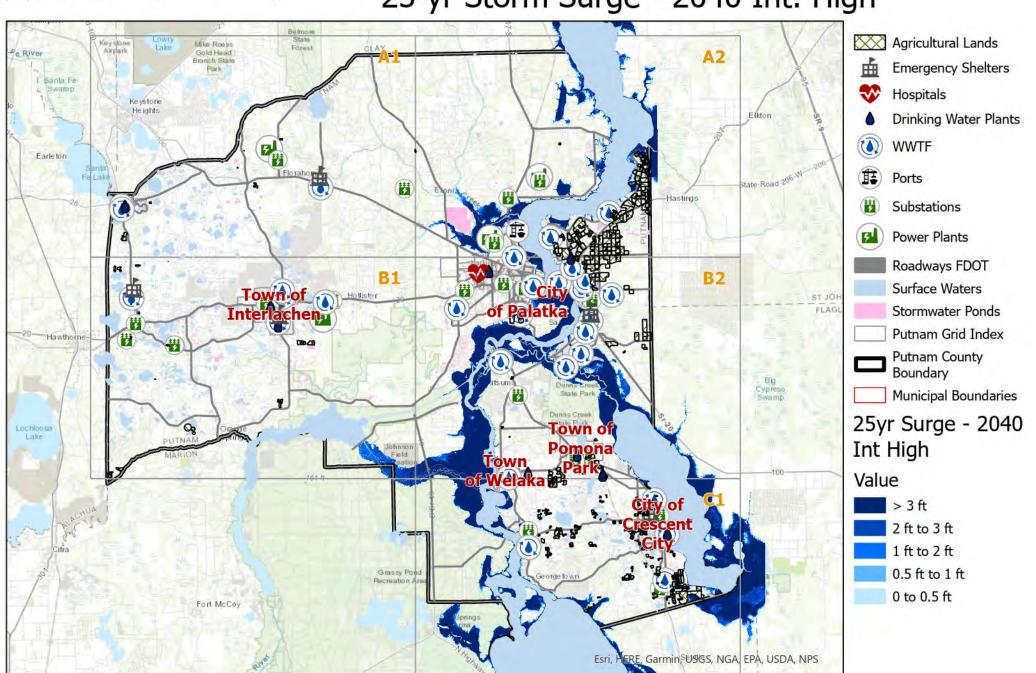
Exposure Analysis: Putnam County, Florida









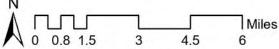


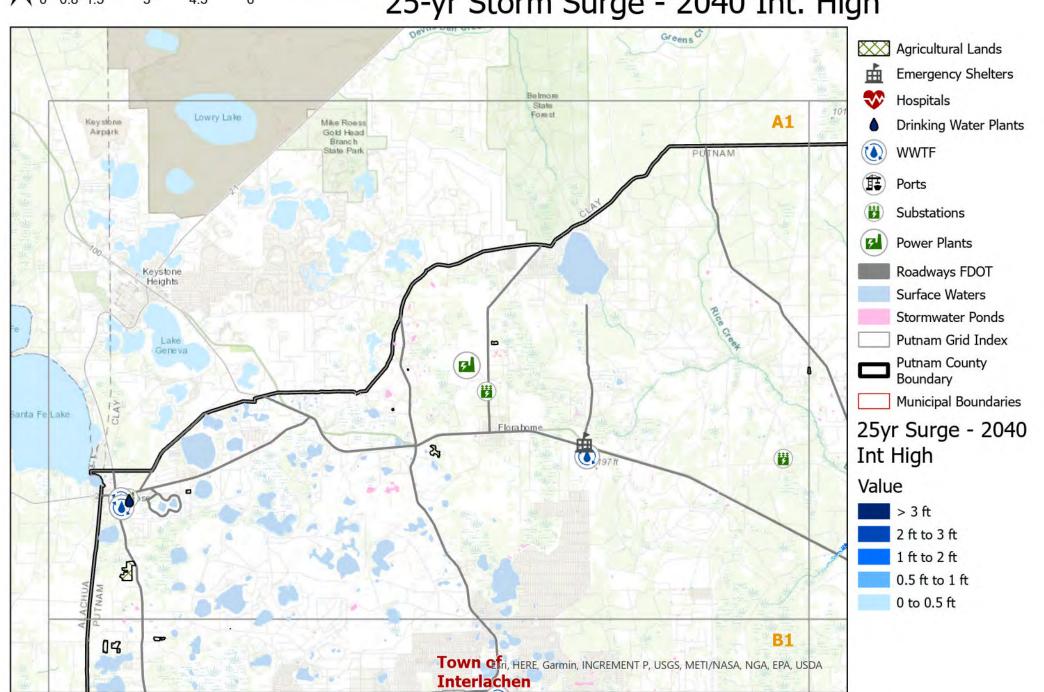
Exposure Analysis: Putnam County, Florida









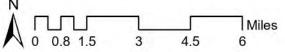


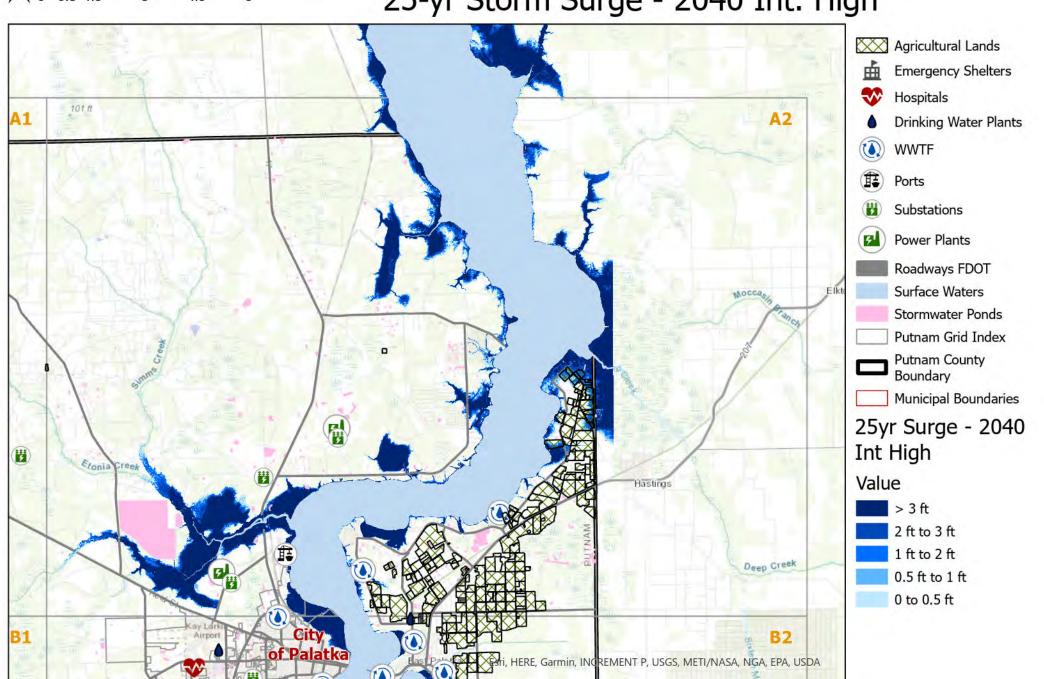
Exposure Analysis: Putnam County, Florida









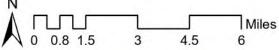


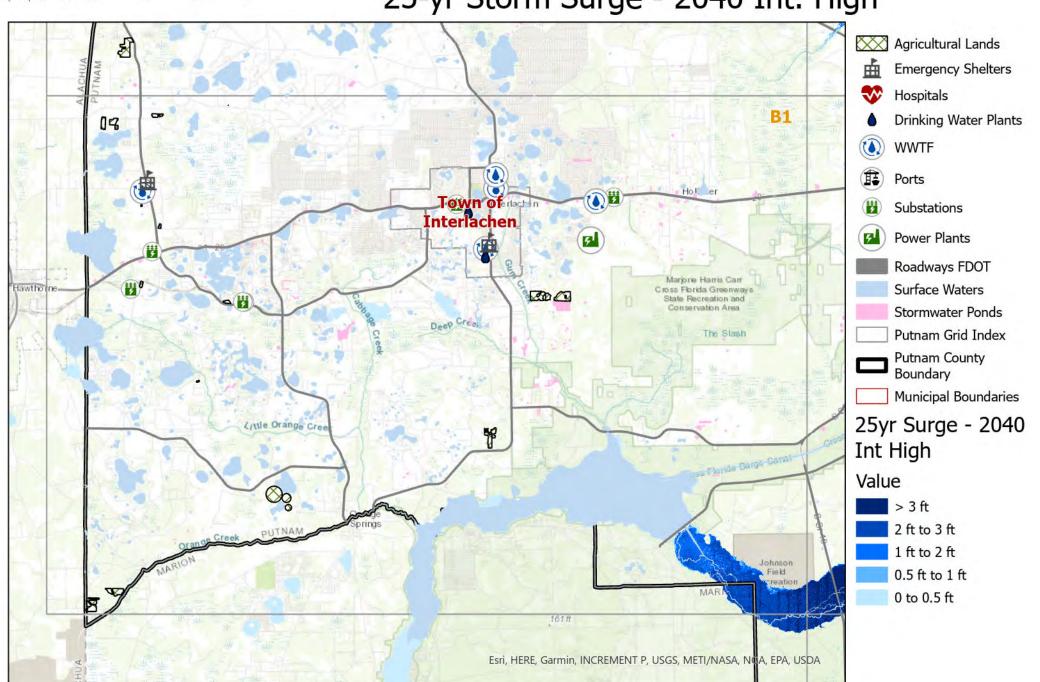
Exposure Analysis: Putnam County, Florida









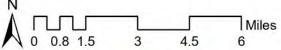


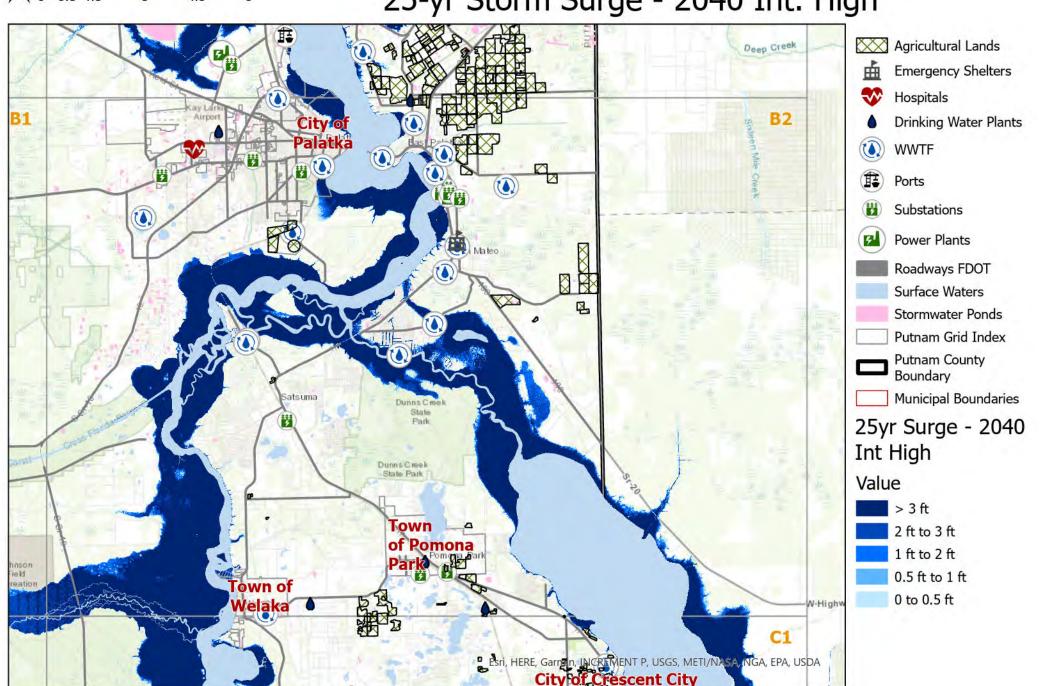
Exposure Analysis: Putnam County, Florida









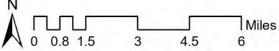


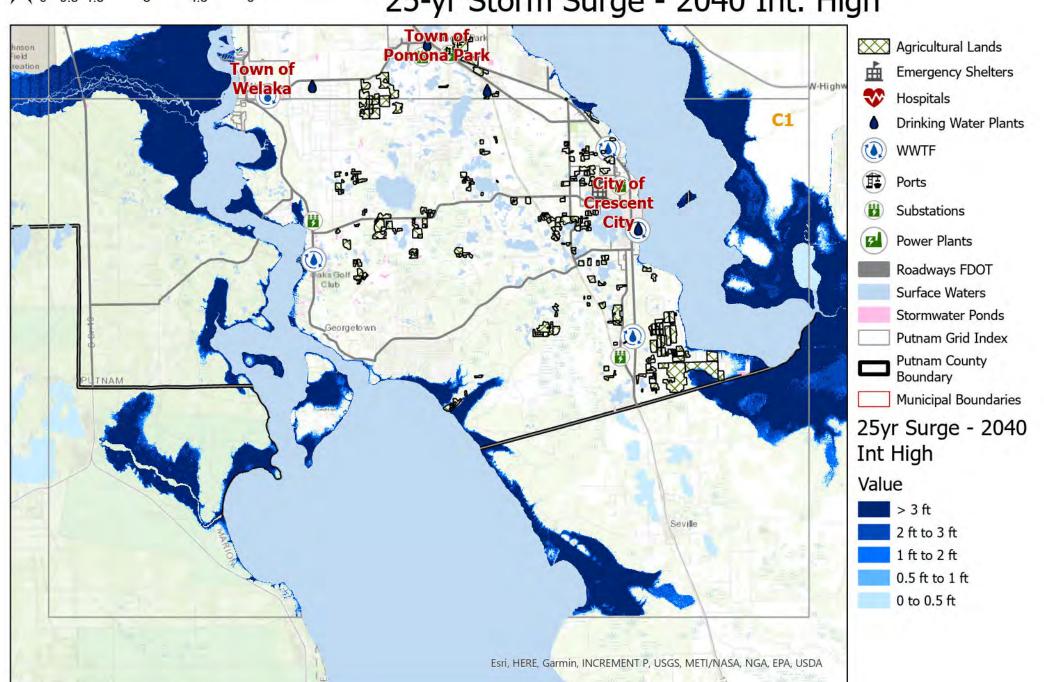
Exposure Analysis: Putnam County, Florida









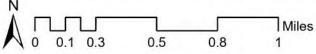


Exposure Analysis: Putnam County, Florida









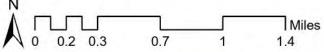


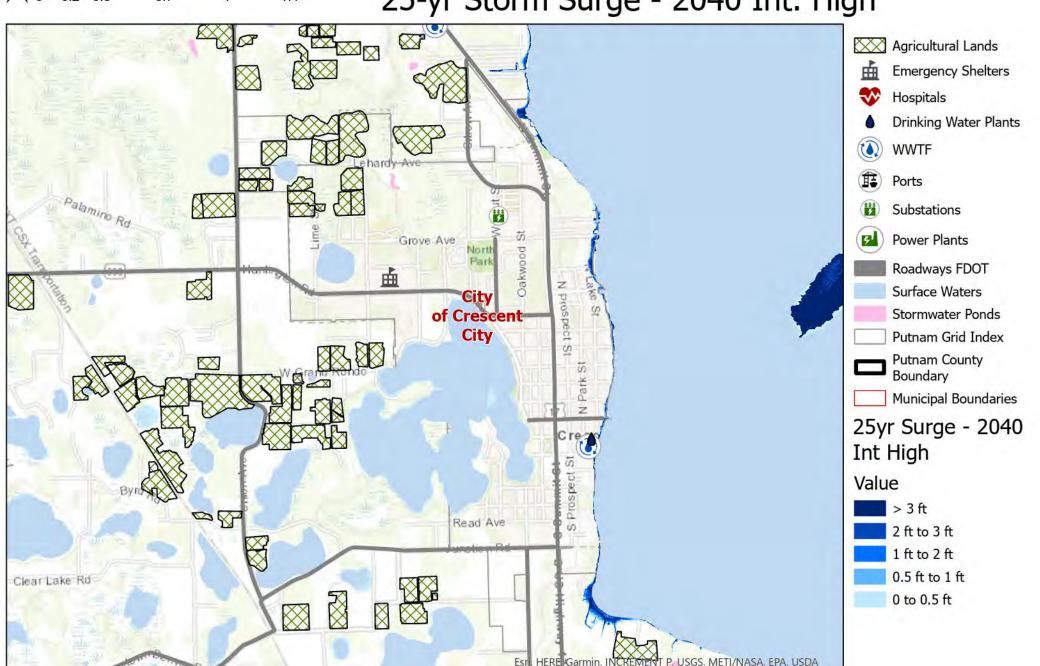
Exposure Analysis: Putnam County, Florida









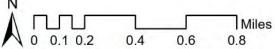


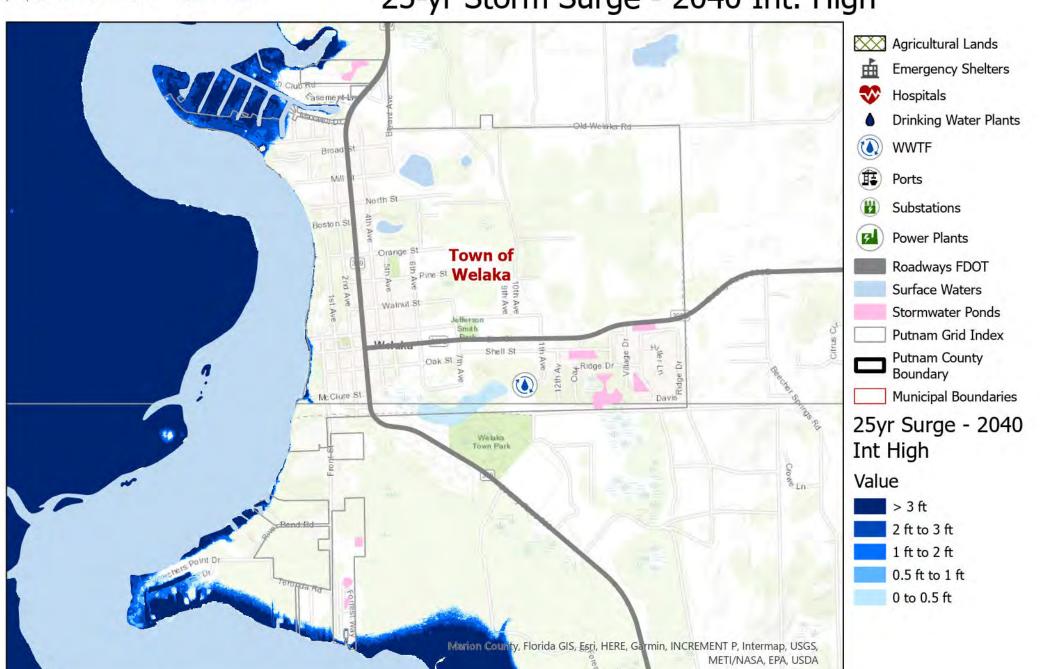
Exposure Analysis: Putnam County, Florida









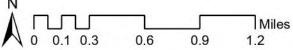


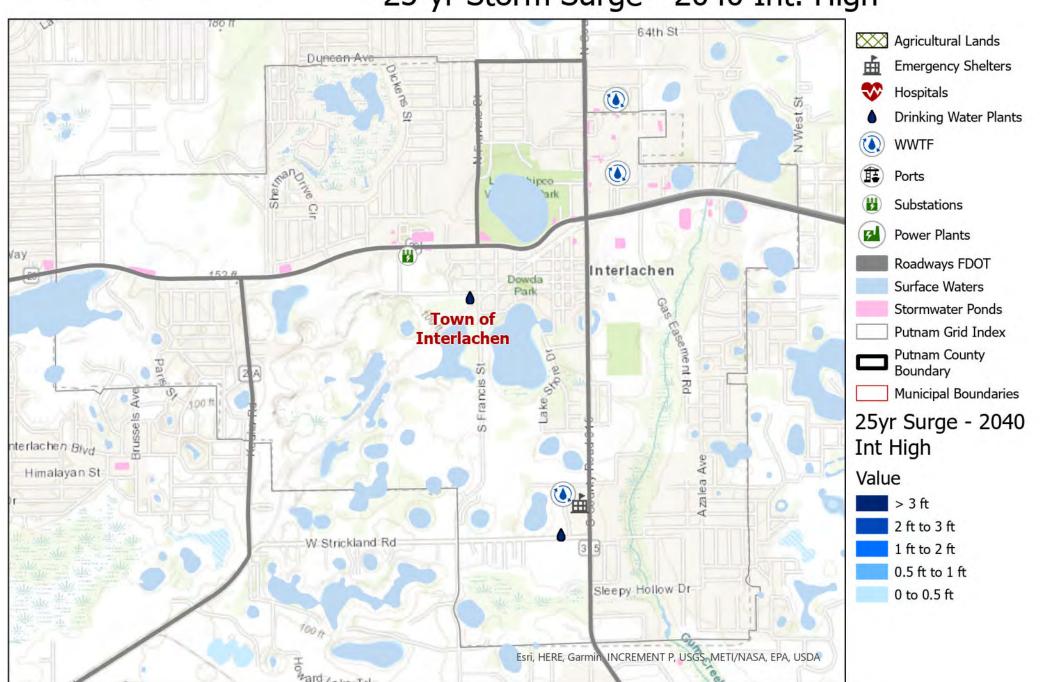
Exposure Analysis: Putnam County, Florida









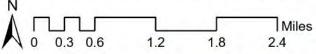


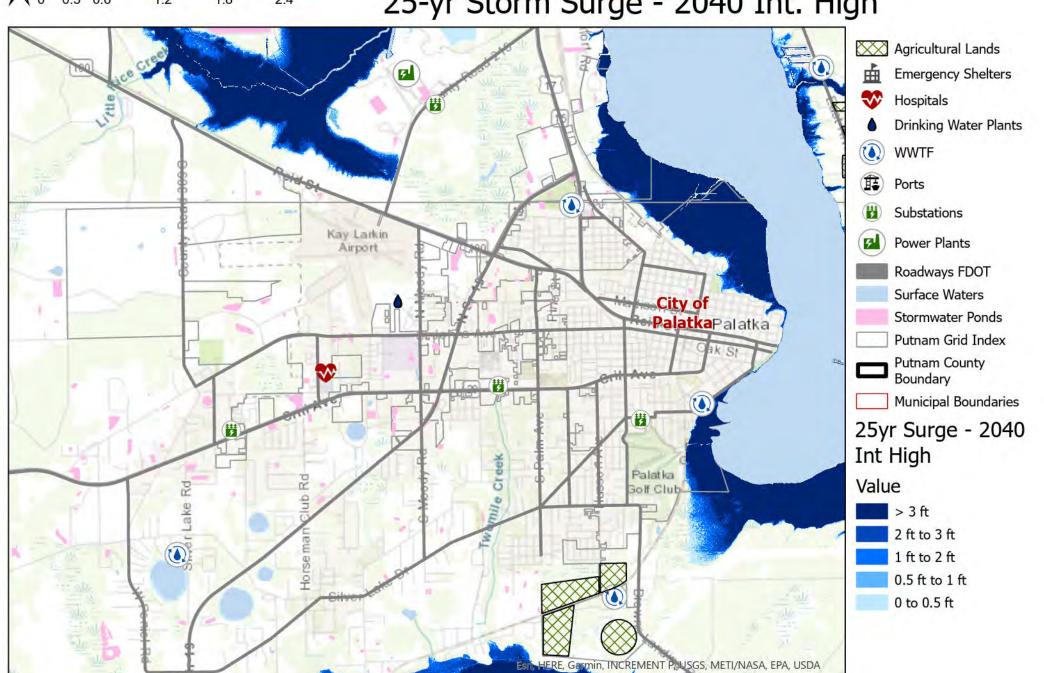
Exposure Analysis: Putnam County, Florida











## 25-yr Storm Surge; 2070 Int. Low; Map Series

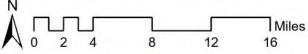
- Full County view (1 map)
- Gridded extent areas to cover County (5 maps)
- City extent views at 5 municipality locations (5 maps)

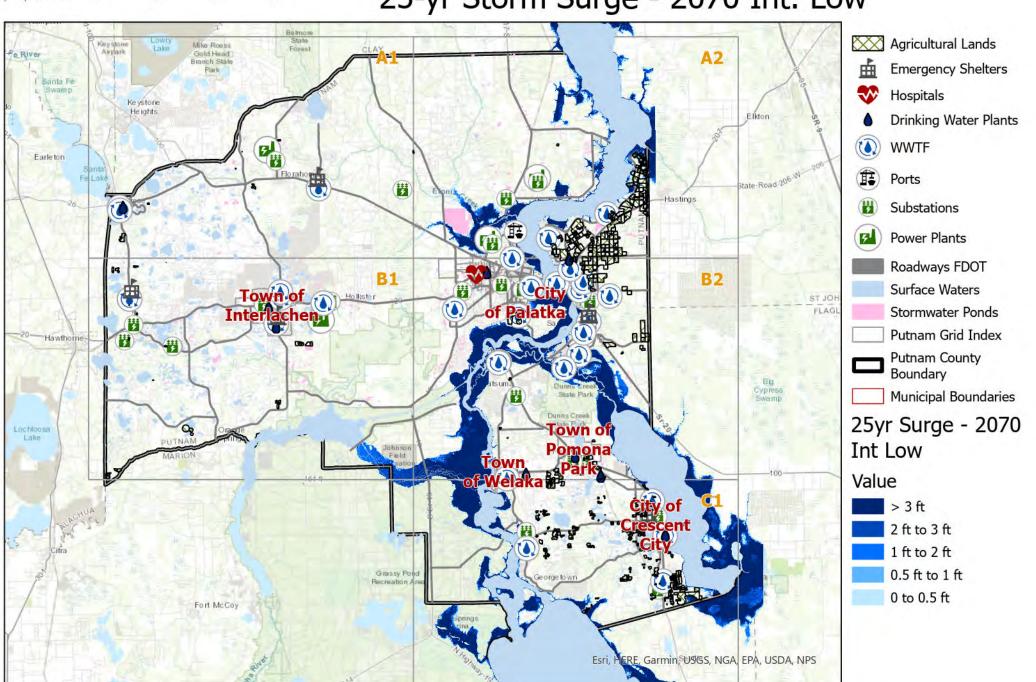
Exposure Analysis: Putnam County, Florida









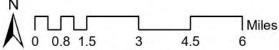


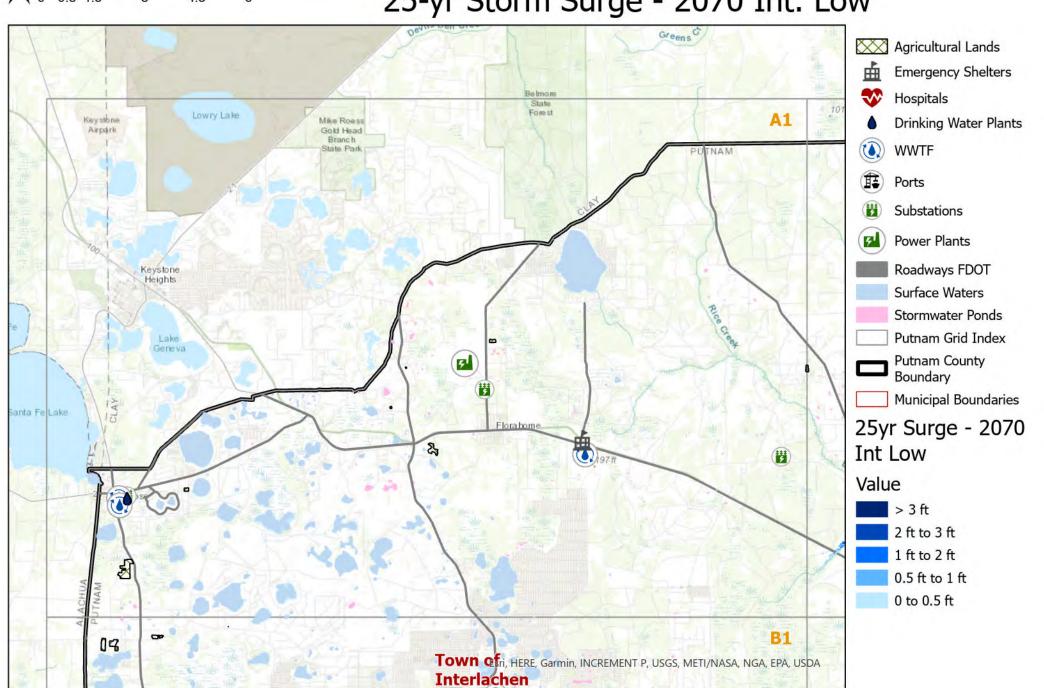
Exposure Analysis: Putnam County, Florida









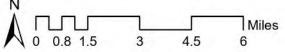


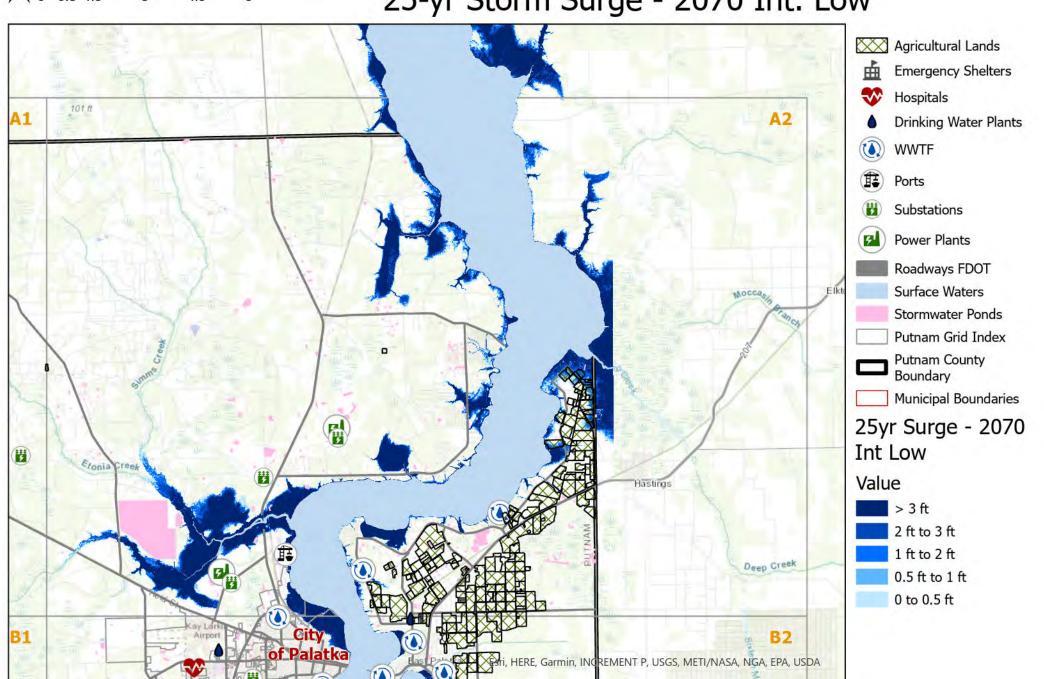
Exposure Analysis: Putnam County, Florida









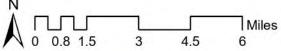


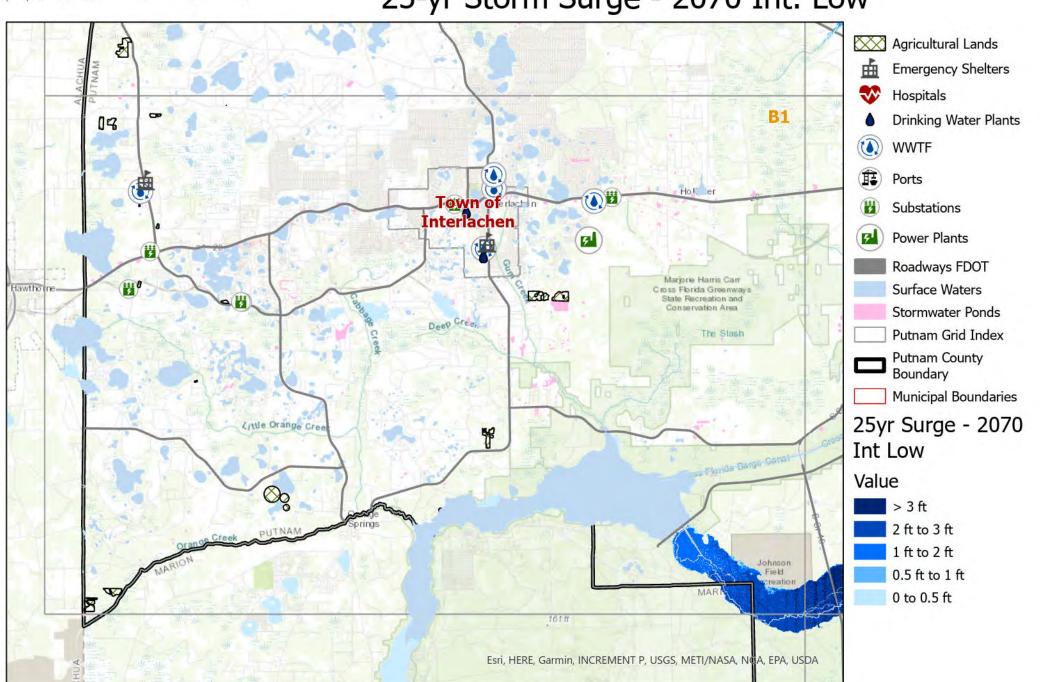
Exposure Analysis: Putnam County, Florida









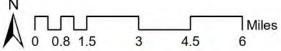


Exposure Analysis: Putnam County, Florida



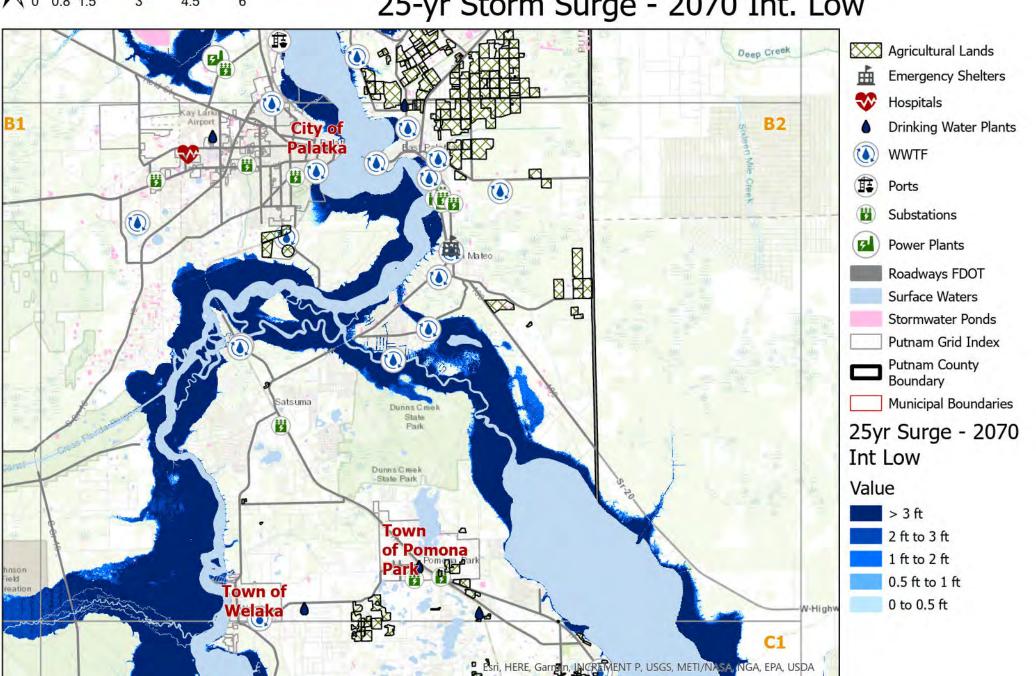






## 25-yr Storm Surge - 2070 Int. Low

Crescent City

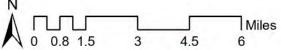


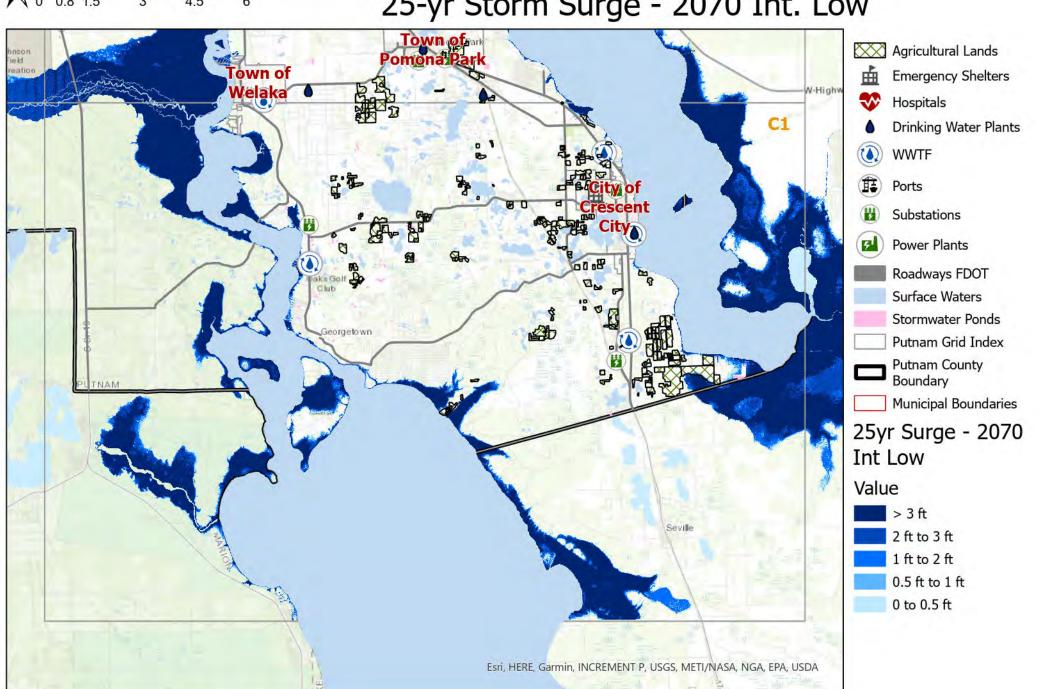
Exposure Analysis: Putnam County, Florida









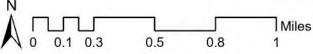


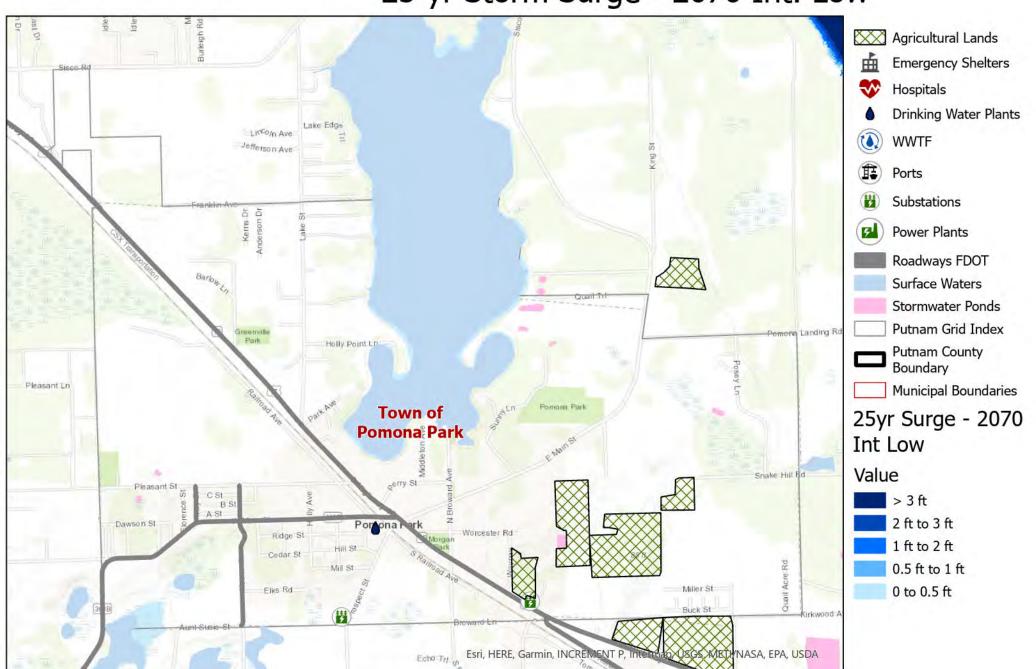
Exposure Analysis: Putnam County, Florida









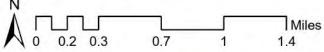


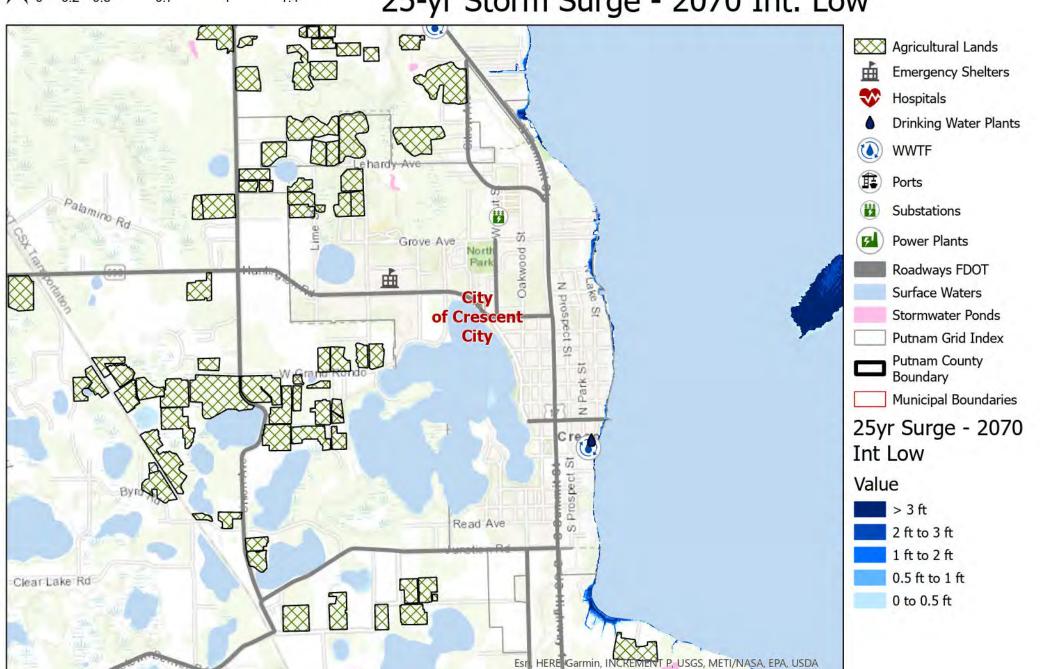
Exposure Analysis: Putnam County, Florida









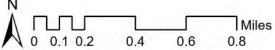


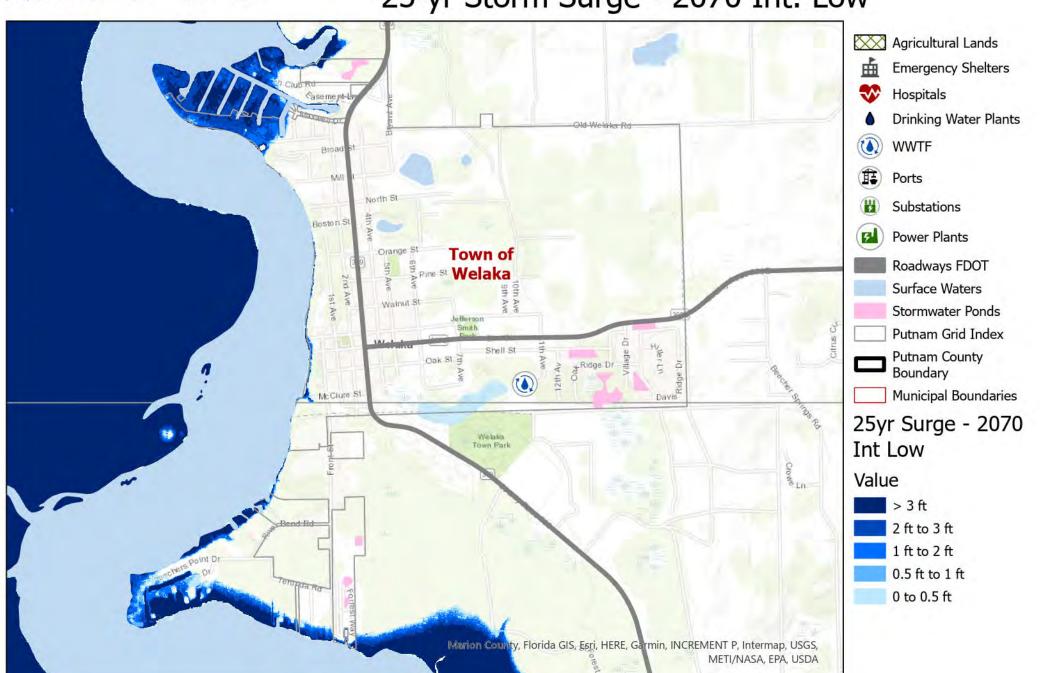
Exposure Analysis: Putnam County, Florida









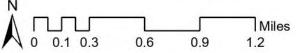


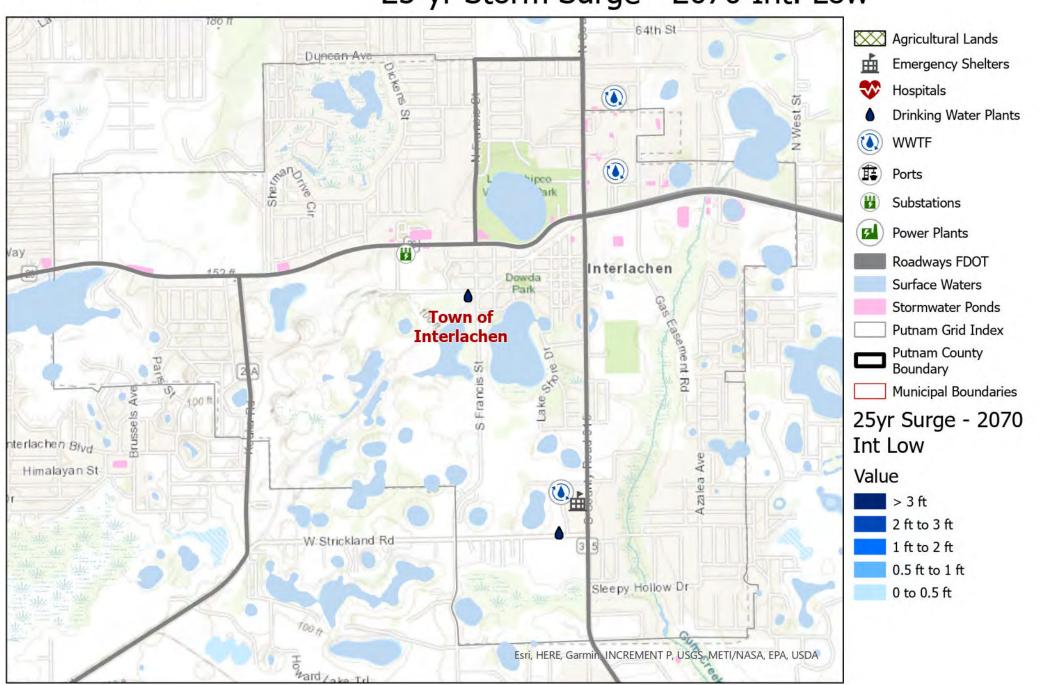
Exposure Analysis: Putnam County, Florida









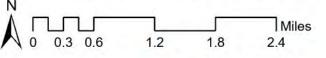


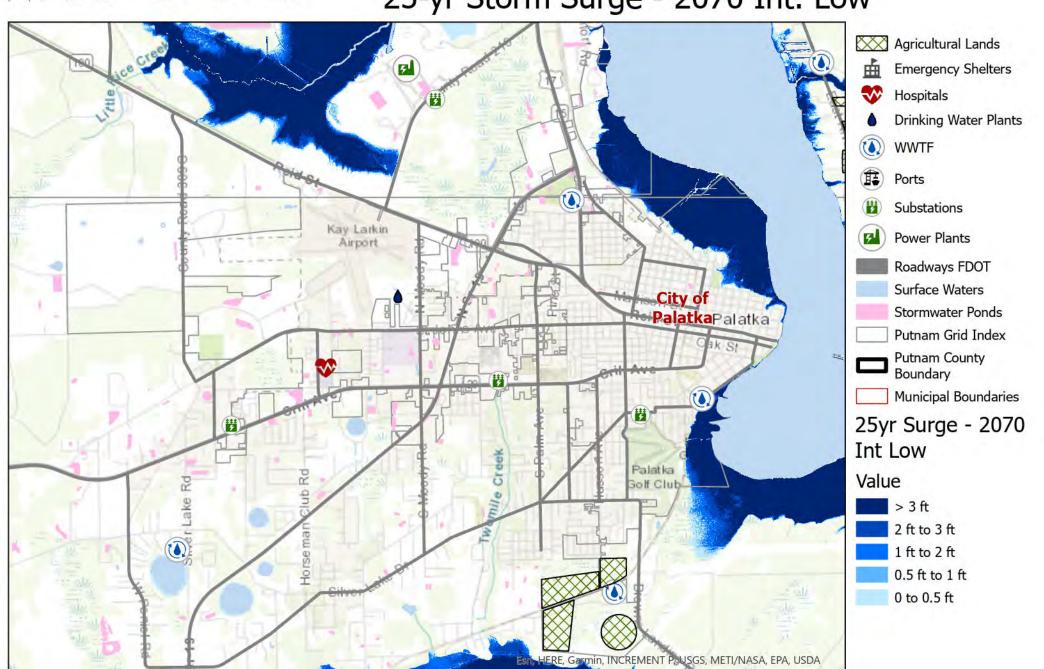
Exposure Analysis: Putnam County, Florida











# 25-yr Storm Surge; 2070 Int. High; Map Series

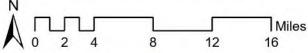
- Full County view (1 map)
- Gridded extent areas to cover County (5 maps)
- City extent views at 5 municipality locations (5 maps)

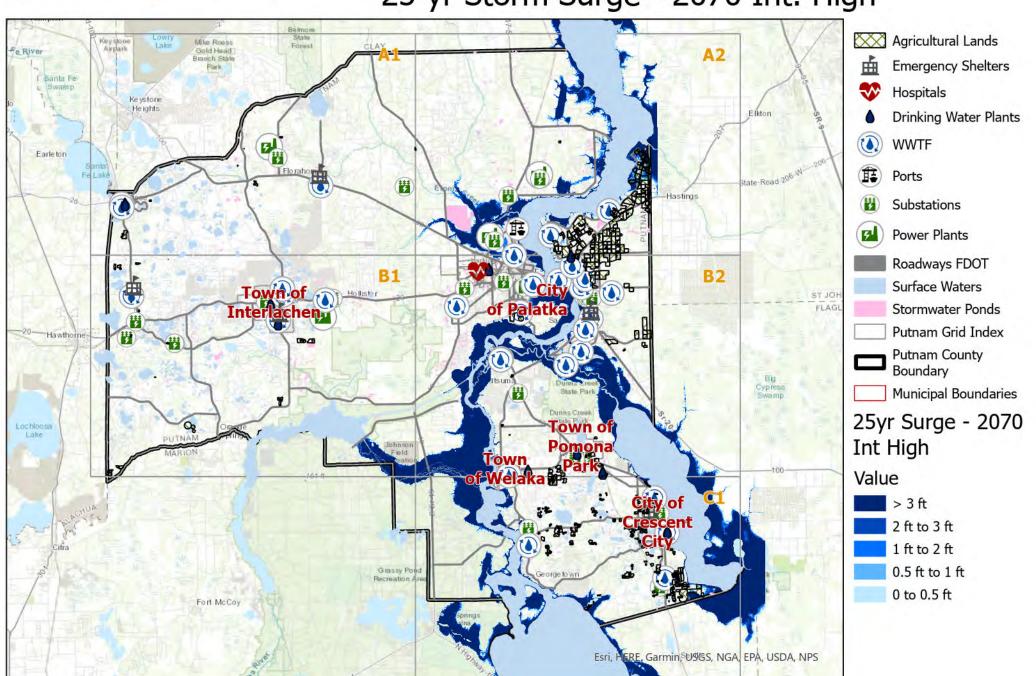
Exposure Analysis: Putnam County, Florida









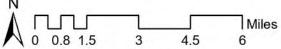


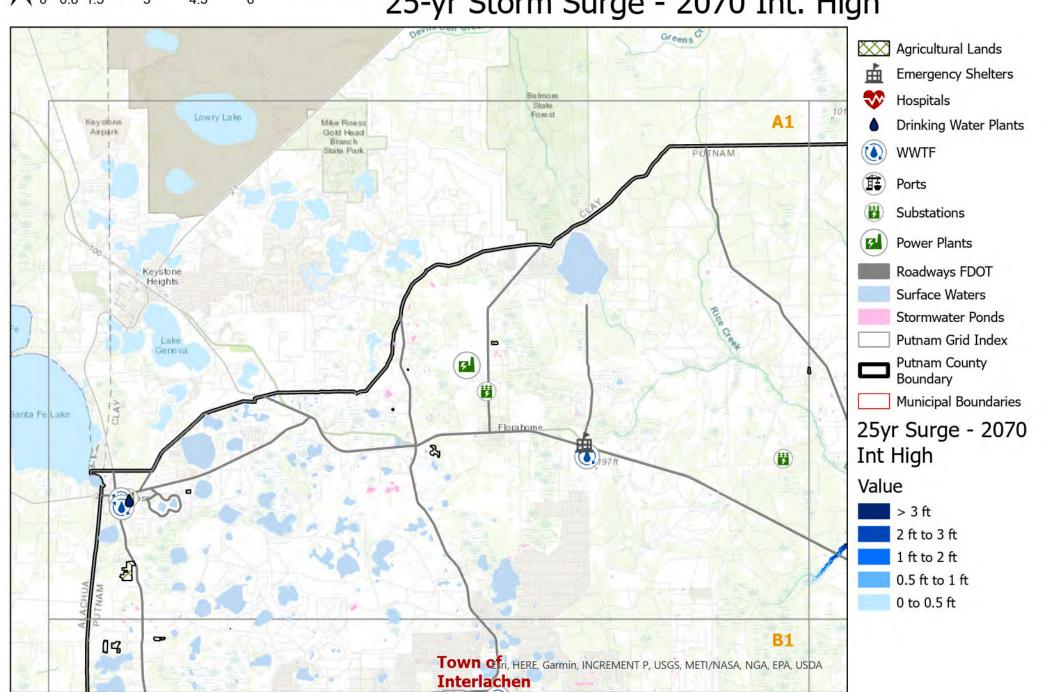
Exposure Analysis: Putnam County, Florida









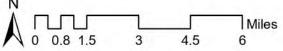


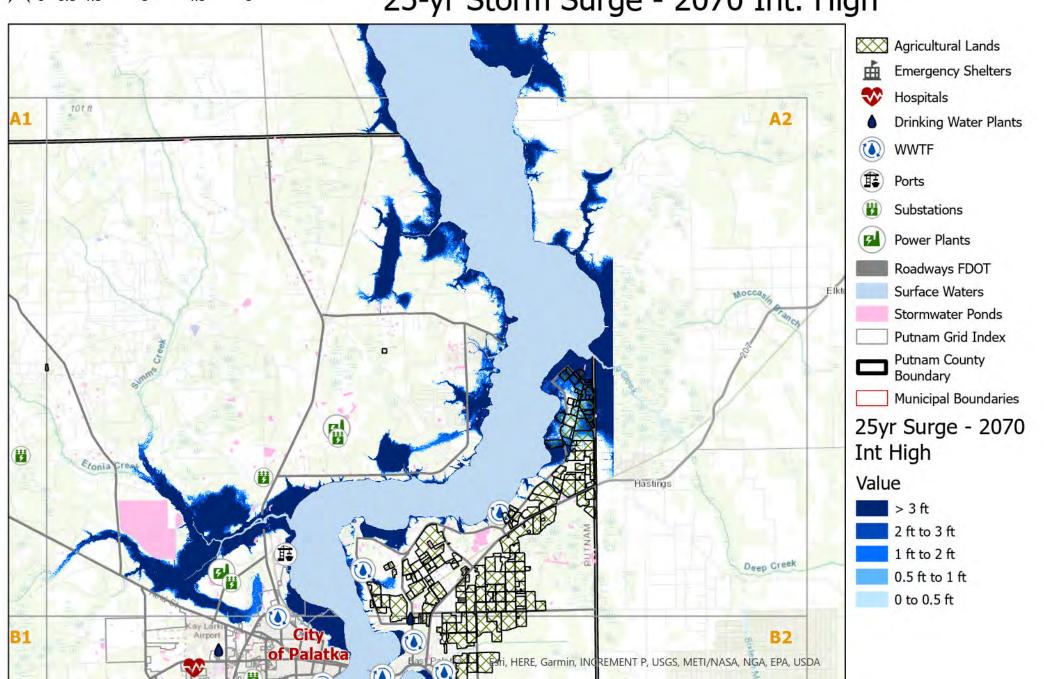
Exposure Analysis: Putnam County, Florida









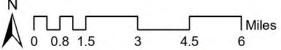


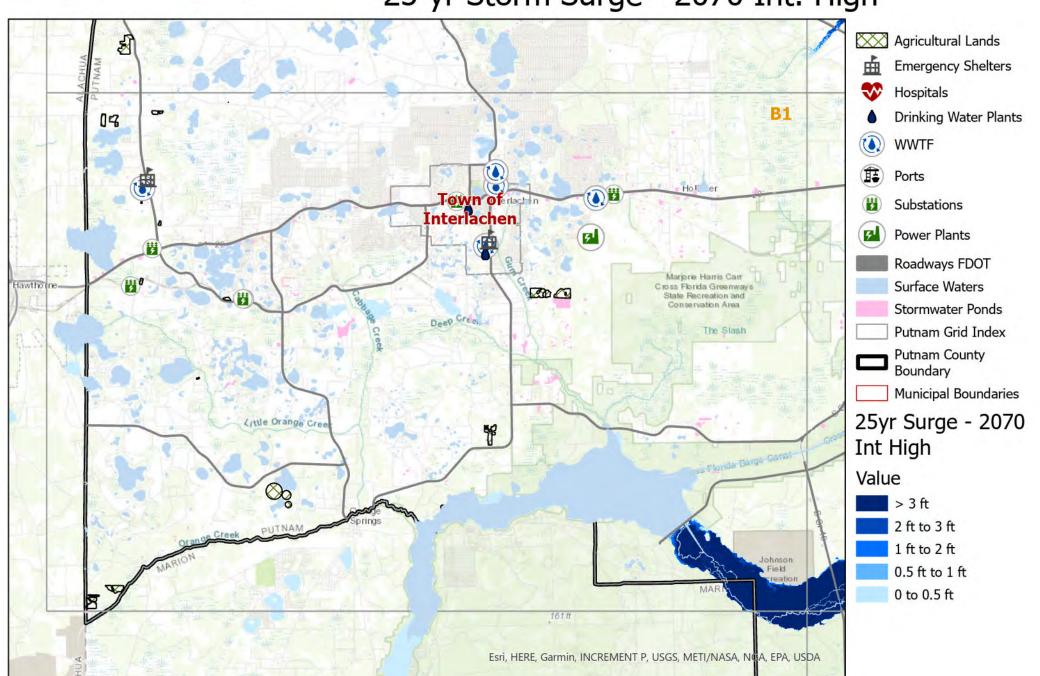
Exposure Analysis: Putnam County, Florida









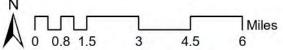


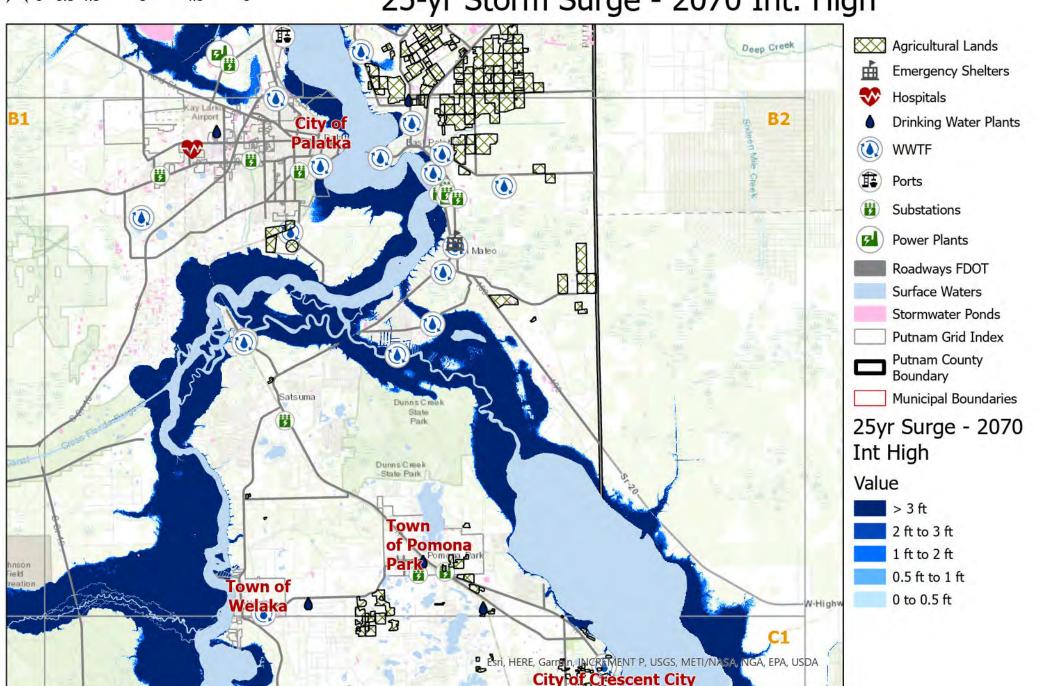
Exposure Analysis: Putnam County, Florida









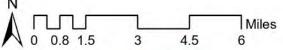


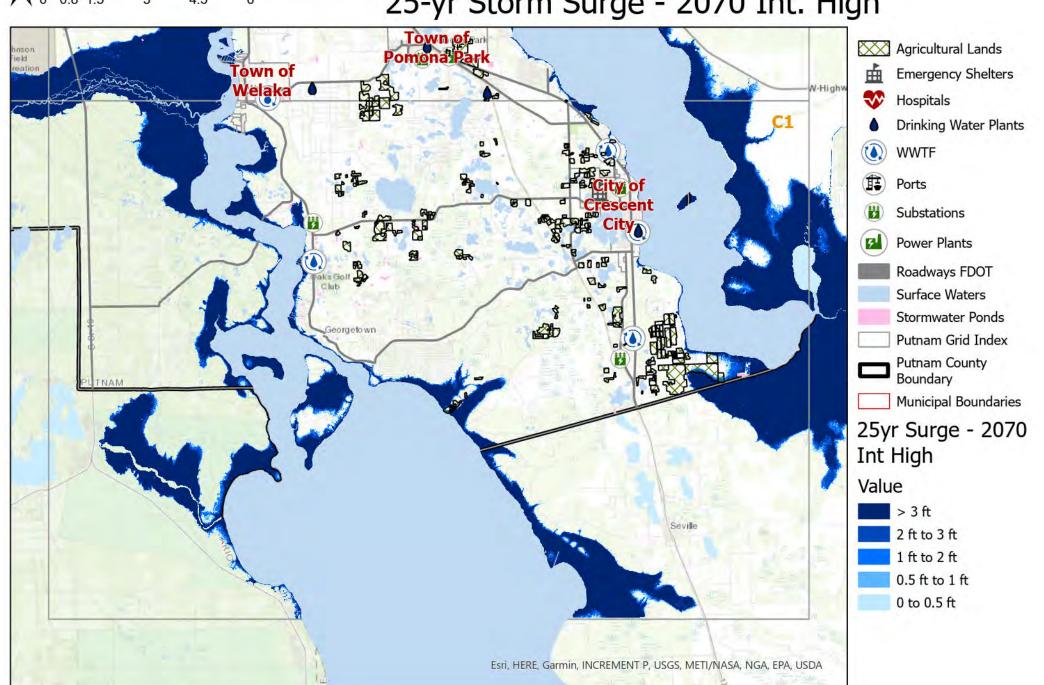
Exposure Analysis: Putnam County, Florida









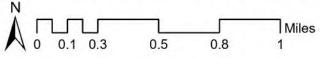


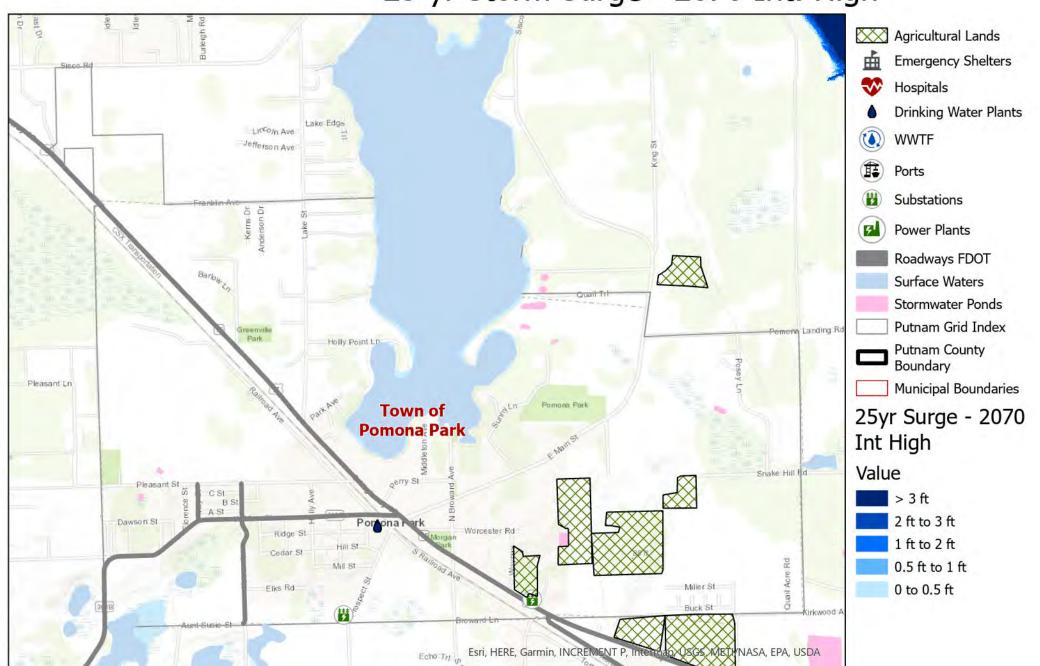
Exposure Analysis: Putnam County, Florida









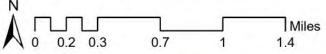


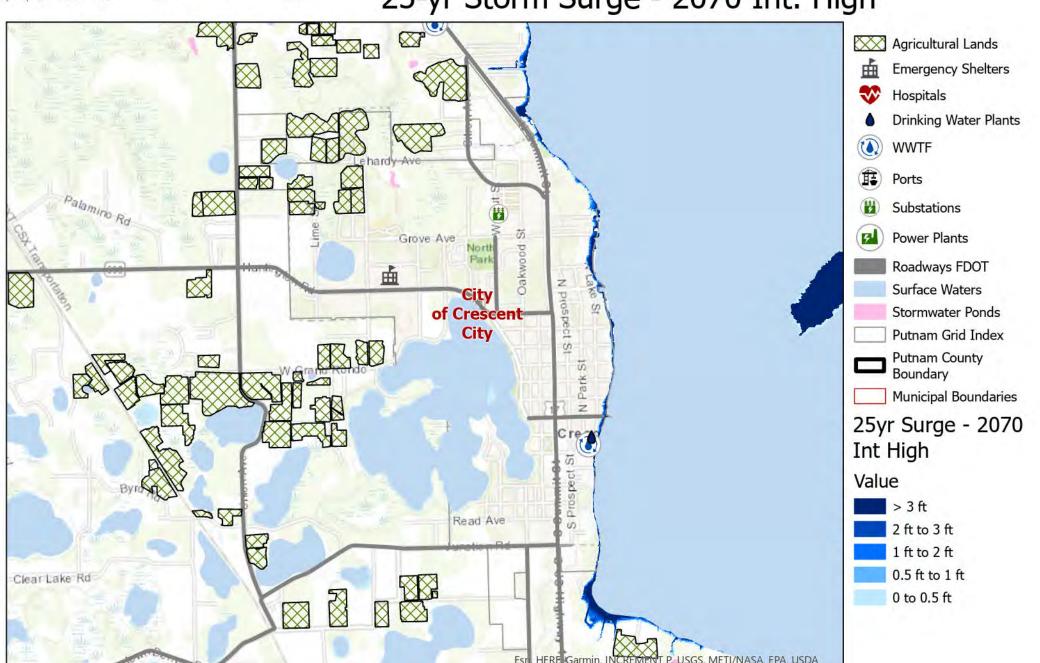
Exposure Analysis: Putnam County, Florida









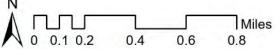


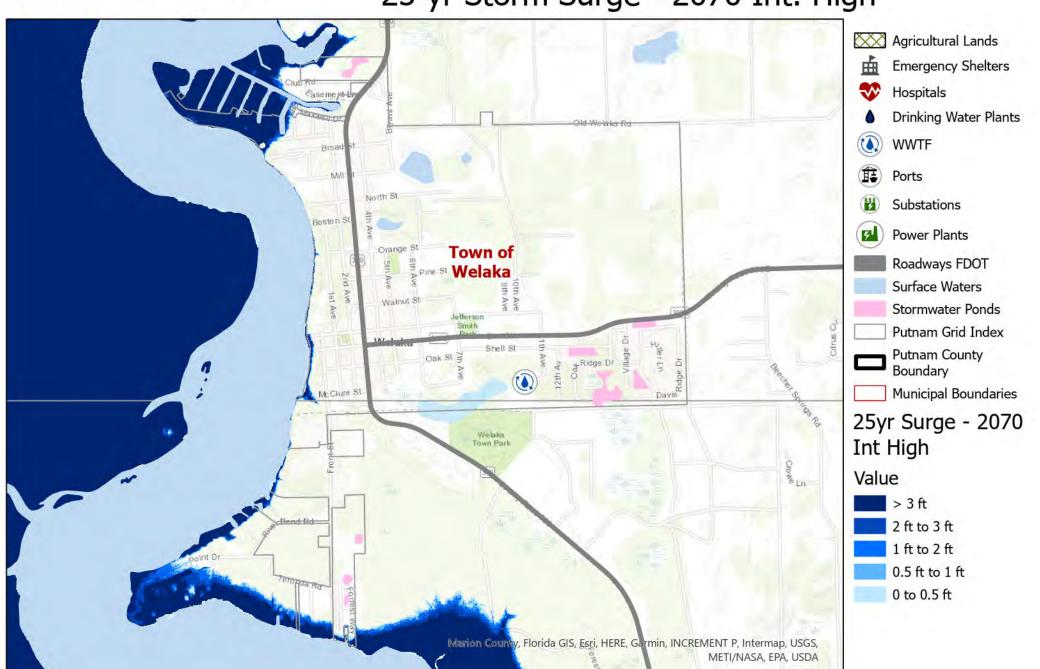
Exposure Analysis: Putnam County, Florida









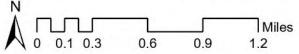


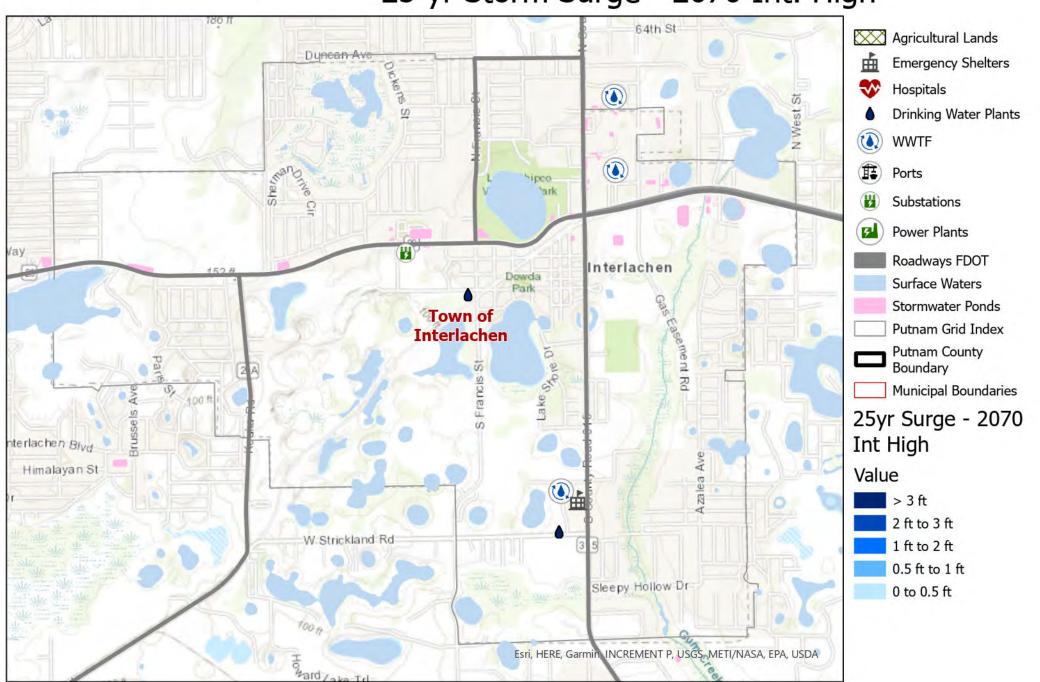
Exposure Analysis: Putnam County, Florida









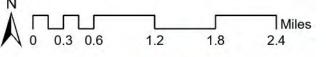


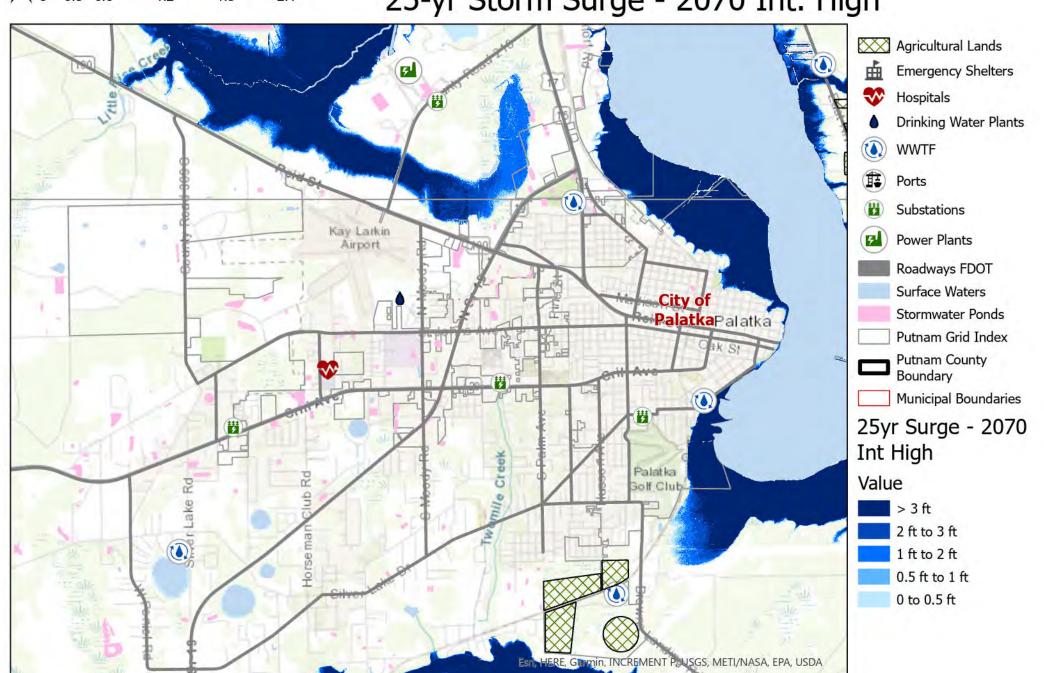
Exposure Analysis: Putnam County, Florida











# 100-yr Storm Surge; present; Map Series

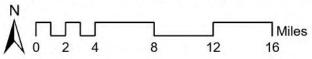
- Full County view (1 map)
- Gridded extent areas to cover County (5 maps)
- City extent views at 5 municipality locations (5 maps)

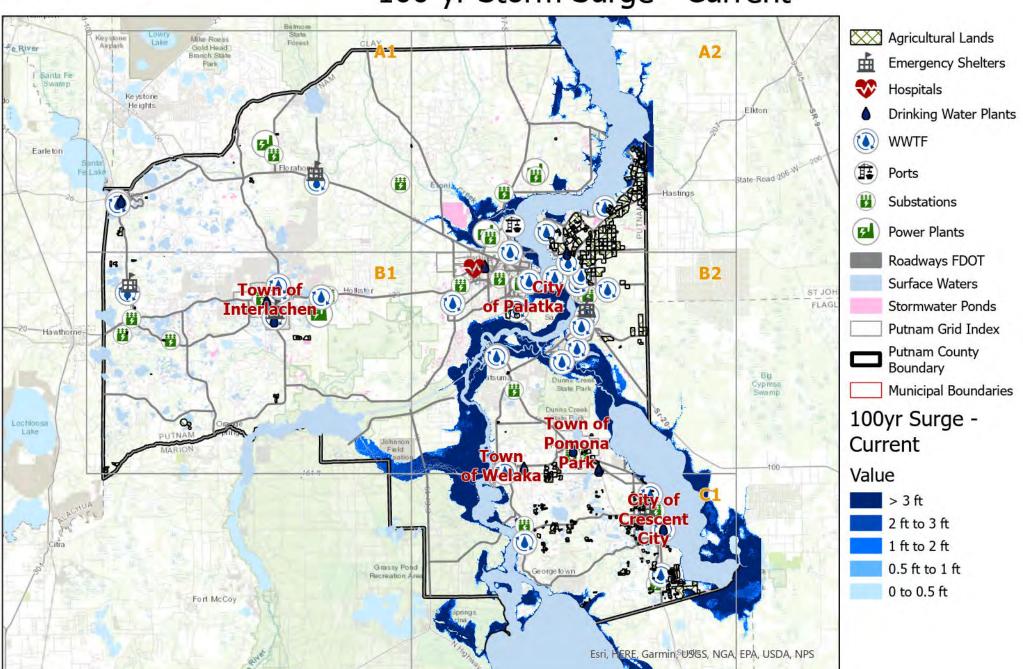
Exposure Analysis: Putnam County, Florida









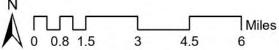


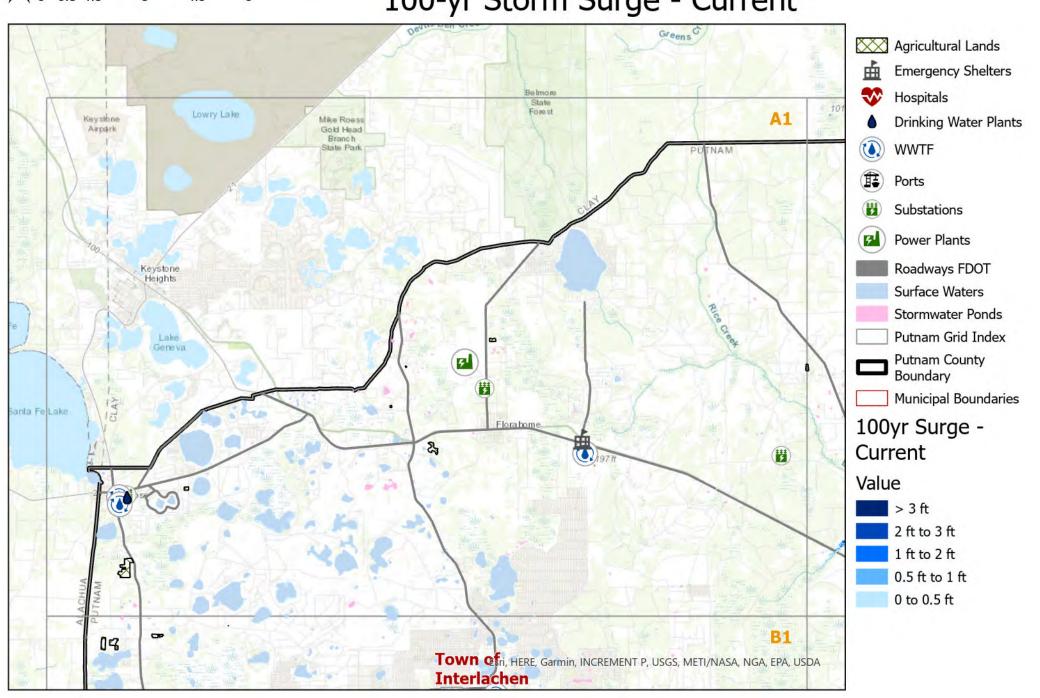
Exposure Analysis: Putnam County, Florida









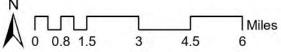


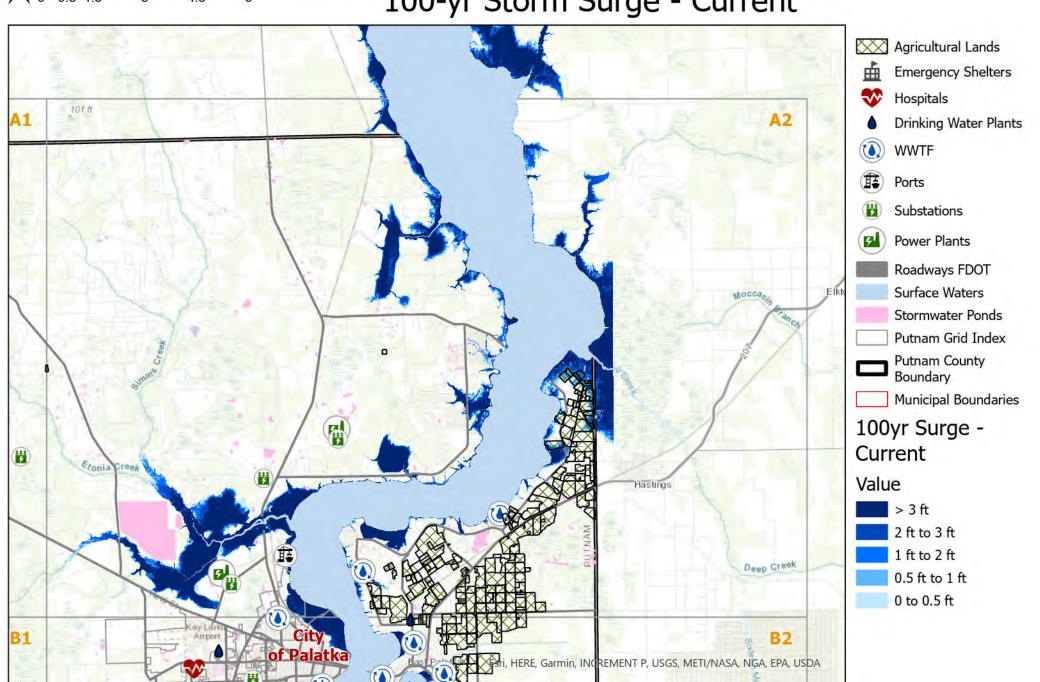
Exposure Analysis: Putnam County, Florida









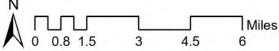


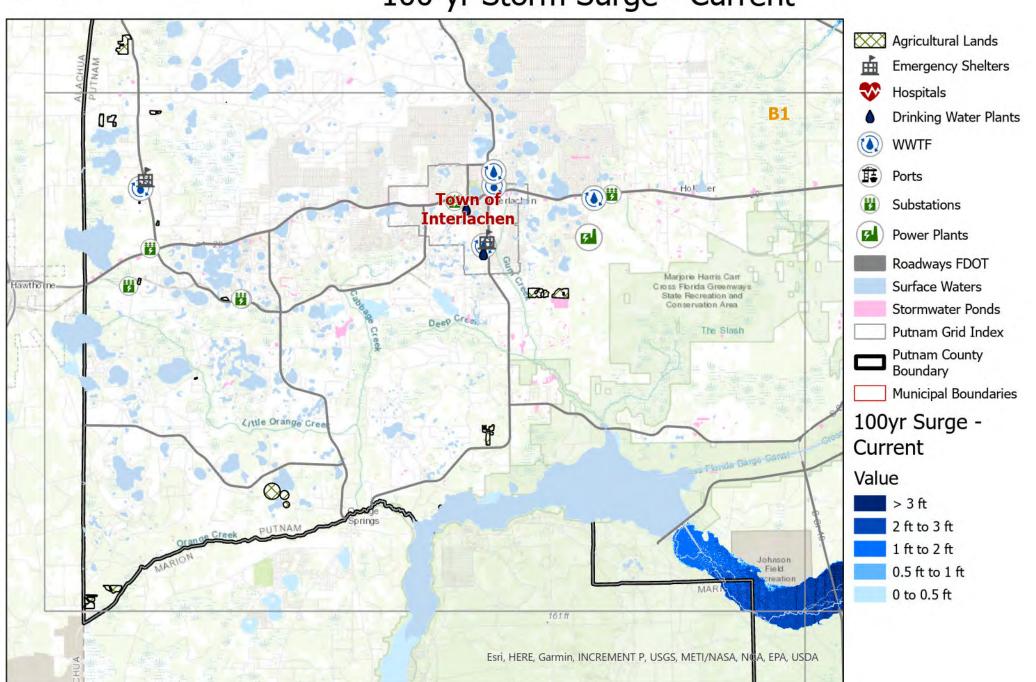
Exposure Analysis: Putnam County, Florida









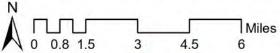


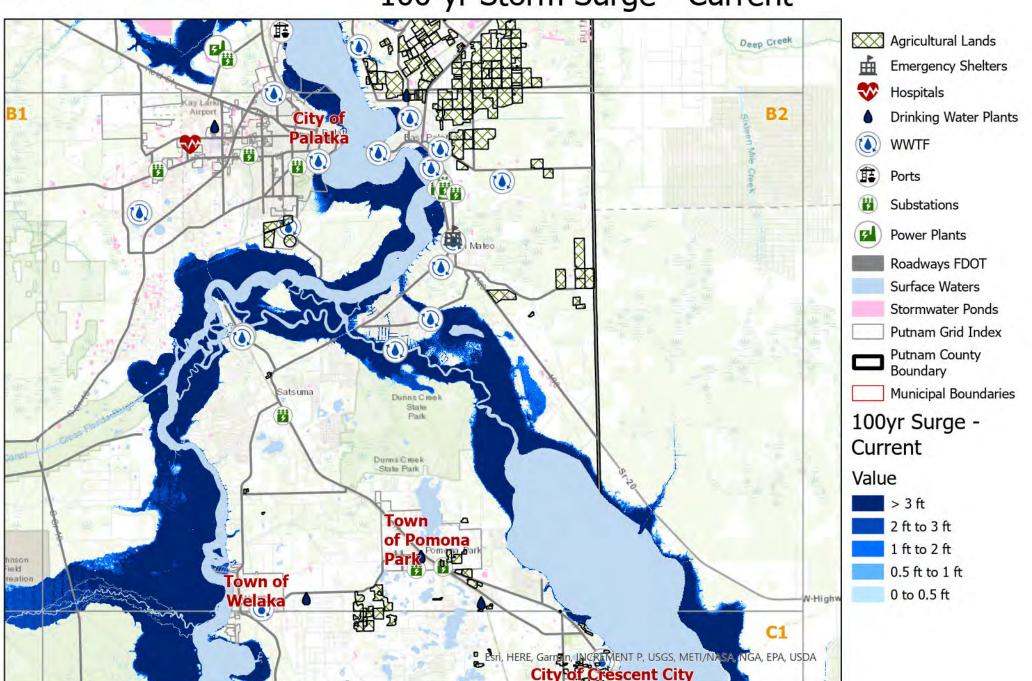
Exposure Analysis: Putnam County, Florida









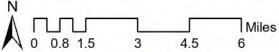


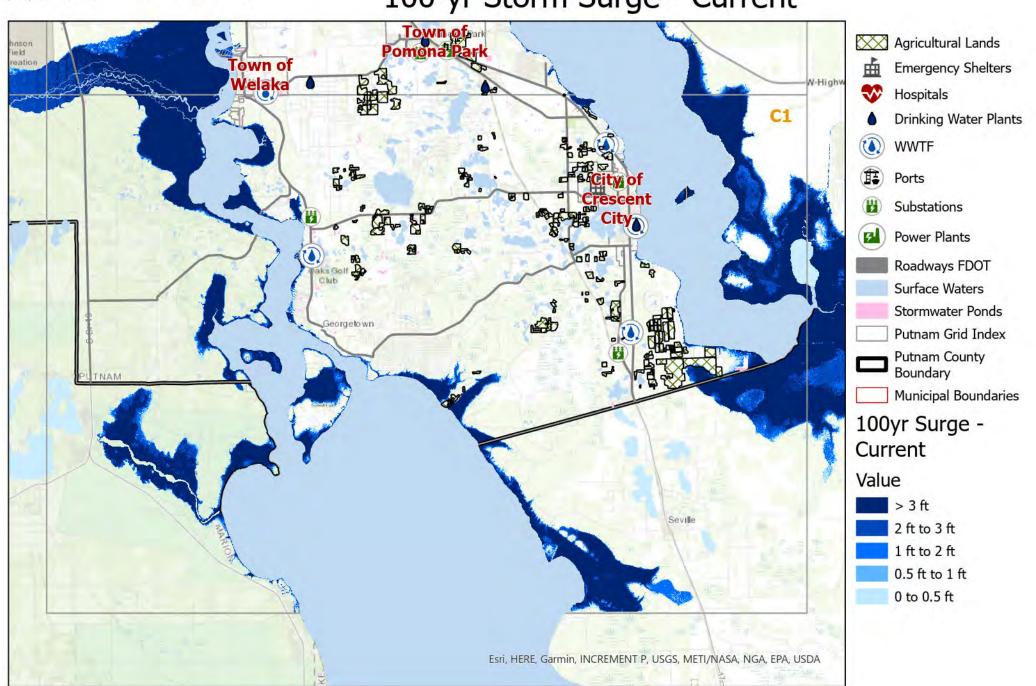
Exposure Analysis: Putnam County, Florida









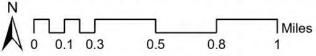


Exposure Analysis: Putnam County, Florida









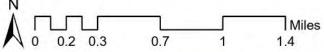


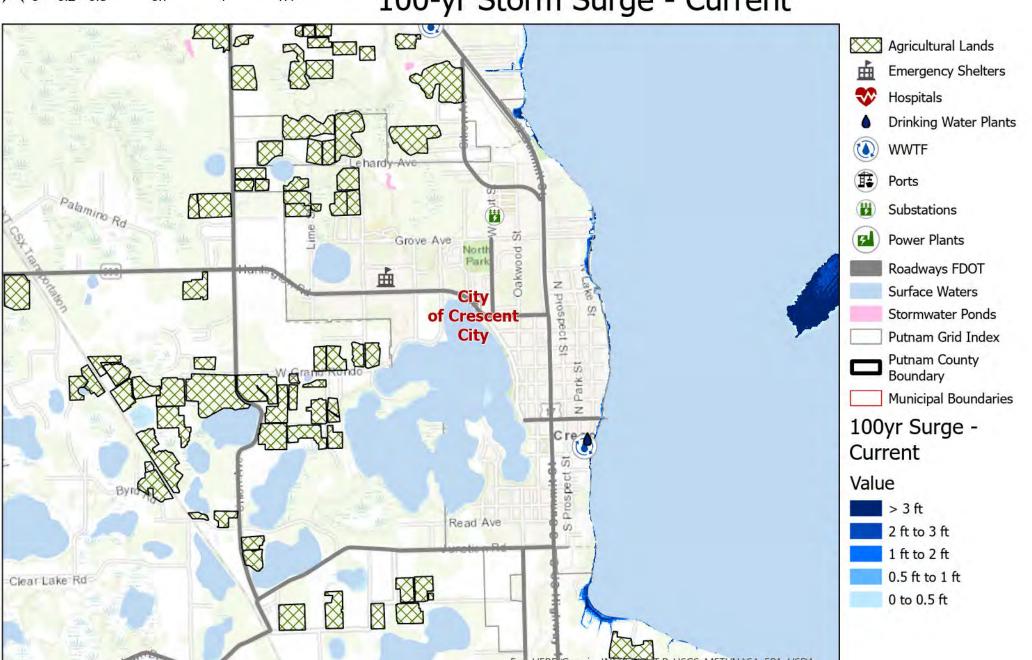
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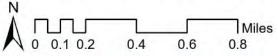


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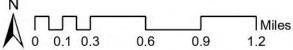


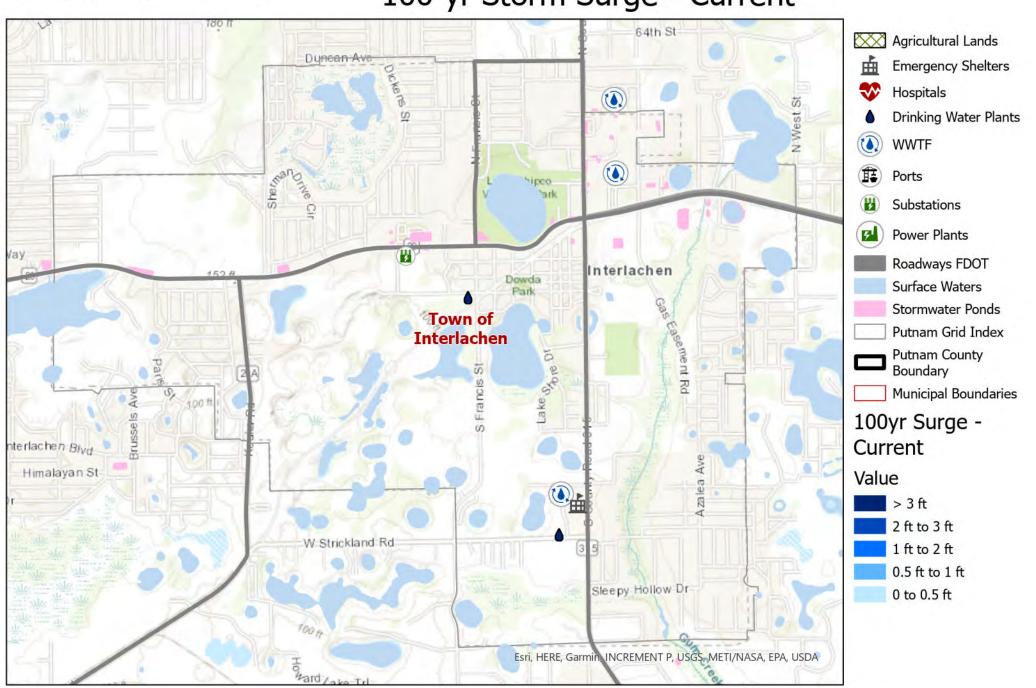
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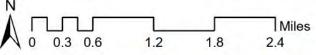


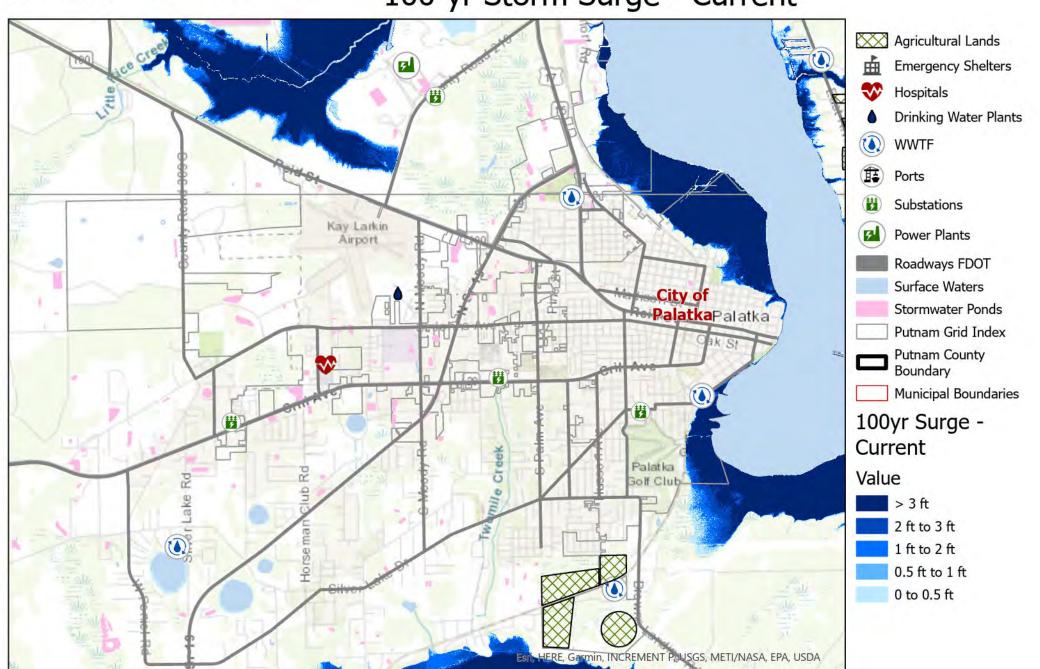
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# 100-yr Storm Surge; 2040 Int. Low; Map Series

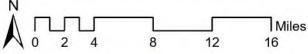
- Full County view (1 map)
- Gridded extent areas to cover County (5 maps)
- City extent views at 5 municipality locations (5 maps)

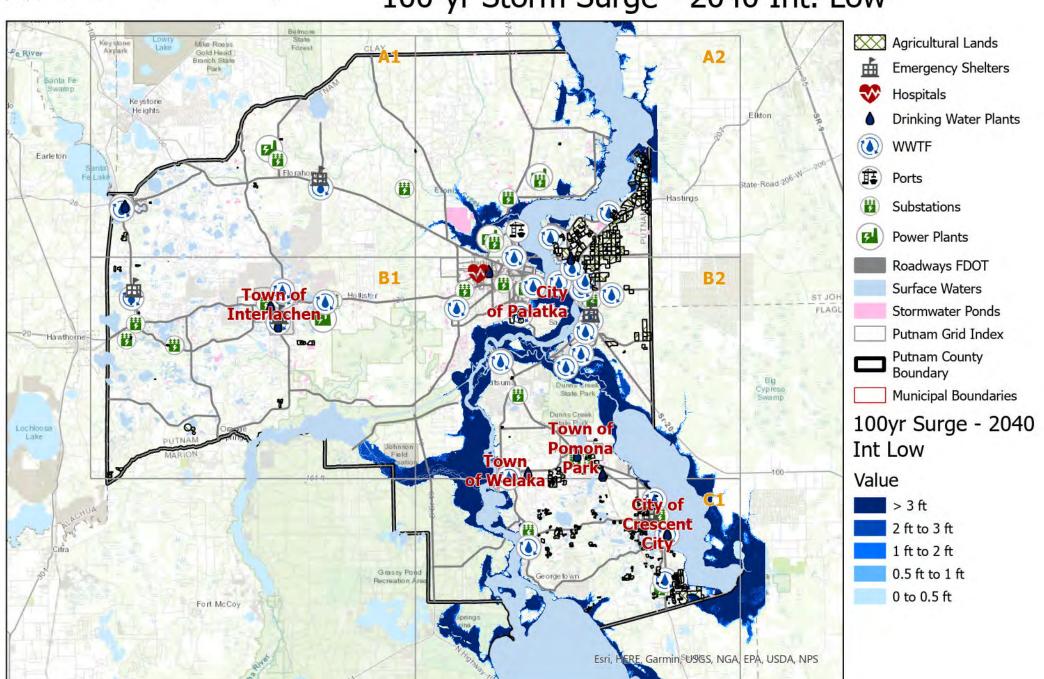
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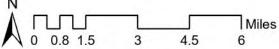


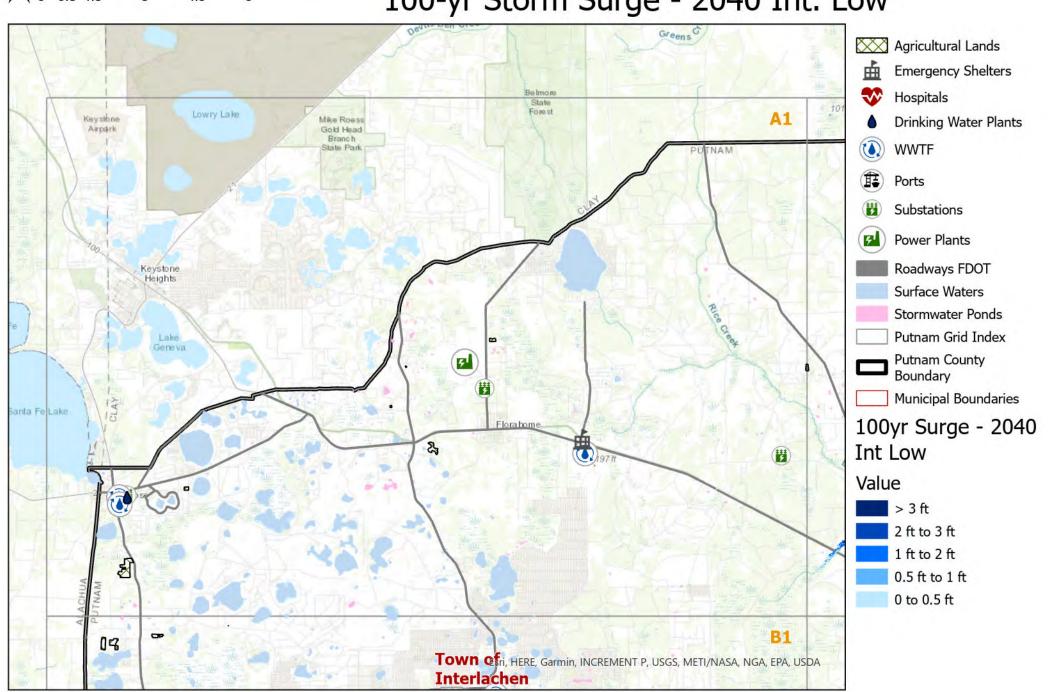
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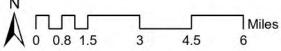


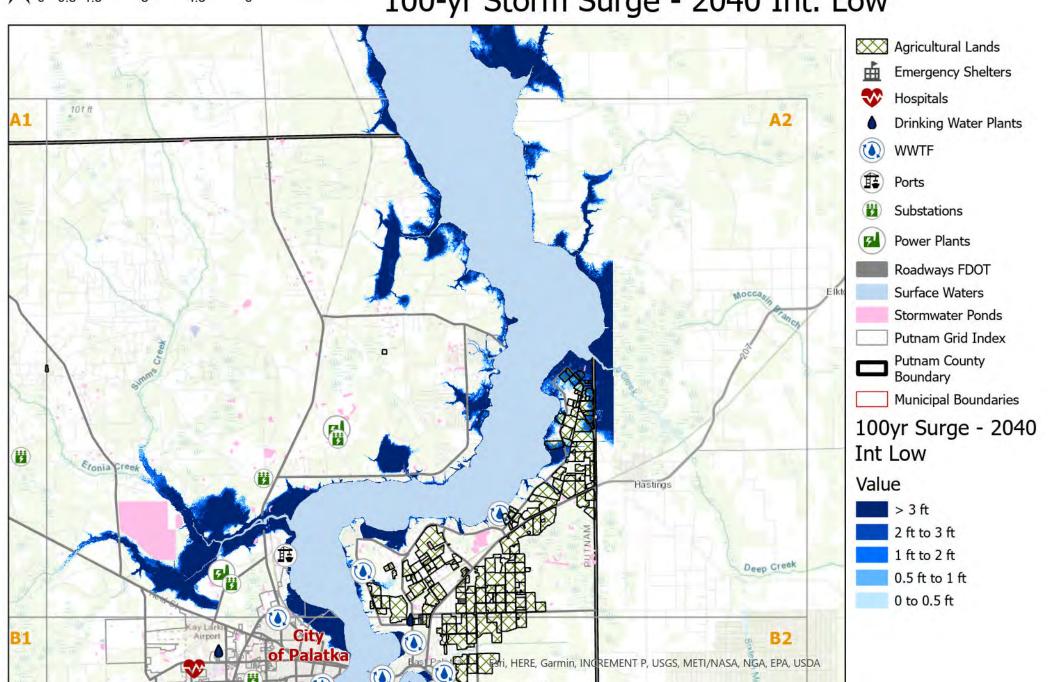
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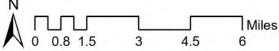


Exposure Analysis: Putnam County, Florida









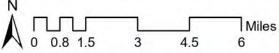


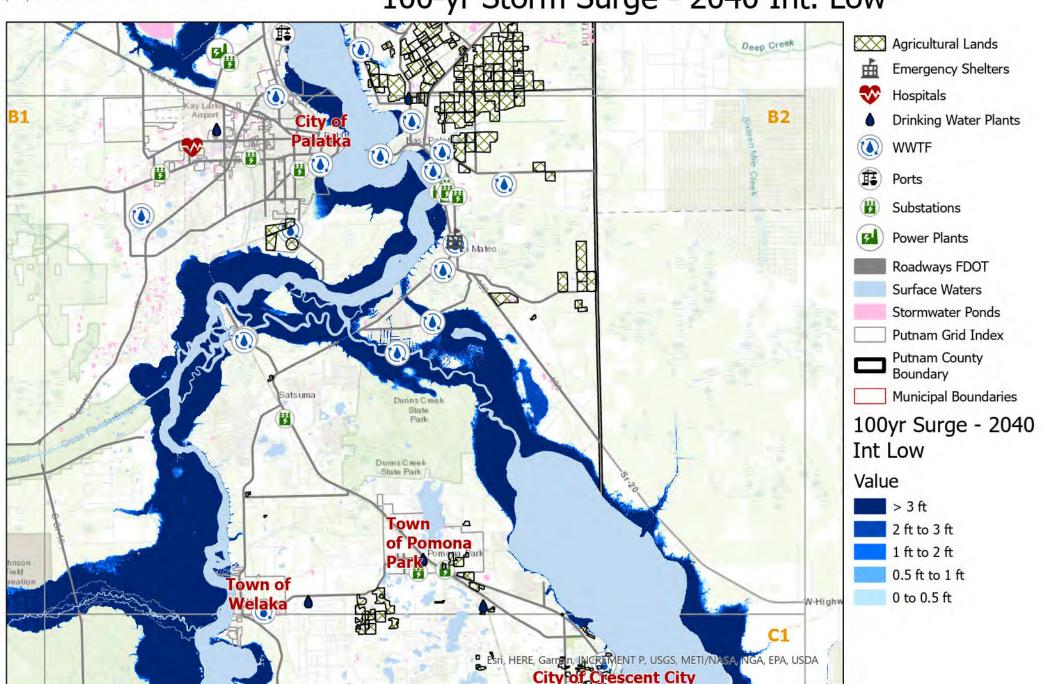
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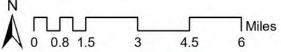


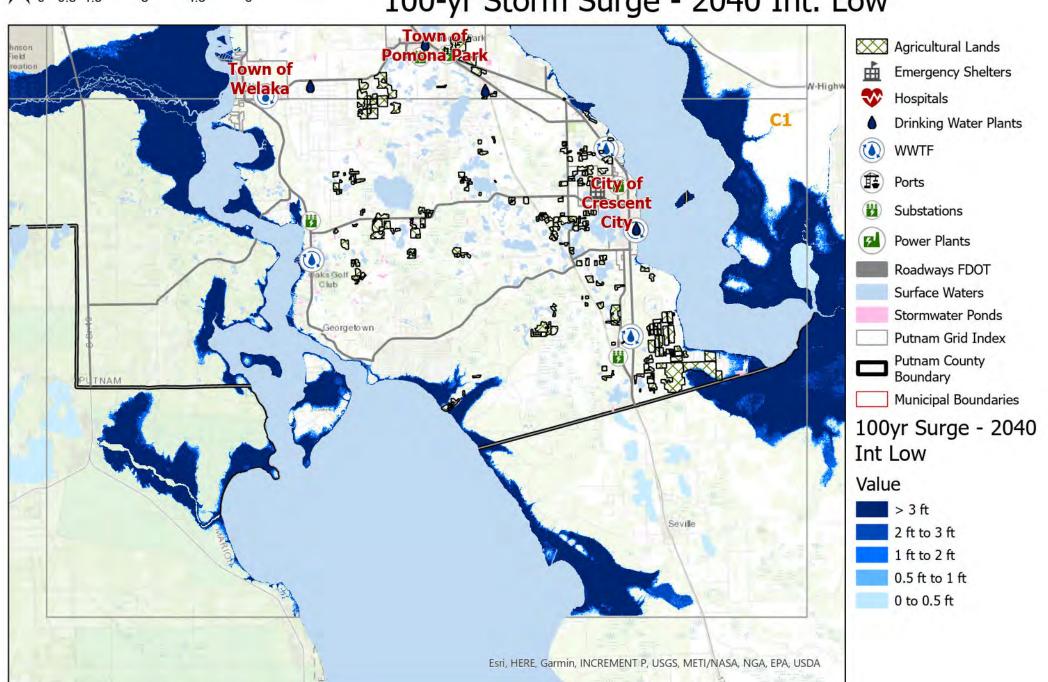
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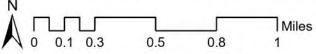


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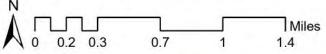


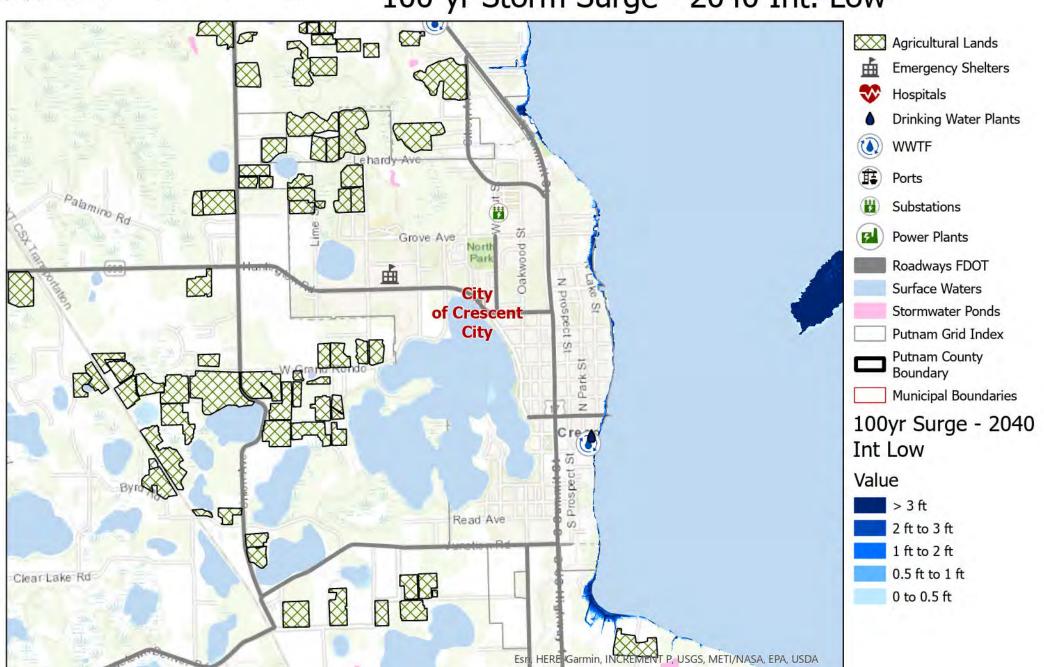
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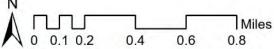


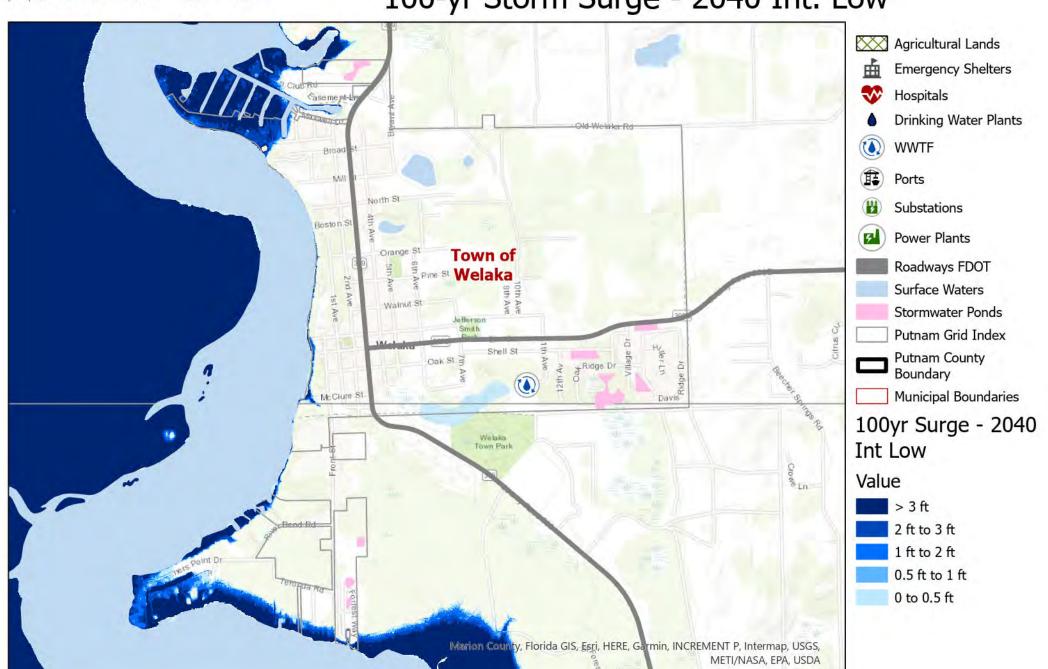
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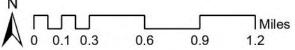


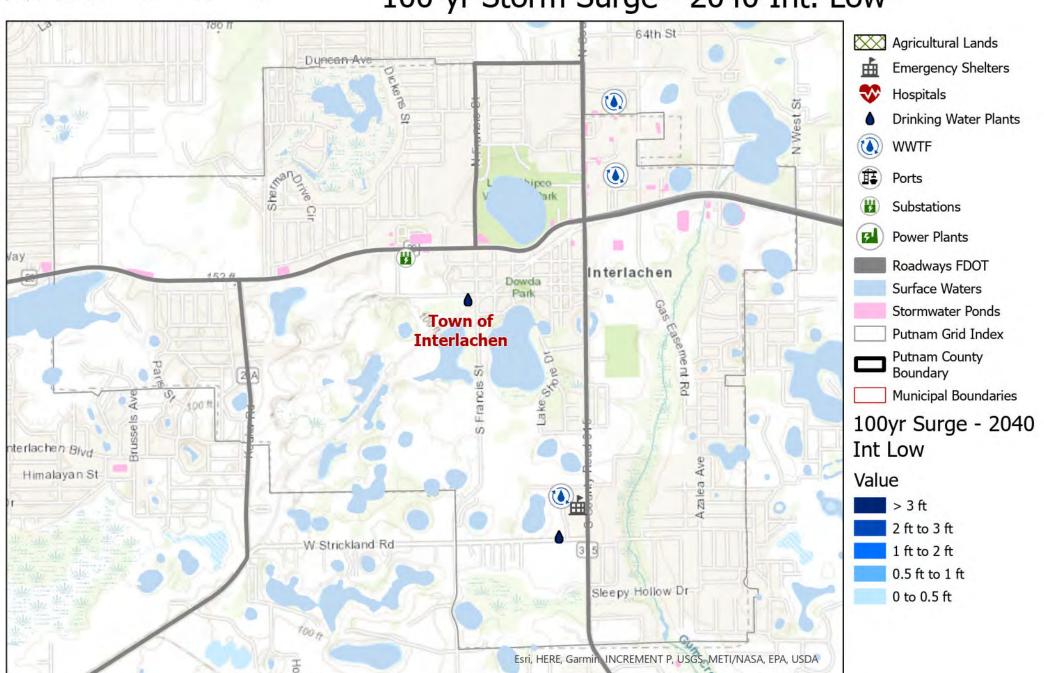
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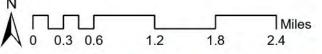


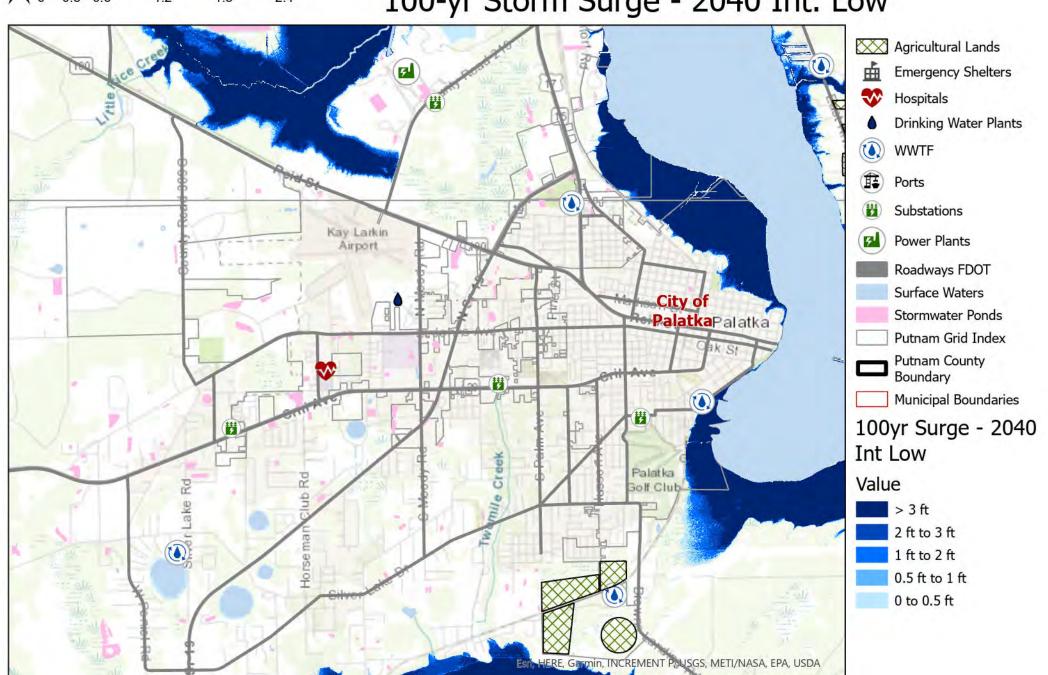
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# 100-yr Storm Surge; 2040 Int. High; Map Series

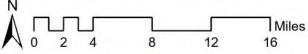
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- Gridded extent areas to cover County (5 maps)
- City extent views at 5 municipality locations (5 maps)

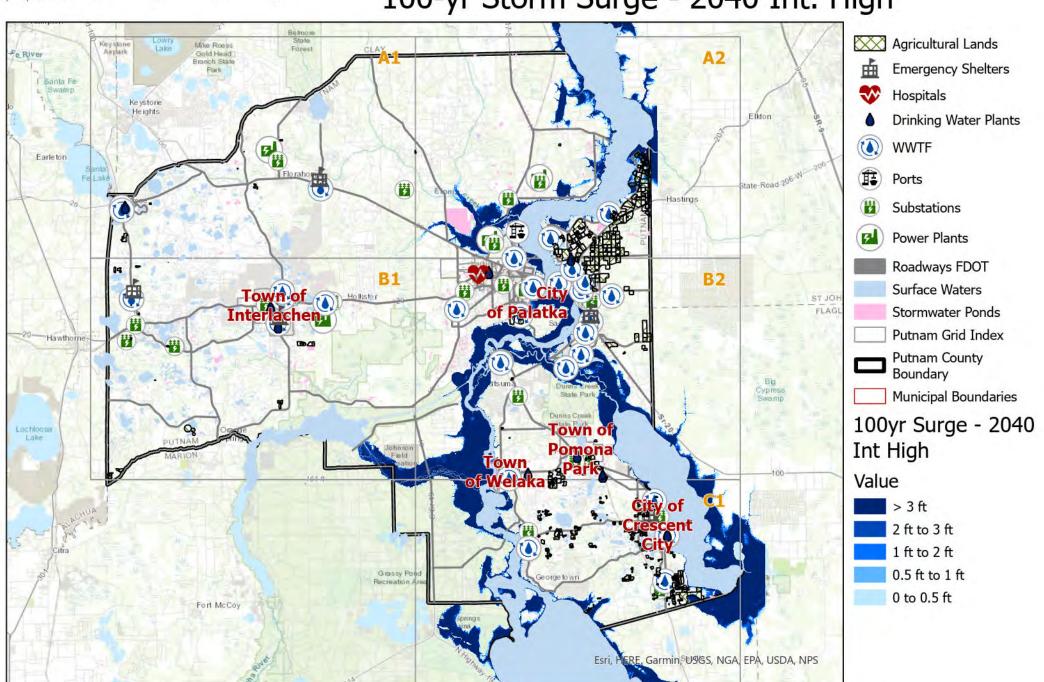
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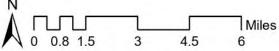


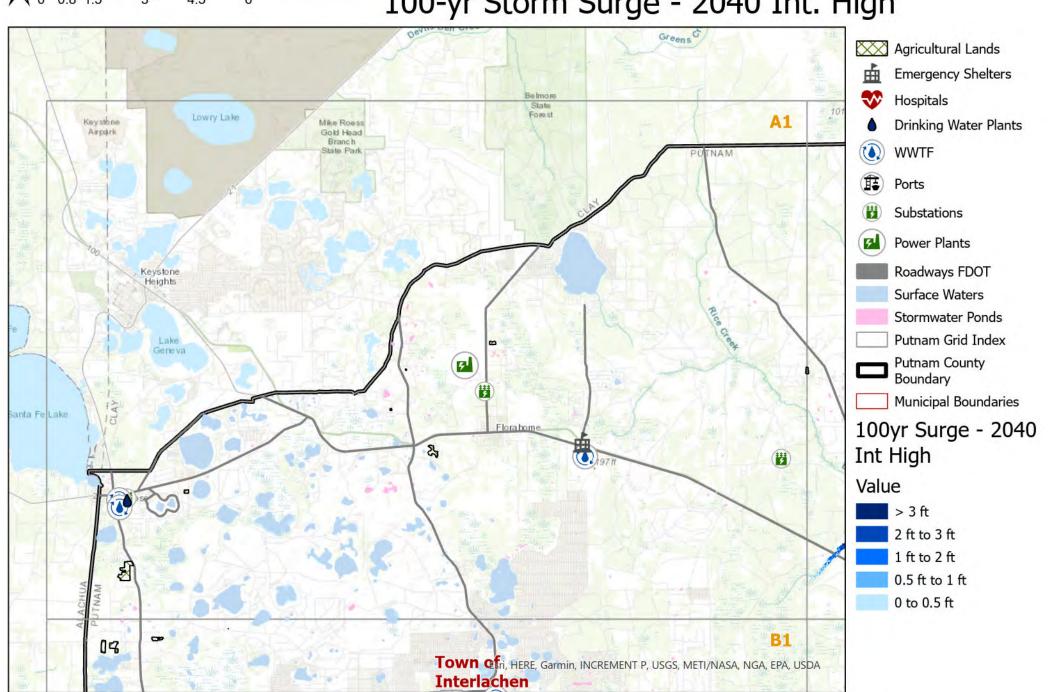
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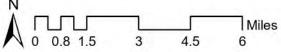


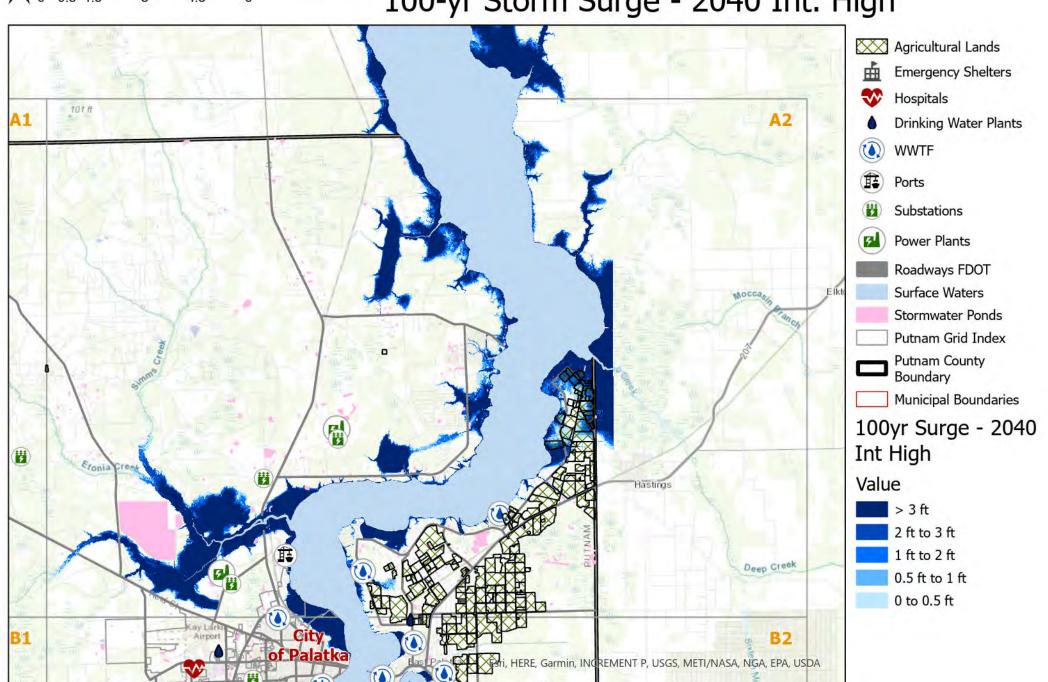
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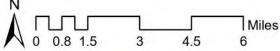


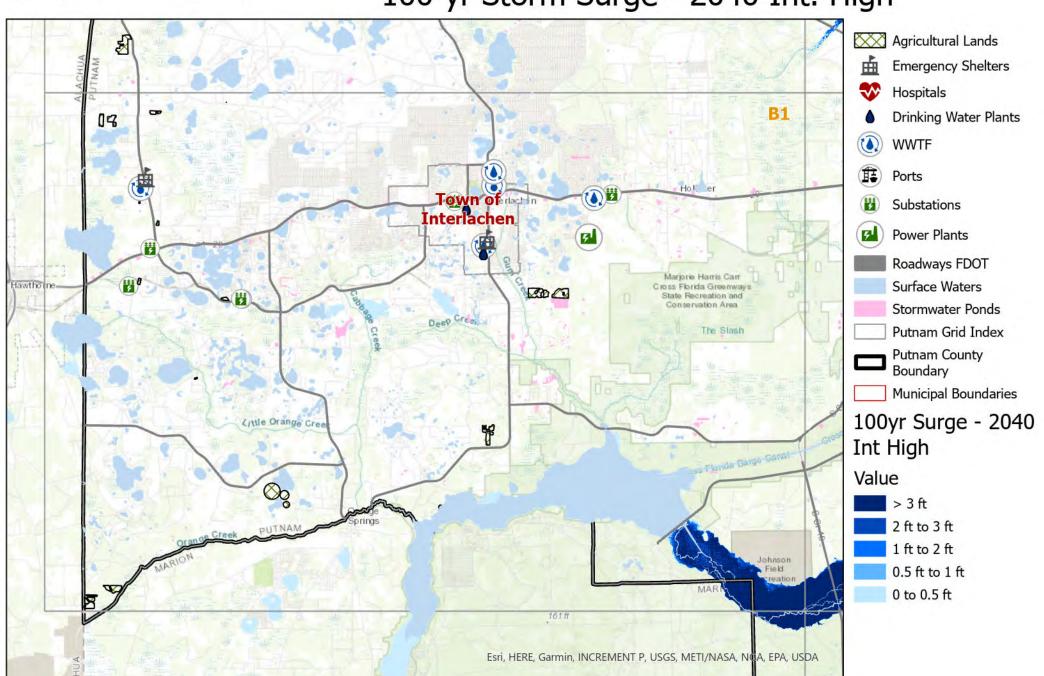
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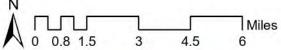


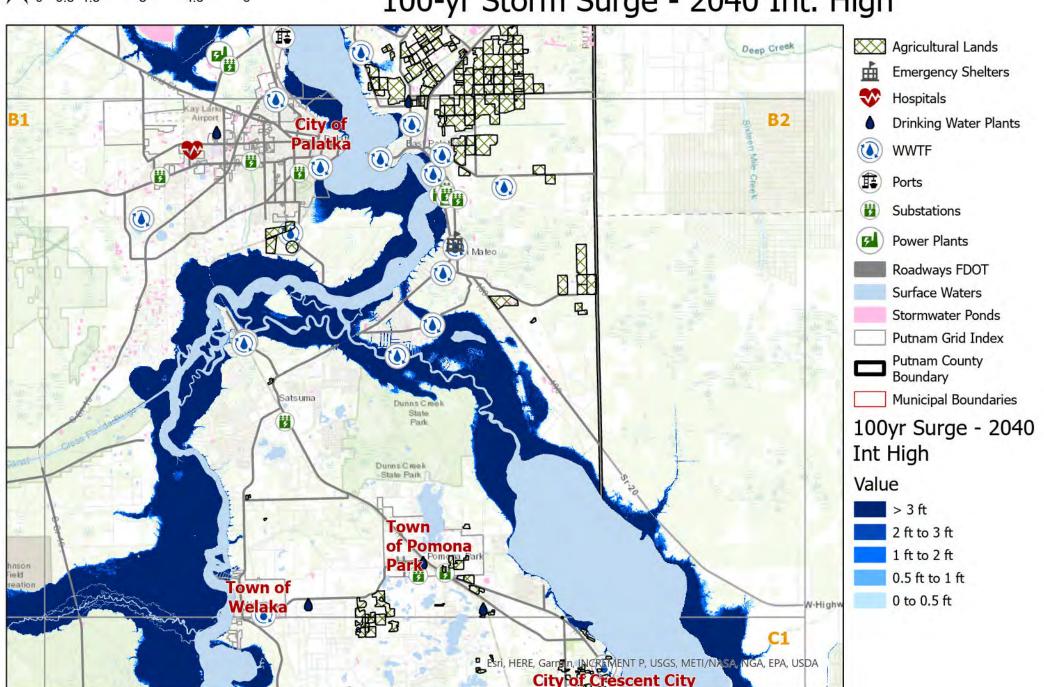
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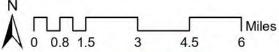


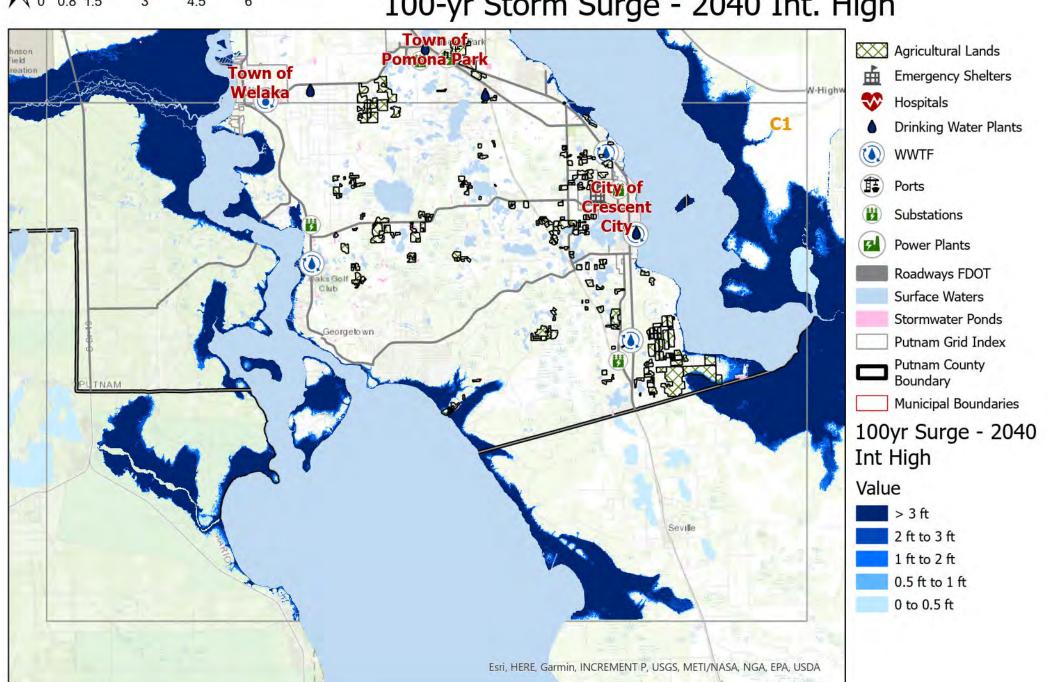
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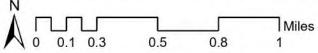


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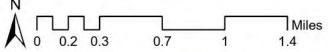


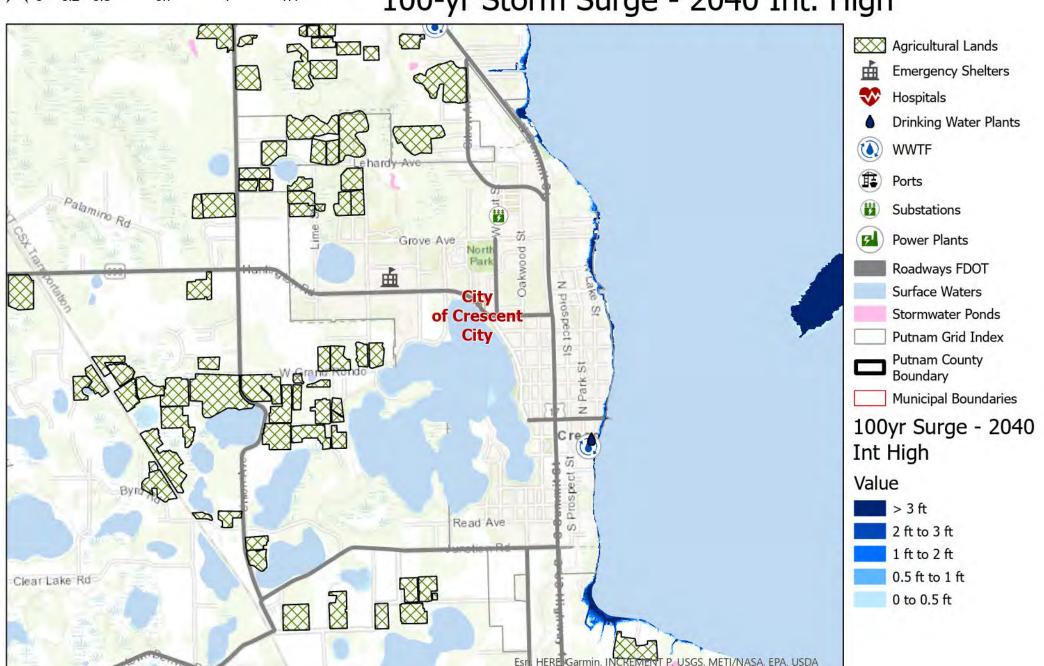
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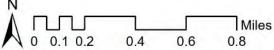


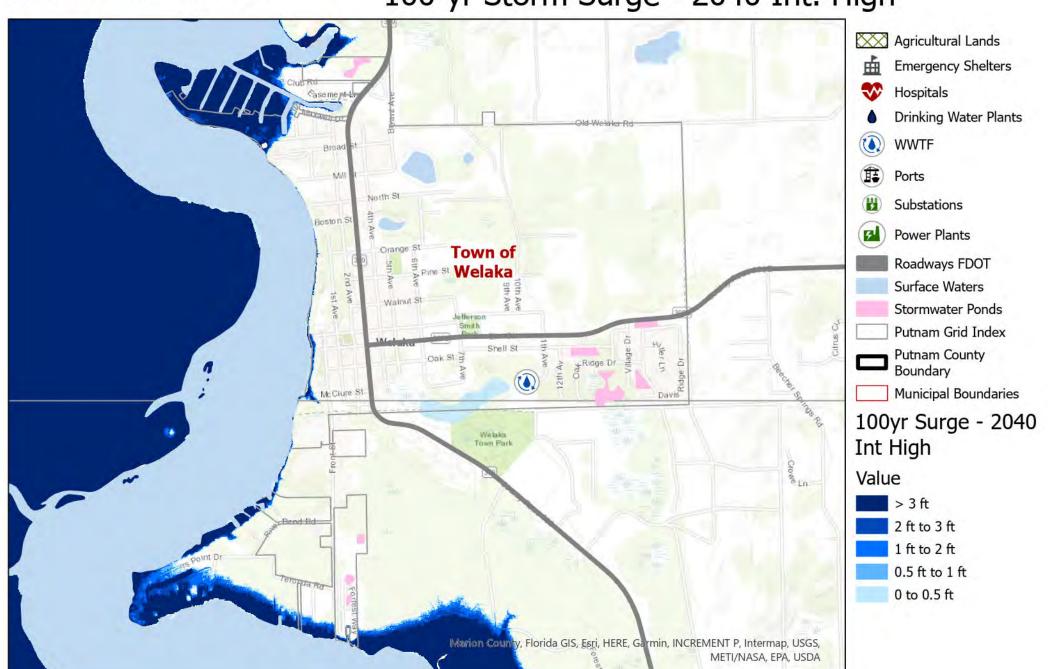
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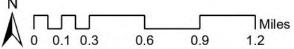


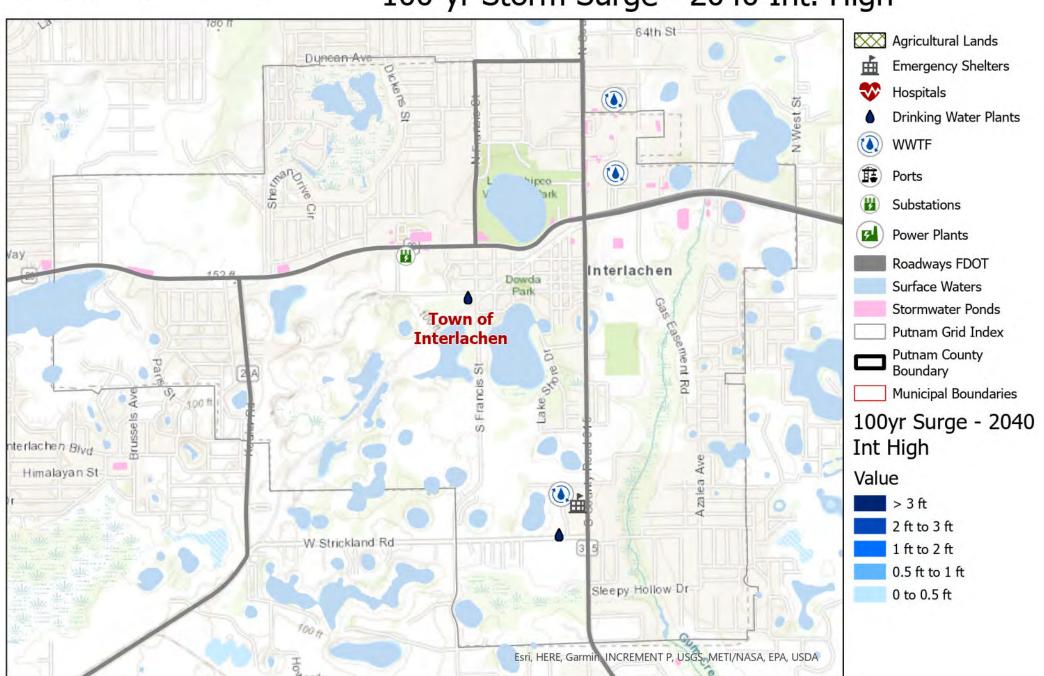
Exposure Analysis: Putnam County, Florida









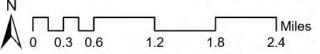


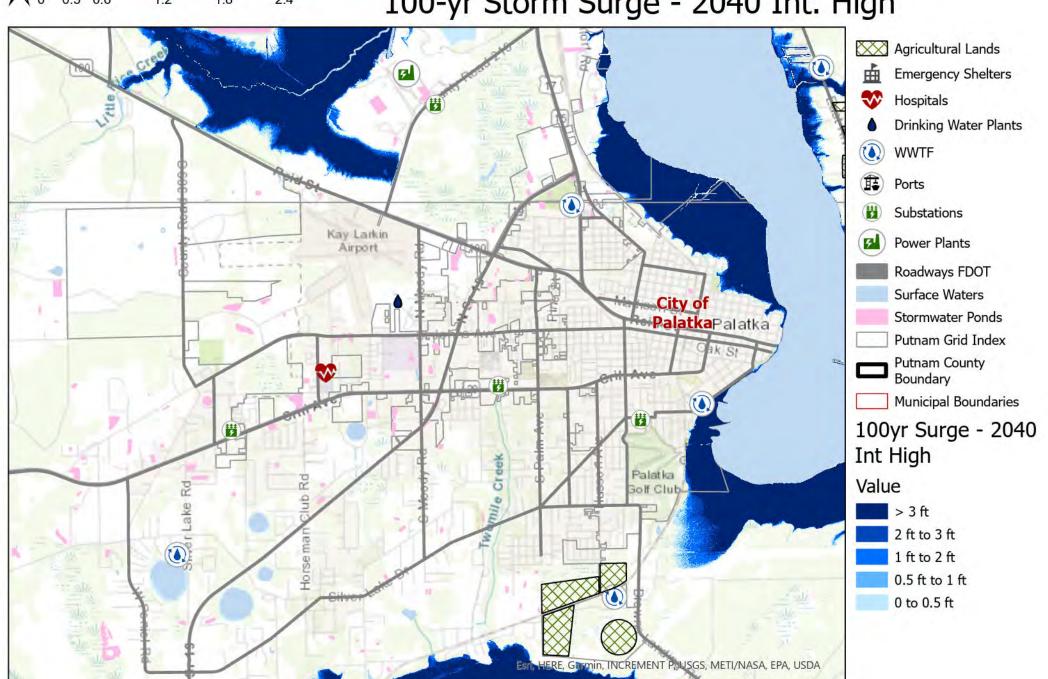
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# 100-yr Storm Surge; 2070 Int. Low; Map Series

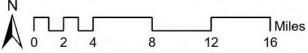
- Full County view (1 map)
- Gridded extent areas to cover County (5 maps)
- City extent views at 5 municipality locations (5 maps)

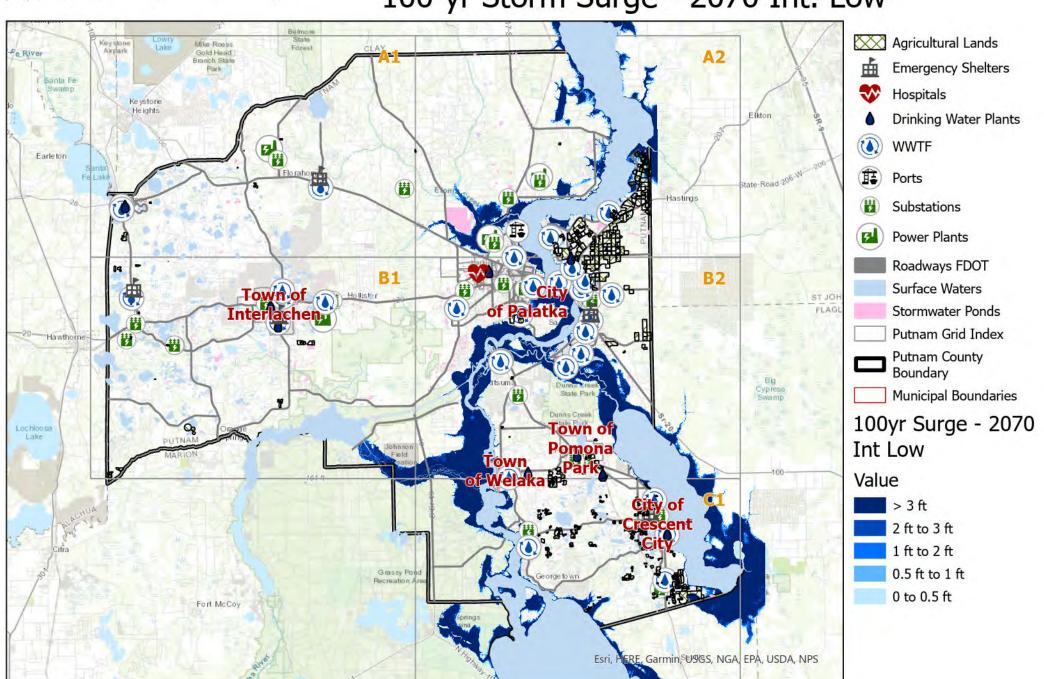
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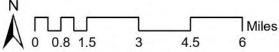


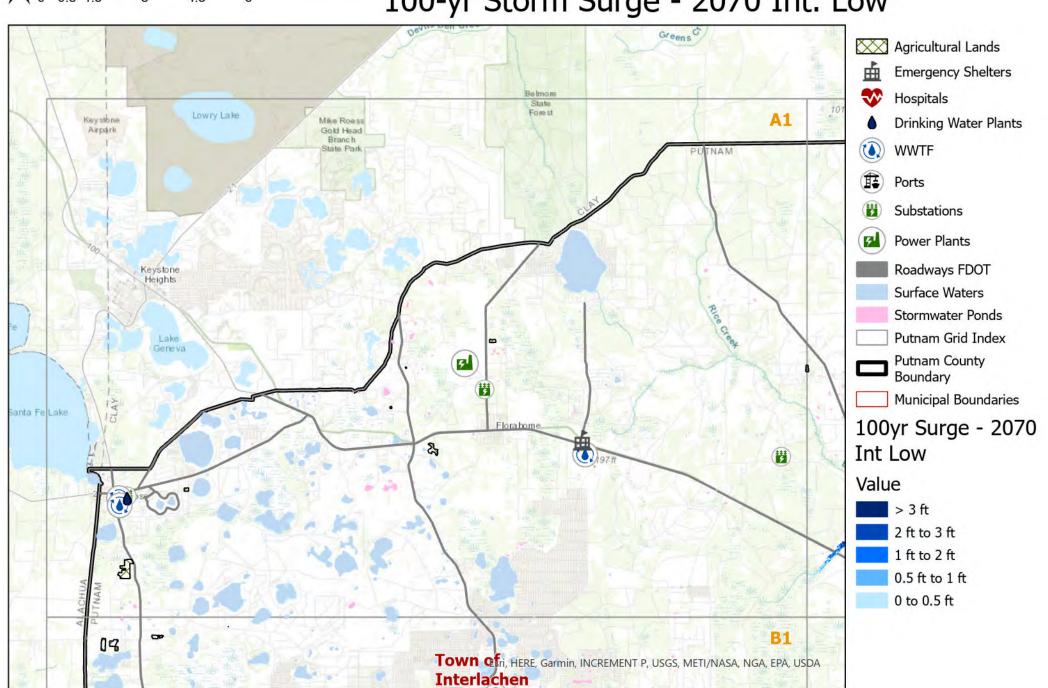
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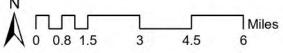


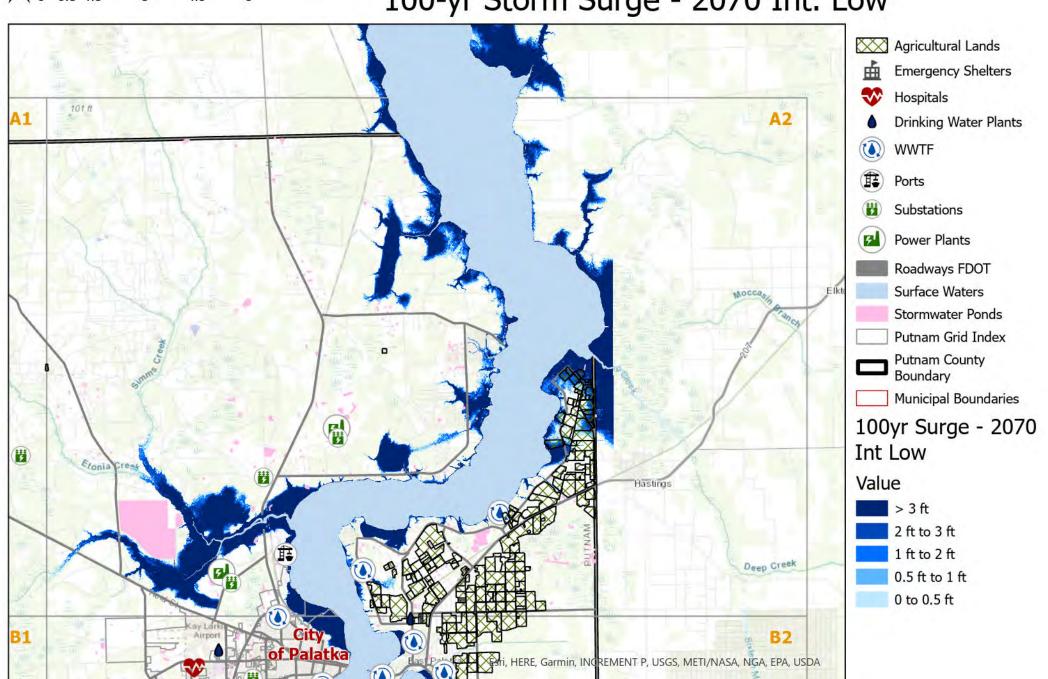
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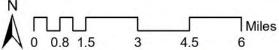


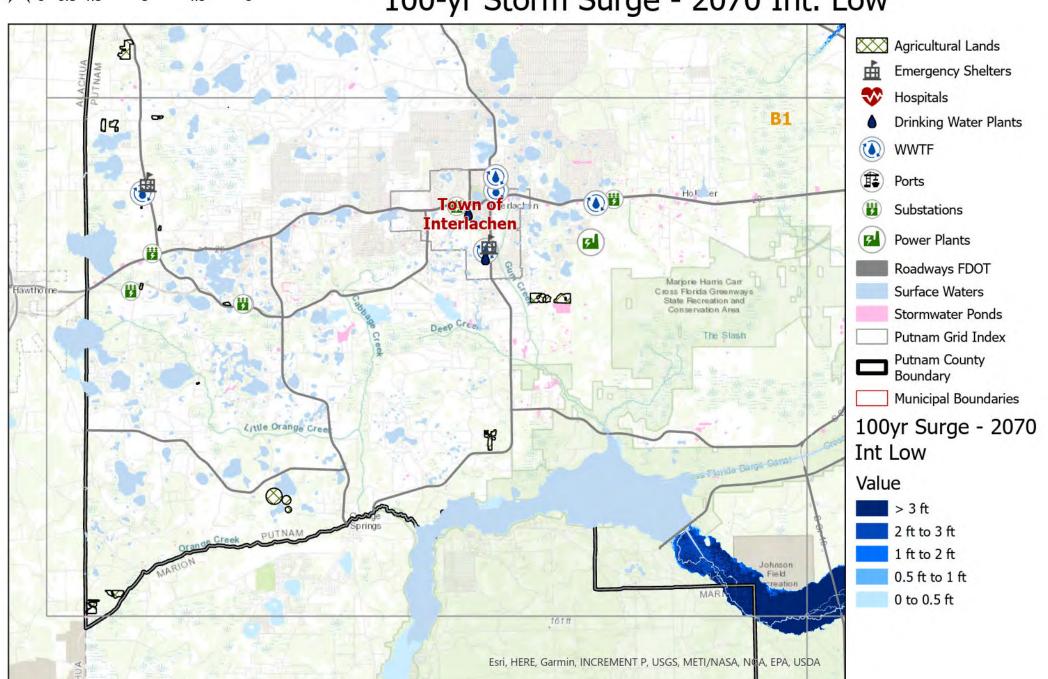
Exposure Analysis: Putnam County, Florida









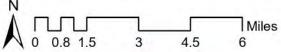


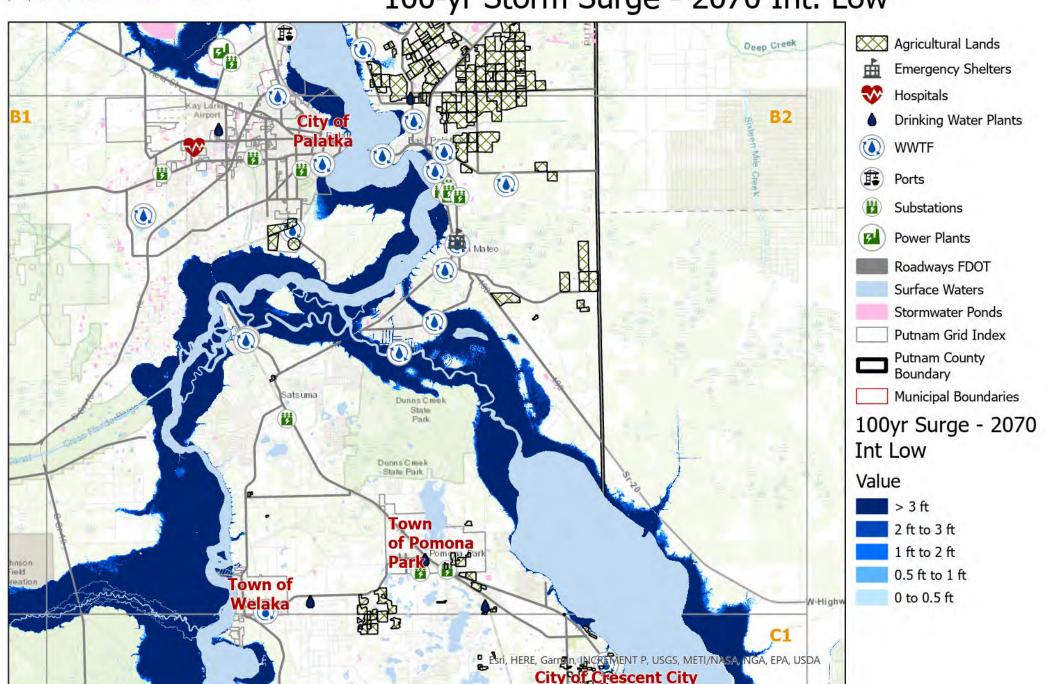
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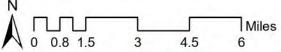


Exposure Analysis: Putnam County, Florida









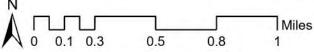


Exposure Analysis: Putnam County, Florida









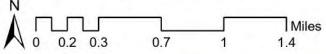


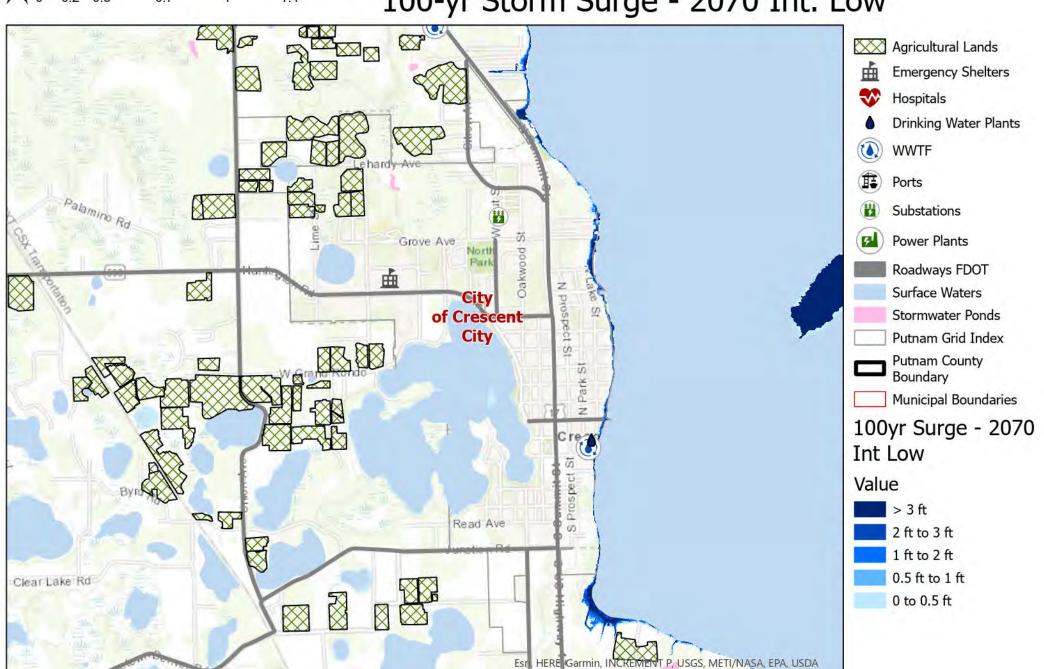
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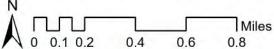


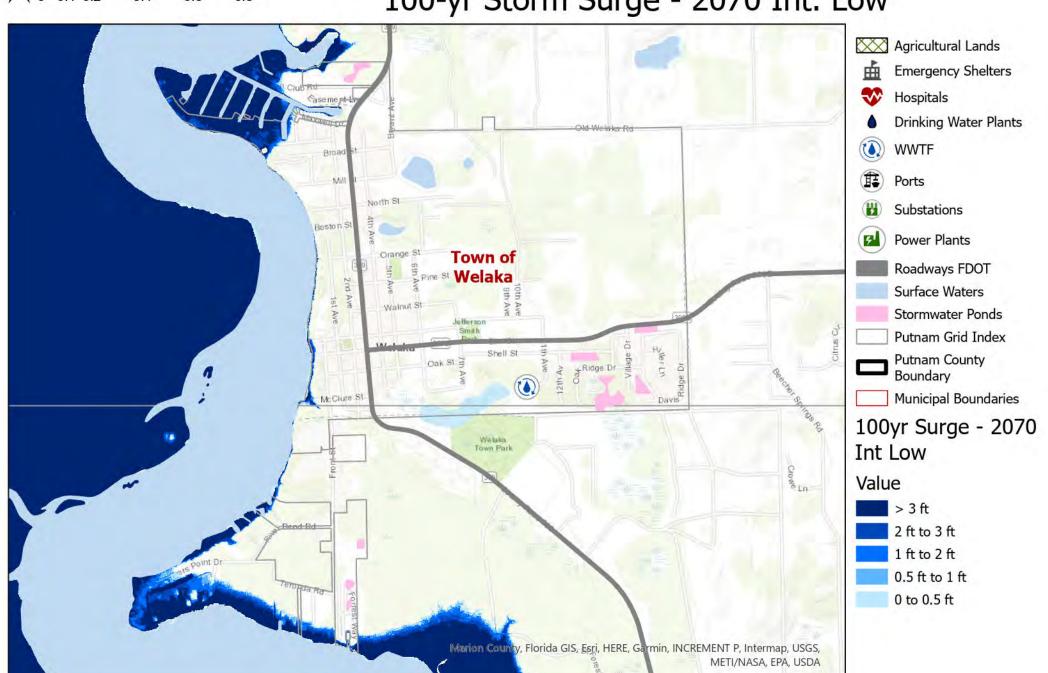
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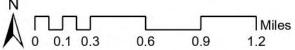


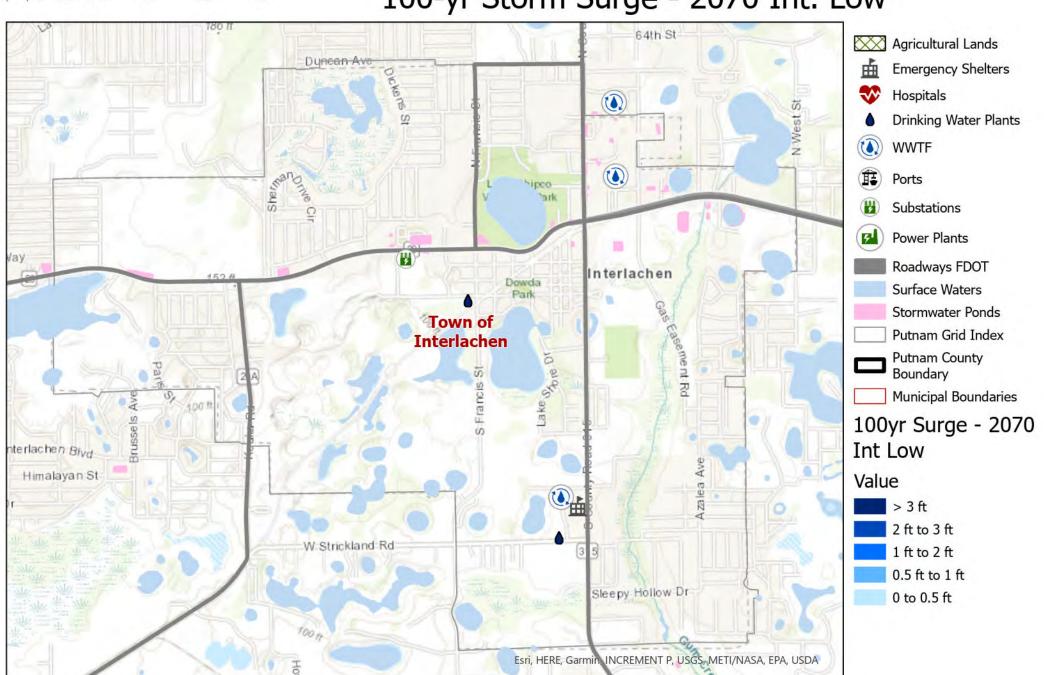
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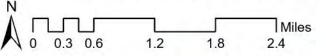


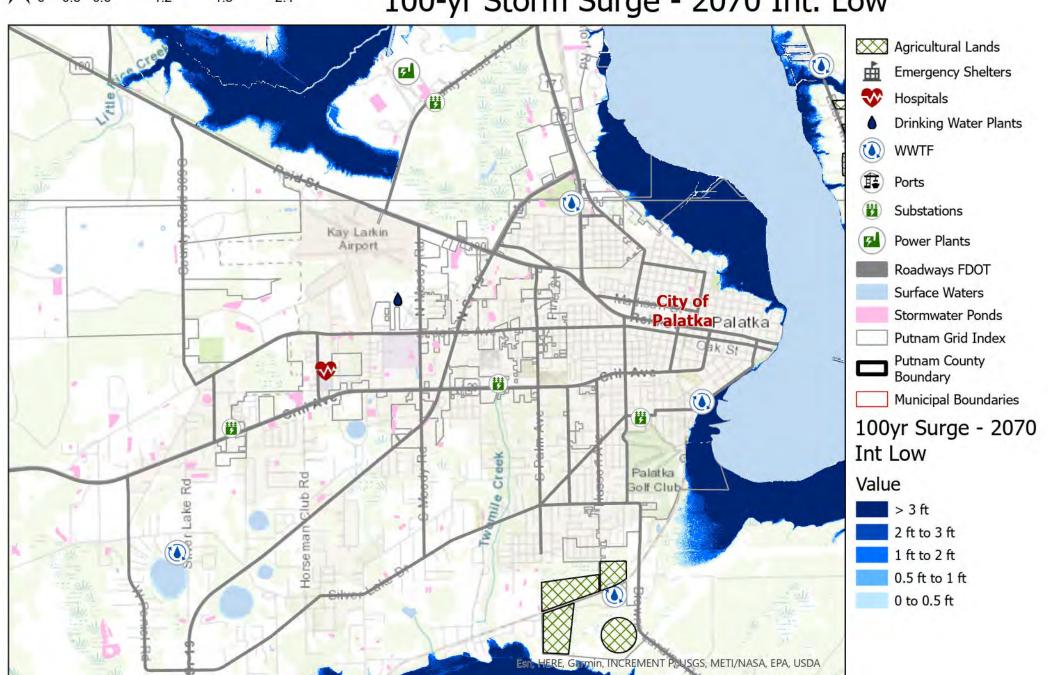
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# 100-yr Storm Surge; 2070 Int. High; Map Series

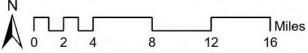
- Full County view (1 map)
- Gridded extent areas to cover County (5 maps)
- City extent views at 5 municipality locations (5 maps)

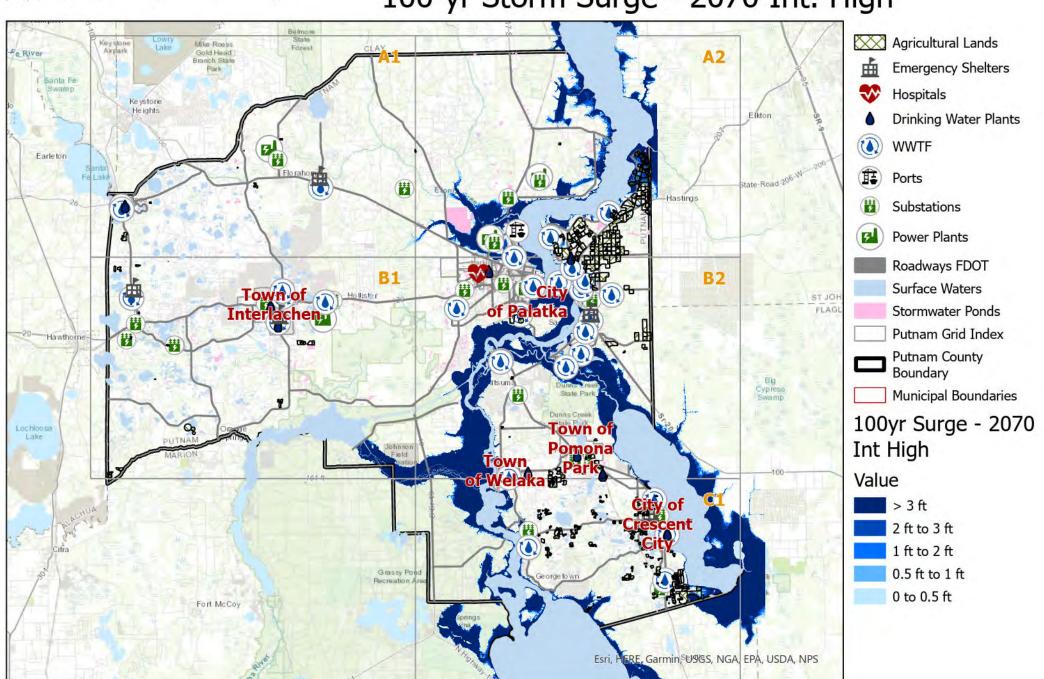
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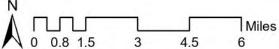


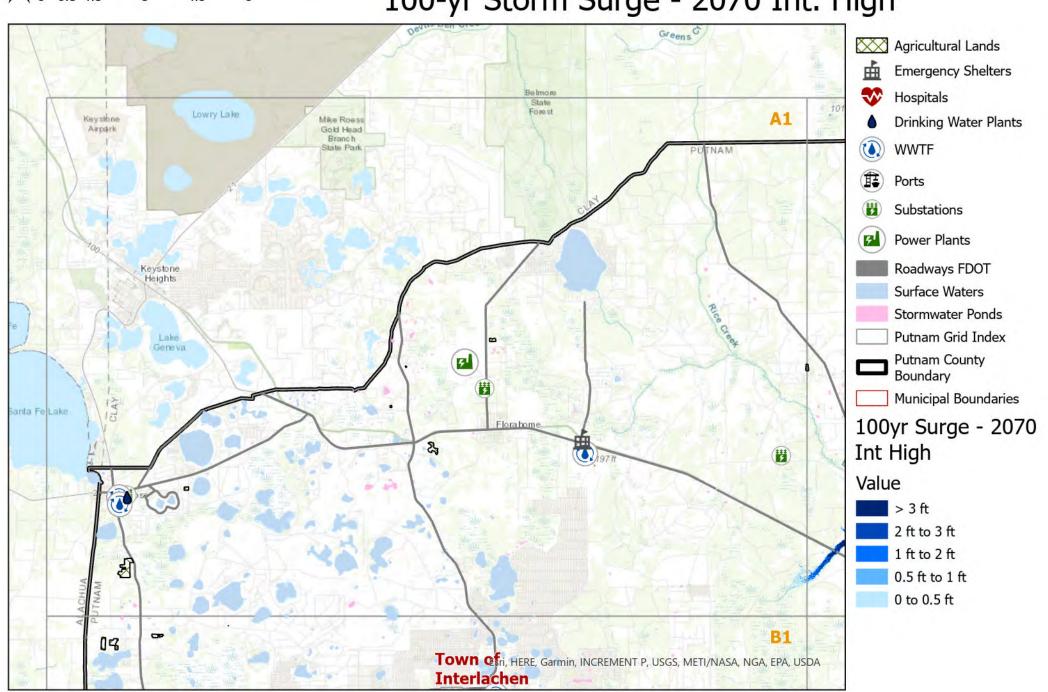
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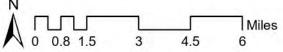


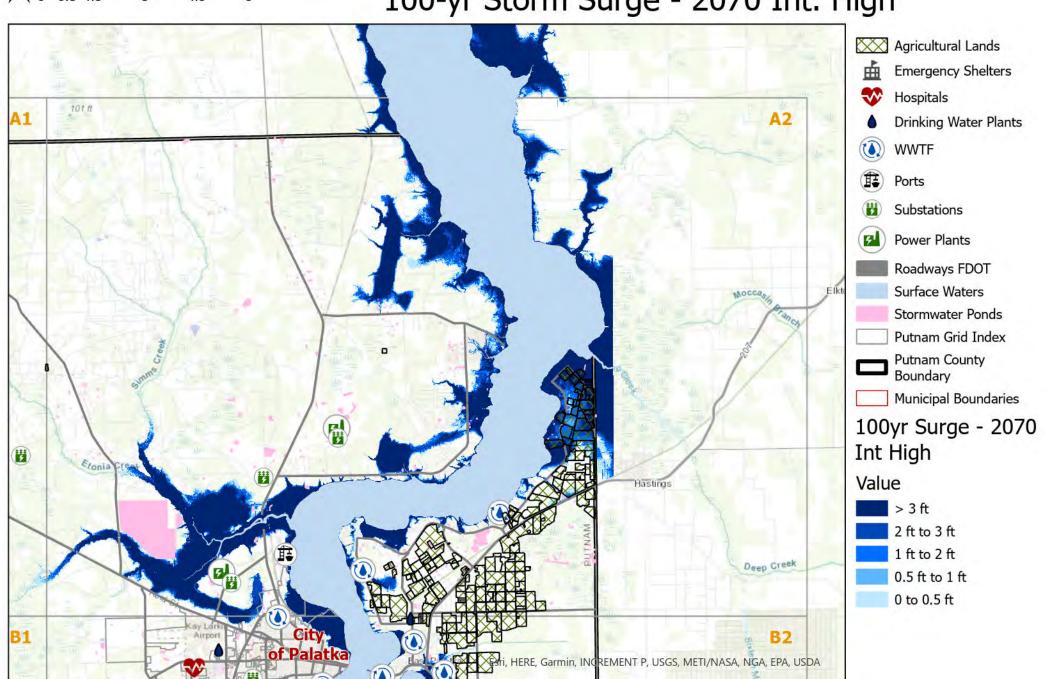
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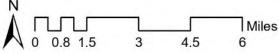


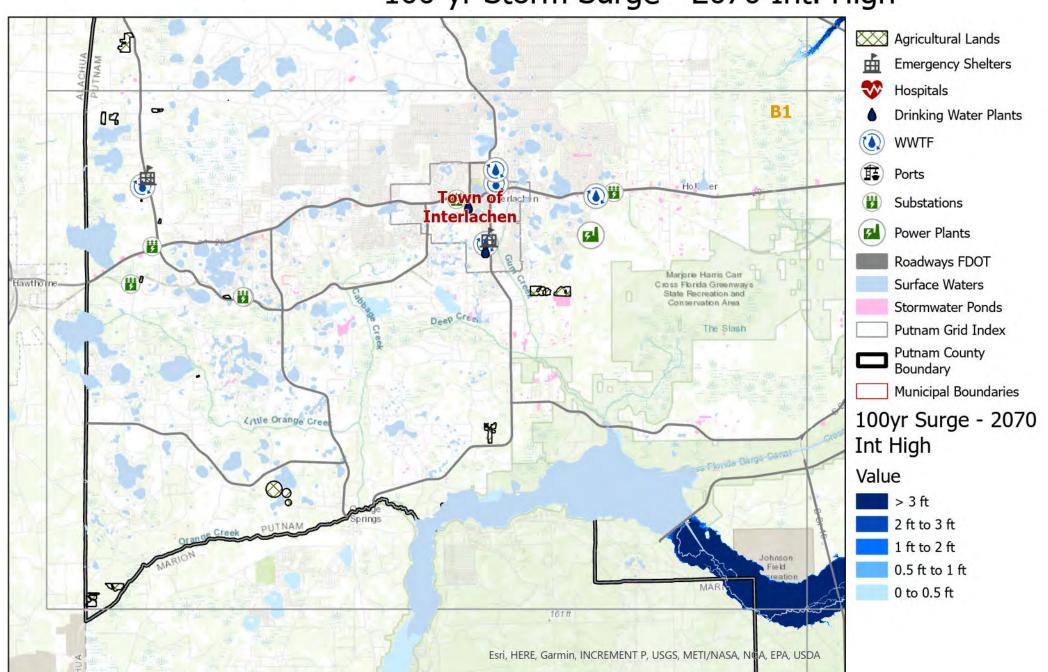
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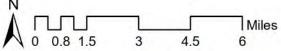


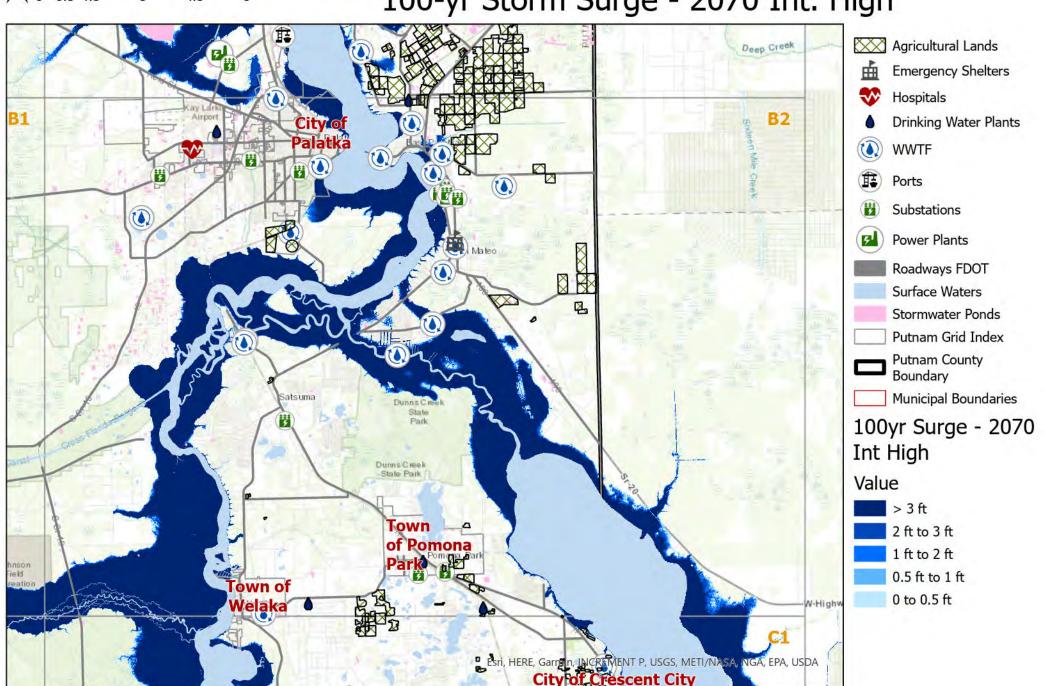
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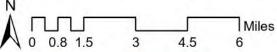


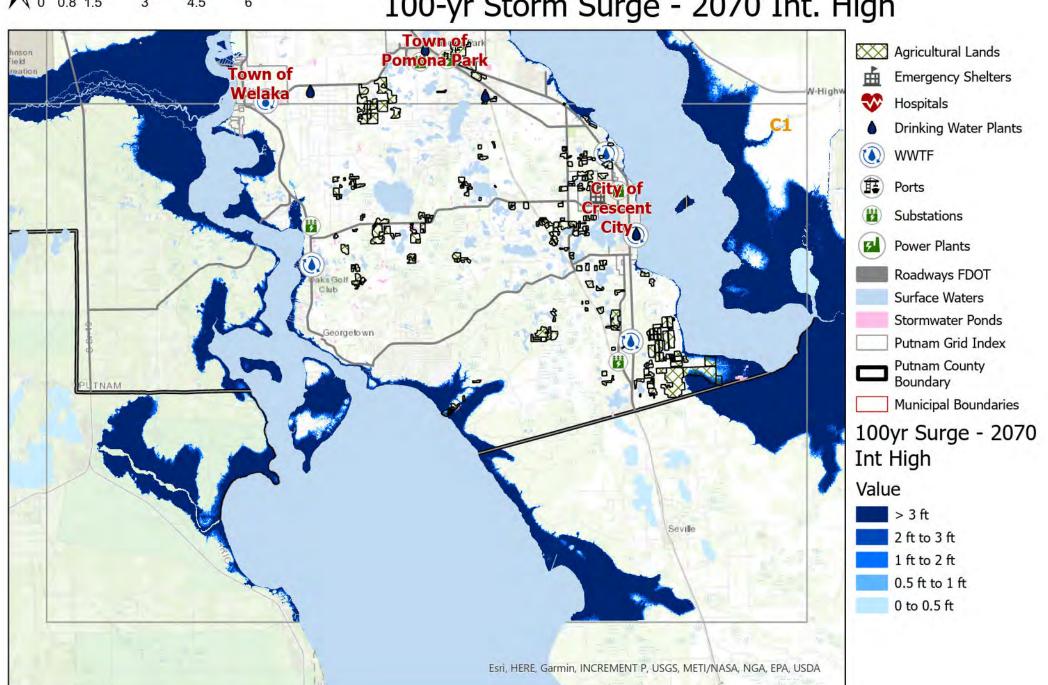
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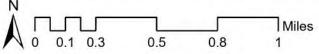


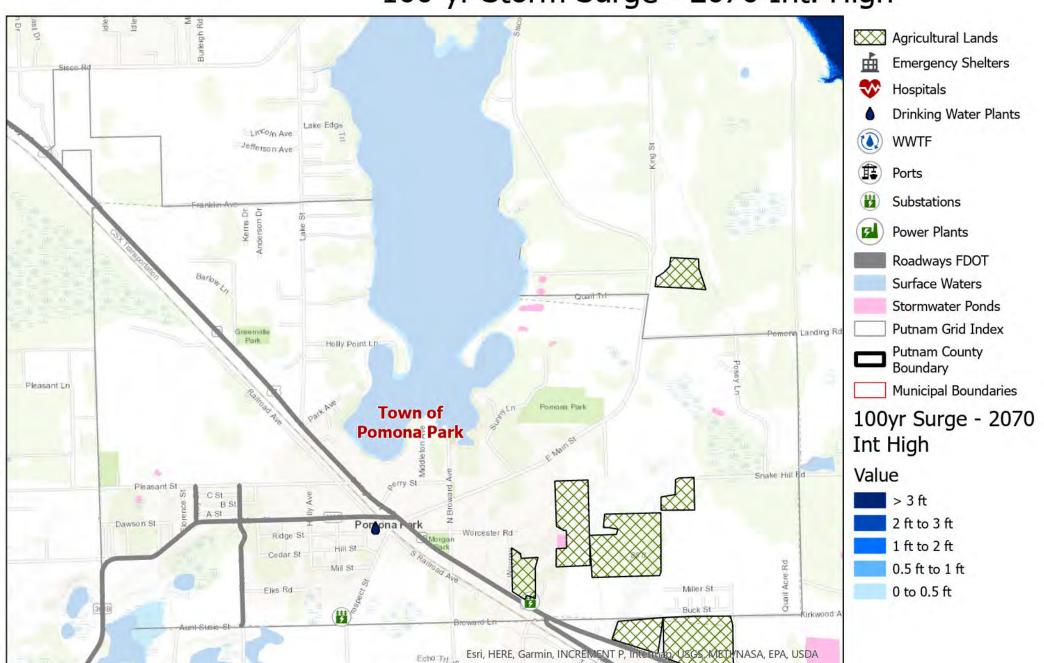
Exposure Analysis: Putnam County, Florida









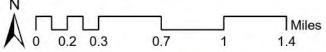


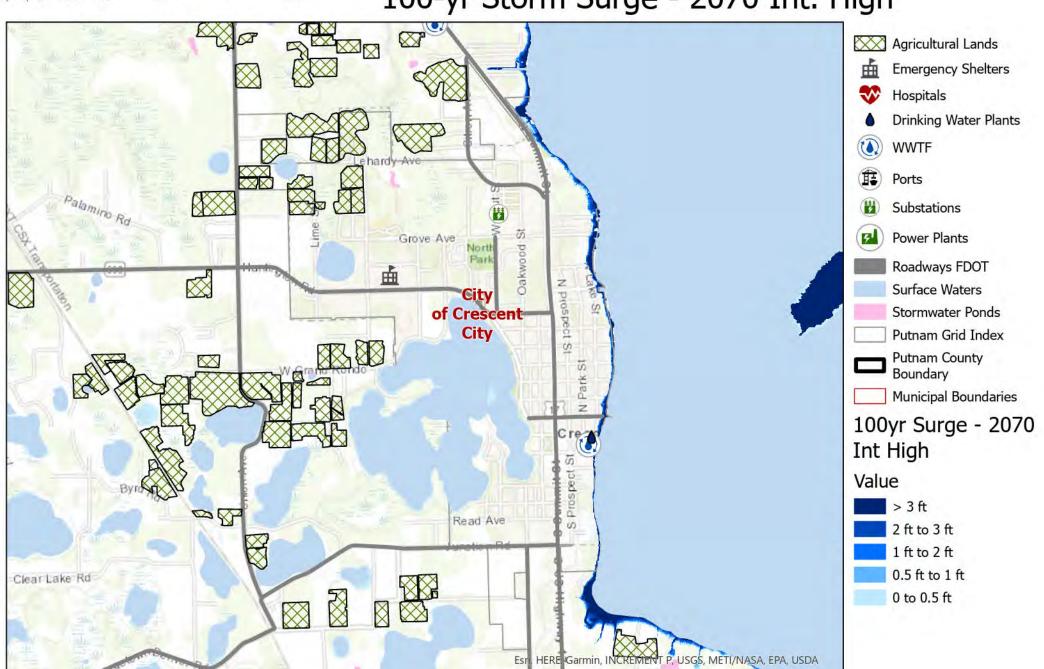
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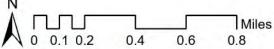


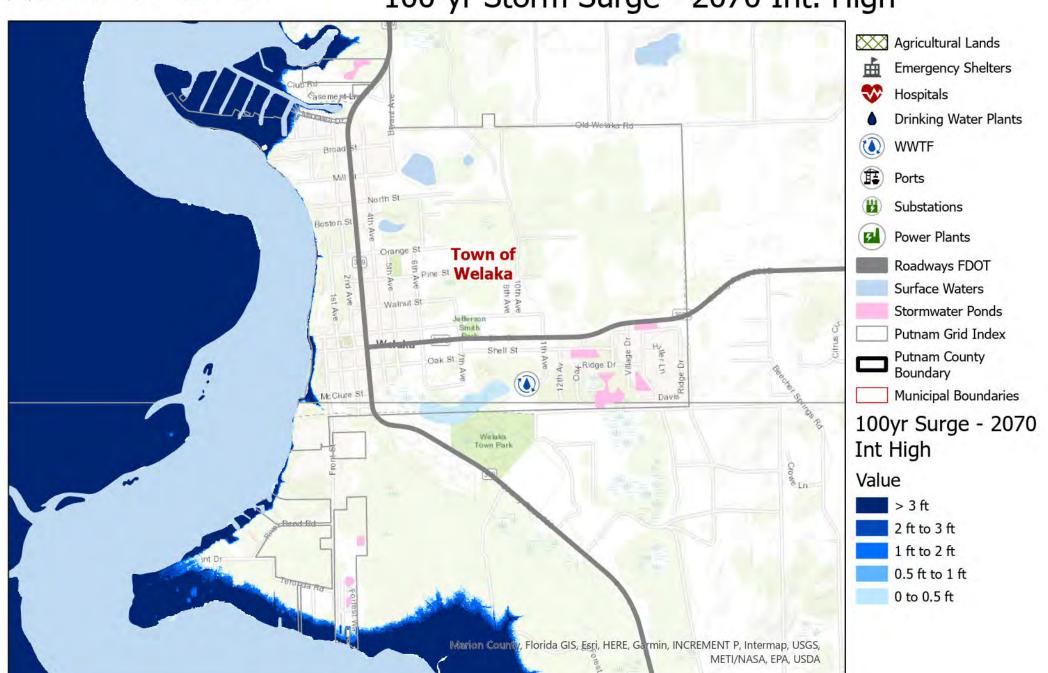
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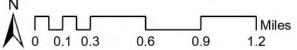


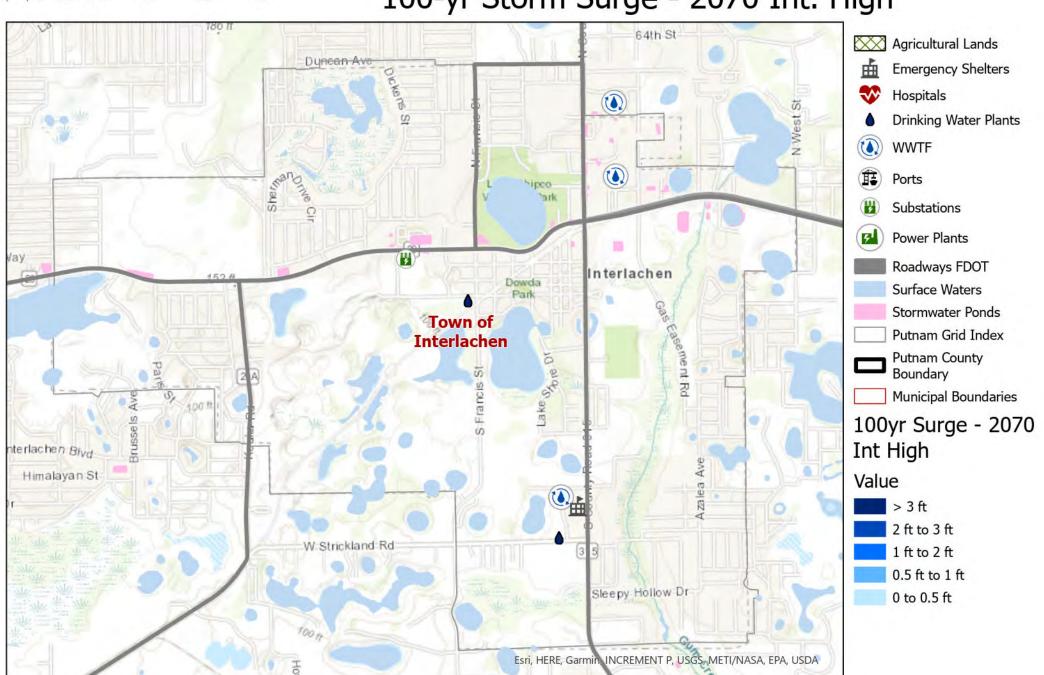
Exposure Analysis: Putnam County, Florida









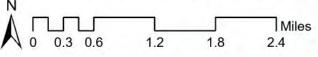


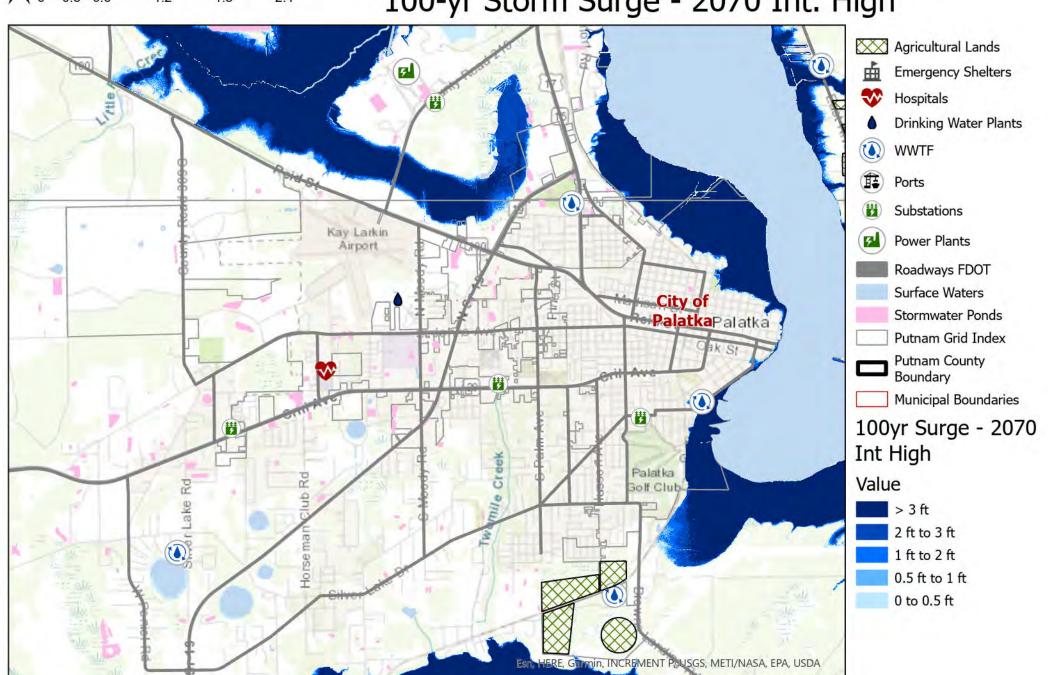
Exposure Analysis: Putnam County, Florida











## **Appendix C: Critical Asset Flood Depths**

The following tables list the flood-impacted areas and maximum depths over the area for all flood-impacted critical assets for 7 flood scenarios:

- High Tide current conditions
- High Tide 2040 Intermediate High SLR scenario (IH)
- High Tide 2070 Intermediate High SLR scenario (IH)
- Rainfall 100-yr
- Rainfall 100-yr: 2070
- 2040 IH with 100-yr surge
- 2070 IH with 100-yr surge

The online data dashboard can also be used to review flood-impacted critical assets in Putnam County: https://datavisual.balmoralgroup.us/ResilientPutnam

### Natural, Cultural and Historical Resource

### High Tide and Sea Level Rise Events

Table C-1. Conservation Land Areas with flood depths (ft.) and flood areas (acres) for high tide events: current, 2040, and 2070

Asset Type: Conservation Land Area	High T	ide	High Tide	2040 IH	High Tide 2070 IH	
Asset Name:	Flooded Area	Max	Flooded	Max Depth	Flooded	Max
	(acres)	Depth (ft.)	Area (acres)	(ft.)	Area (acres)	Depth (ft.)
Haw Creek Preserve State Park	1,851	2.9	2,322	4.3	2,328	6.2
Crescent Lake Conservation Area	1,815	2.6	2,310	4.0	2,546	5.9
Welaka State Forest	462	2.6	492	4.0	536	5.9
Seven Sisters Conservation Area	266	2.8	267	4.2	267	6.1
J. A. Ginn Jr. Parcel	50	2.6	51	4.1	51	5.9
Deep Creek Conservation Area (SJRWMD)	593	3.0	629	4.4	629	6.3
Horseshoe Point Conservation Area	1,890	3.8	1,989	5.2	2,084	7.1
Ravine Gardens State Park	67	2.8	76	4.3	79	6.2
Rodman Bomb Target	164	1.1	1,106	2.5	1,203	4.4
Welaka National Fish Hatchery	25	2.6	31	4.0	37	5.9
Murphy Creek Conservation Area	990	2.8	1,031	4.3	1,087	6.1
Palatka-to-Lake Butler State Trail	-	-	0	0.0	1	3.4
Ocala National Forest	4,918	2.6	5,990	4.1	6,804	6.0
<b>Dunns Creek Conservation Area</b>	1,979	2.8	2,437	4.2	2,662	6.1
Rice Creek Conservation Area	-	-	-	-	15	1.8
Lake George Conservation Area	568	2.6	763	4.1	958	6.0
Marjorie Harris Carr Cross Florida Greenways State	959	2.9	1,019	4.3	1,058	6.2
Recreation and Conservation Area						
Dunns Creek State Park	1,313	3.4	1,526	4.9	1,675	6.7
Caravelle Ranch Wildlife Management Area	5,027	2.7	6,024	4.1	6,336	6.0

Source: Florida Natural Areas Inventory (FNAI), TBG Work Product

Table C-2. Historical and Cultural Assets - Bridges with flood depths (ft.) and flood lengths (ft.) for high tide events: current, 2040, and 2070

Asset Type: Historic and Cultural Assets – Bridges	High Tide		High Tide	2040 IH	High Tide 2070 IH	
Asset Name:	Flooded Max		Flooded Max		Flooded	Max
	Length (ft.)	Depth (ft.)	Length (ft.)	Depth (ft.)	Length (ft.)	Depth (ft.)
FORT GATES FERRY- EAST LANDING	1	2.6	1	4.0	1	5.9

Source: Bureau of Archaeological Research, TBG Work Product

Table C-3. Historical and Cultural Assets - Resources with flood depths (ft.) and flood areas (sq. ft.) for high tide events: current, 2040, and 2070

Asset Type: Historic and Cultural Assets - Resources	High Tide		High Tide 2040 IH		High Tide 2070 IH	
Asset Name:	Flooded Area	Max Depth	Flooded Area	Max Depth		Max Depth
	(sq. ft.)	(ft.)	(sq. ft.)	(ft.)	ft.)	(ft.)
PALATKA HISTORIC BUSINESS DISTRICT					2,002	1.5
THE PALMETTOS PLANTATION (FT GATES)	148,724	2.6	275,060	4.0	441,071	5.9
PALATKA SOUTH HISTORIC DISTRICT	1,313	2.6	3,035	4.0	9,440	5.9
PALATKA NORTH HISTORIC DISTRICT					1,948	1.5
CRESCENT CITY HISTORIC DISTRICT	3,940	2.6	11,539	4.0	37,275	5.9
MEMORIAL BRIDGE STATUES	2,982	2.6	4,252	4.0	8,945	5.9

Source: Bureau of Archaeological Research, TBG Work Product

Table C-4. Parks with flood depths (ft.) and flood areas (sq. ft.) for high tide events: current, 2040 and 2070

Asset Type: Parks	High	Tide	High Tide	2040 IH	High Tide 2070 IH	
Asset Name:	Flooded Area	Max Depth	Flooded Area	Max Depth	Flooded Area (sq.	Max Depth
	(sq. ft.)	(ft.)	(sq. ft.)	(ft.)	ft.)	(ft.)
Palatka-to-Lake Butler State Trail	-	-	11	0.0	829	1.9
Dunns Creek State Park	7,341	2.6	7,481	4.0	7,621	5.9
Haw Creek Preserve State Park	13,229	2.6	14,499	4.0	14,585	5.9
Ravine Gardens State Park	2,325	2.8	2,325	4.2	2,422	6.1
Marjorie Harris Carr Cross Florida Greenways	38,405	2.6	39,385	4.0	39,600	5.9
State Recreation and Conservation Area	36,403	2.0	35,363	4.0	39,000	3.9

### Rainfall

Table C-5. Conservation Land Areas with flood depths (ft.) and flood areas (acres) for 100-yr rain events: current and 2070

Asset Type: Conservation Lands	Rainfall 1	.00-yr	Rainfall 100-yr 2070		
Asset Name:	Flooded Area	Max Depth	Flooded Area	Max Depth	
	(acres)	(ft.)	(acres)	(ft.)	
Haw Creek Preserve State Park	25	6.6	31	7.0	
Crescent Lake Conservation Area	53	6.5	62	6.9	
Welaka State Forest	883	27.0	931	27.3	
Seven Sisters Conservation Area	270	5.5	270	5.8	
J. A. Ginn Jr. Parcel	52	5.6	52	6.0	
Deep Creek Conservation Area (SJRWMD)	67	10.2	76	10.6	
Horseshoe Point Conservation Area	2,095	13.1	2,114	13.3	
Ravine Gardens State Park	87	6.7	88	7.1	
Rodman Bomb Target	1,062	8.0	1,071	8.3	
Welaka National Fish Hatchery	192	33.7	206	34.0	
Murphy Creek Conservation Area	1,111	21.5	1,127	21.3	
Palatka-to-Lake Butler State Trail	52	30.1	55	30.4	
Ocala National Forest	5,757	24.6	5,951	28.7	
<b>Dunns Creek Conservation Area</b>	2,656	14.0	2,697	14.3	
Rice Creek Conservation Area	3,892	27.9	3,943	28.3	
Lake George Conservation Area	3,707	25.4	3,956	25.9	
Marjorie Harris Carr Cross Florida Greenways State Recreation and Conservation Area	14,745	50.5	15,063	50.9	
Dunns Creek State Park	3,081	32.1	3,171	32.5	
Caravelle Ranch Wildlife Management Area	6,579	10.1	6,694	10.5	
Walton Parcel	3	12.4	3	12.8	
Carl Duval Moore State Forest and Park	43	4.3	45	4.6	
Wiles Culbertson Conservation Easement	17	3.7	17	4.1	
BJ Bar Ranch Conservation Easement	359	7.0	372	7.3	
Nine Mile Swamp Park	593	14.2	626	14.5	
Little Orange Creek Nature Park	185	17.2	191	17.6	
Ordway-Swisher Biological Station	3,994	17.5	4,052	17.8	

Asset Type: Conservation Lands	Rainfall 1	.00-yr	Rainfall 100-yr 2070		
Asset Name:	Flooded Area	Max Depth	Flooded Area	Max Depth	
	(acres)	(ft.)	(acres)	(ft.)	
Little Orange Creek Preserve	562	17.2	566	17.6	
Smith Family Farms Conservation Easements	4	3.4	13	3.8	
Wetland Reserve Easement #303	648	6.9	656	7.3	
Clay Ranch Agricultural and Conservation Easement	1,475	15.8	1,503	16.2	
Etoniah Creek State Forest	603	34.9	648	35.2	
Alford Conservation Easement	137	13.2	140	13.6	
Fox Pen Preserve	0	7.7	1	8.0	
Rodman Plantation Agricultural and Conservation Easement	1,303	13.4	1,323	13.7	
Lochloosa Slough Preserve	1	0.8	1	1.1	
Palatka-to-St. Augustine State Trail	3	6.2	3	10.0	
Wetlands Preserve Conservation Easement	1,649	23.5	1,746	23.9	
Twin Creek Ranch Gopher Tortoise Longterm Recipient Site	8	5.0	9	5.3	
FSA Conservation Easement - Tract 25C	52	9.1	52	9.5	
FSA Conservation Easement - Tract 33C	130	4.6	168	4.9	

Source: Florida Natural Areas Inventory (FNAI), TBG Work Product

Table C-6. Historical and Cultural Assets - Bridges with flood depths (ft.) and flood lengths (ft.) for 100-yr rain events: current and 2070

Asset Type: Historic and Cultural Assets – Bridges	Rainfall 1	.00-yr	Rainfall 100-yr 2070		
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)	
FORT GATES FERRY- EAST LANDING	67	6.0	67	6.3	
SAN MATEO BRICK ROAD	95	8.7	95	9.0	
DOG BRANCH RR TRESTLE	31	6.1	37	6.4	
G.S. & F RAILROAD BRIDGE 1	14	7.4	14	7.8	
G.S. & F RAILROAD BRIDGE 2	23	16.7	23	17.1	
SR 100 BRIDGE	690	13.5	690	13.8	

Source: Bureau of Archaeological Research, TBG Work Product

Table C-7. Cemeteries with flood depths (ft.) and flood areas (sq. ft.) for 100-yr rain events: current and 2070

Asset Type: Cemeteries	Rainfall 1	00-yr	Rainfall 100-yr 2070		
Asset Name:	Flooded Area (sq. ft.)	Max Depth (ft.)	Flooded Area (sq. ft.)	Max Depth (ft.)	
WESTVIEW CEMETERY, PALATKA, FL	-	-	25	0.1	
ETONIAH CEMETERY	24,050	12.4	36,950	12.7	

Source: Bureau of Archaeological Research, TBG Work Product

Table C-8. Historical and Cultural Assets - Resources with flood depths (ft.) and flood areas (sq. ft.) for 100-yr rain events: current and 2070

Asset Type: Historic and Cultural Assets – Resources	Rainfall 10	00-yr	Rainfall 100-	yr 2070
Asset Name:	Flooded Area (sq. ft.)	Max Depth (ft.)	Flooded Area (sq. ft.)	Max Depth (ft.)
PALATKA HISTORIC BUSINESS DISTRICT	250	0.6	625	0.9
THE PALMETTOS PLANTATION (FT GATES)	666,575	6.0	732,450	6.3
PALATKA SOUTH HISTORIC DISTRICT	9,075	6.7	9,800	7.1
PALATKA NORTH HISTORIC DISTRICT	900	0.6	1,550	1.0
CRESCENT CITY HISTORIC DISTRICT	76,750	6.6	86,800	7.0
MEMORIAL BRIDGE STATUES	106,875	6.7	107,800	7.1
MELROSE HISTORIC DISTRICT	216,425	6.2	228,975	6.6
INTERLACHEN HISTORIC DISTRICT	40,000	7.1	43,650	7.4
1771 SR 20 - CAMPGROUND	25,075	2.9	30,925	3.2
WELAKA STATE FOREST FISH HATCHERY PONDS	336,825	2.4	371,375	2.8

Source: Bureau of Archaeological Research, TBG Work Product

Table C-9. Parks with flood depths (ft.) and flood areas (sq. ft.) for 100-yr rain events: current and 2070

Asset Type: Parks	Rainfall 1	l00-yr	Rainfall 100-yr 2070	
Asset Name:	Flooded Area	Max Depth	Flooded Area	Max Depth
	(sq. ft.)	(ft.)	(sq. ft.)	(ft.)
Palatka-to-Lake Butler State Trail	36,600	29.9	37,850	30.3
Dunns Creek State Park	48,925	15.0	49,050	15.3
Haw Creek Preserve State Park	21,300	6.6	21,375	7.0
Ravine Gardens State Park	3,375	6.7	3,375	7.1
Marjorie Harris Carr Cross Florida Greenways State Recreation and	396,525	39.8	409,850	40.1
Conservation Area				
Palatka-to-St. Augustine State Trail	13,425	7.0	14,075	10.9

Source: FDEP, TBG Work Product

### Surge and Sea Level Rise Events

Table C-10. Conservation Land Areas with flood depths (ft.) and flood areas (acres) for 100-yr surge events: 2040 and 2070 SLR - Intermediate High

Asset Type: Conservation Lands	2040 IH with 1	00-yr surge	2070 IH with 100-yr surge		
Asset Name:	Flooded Area	Max Depth	Flooded Area	Max Depth	
	(acres)	(ft.)	(acres)	(ft.)	
Haw Creek Preserve State Park	2,328	7.1	2,328	9.0	
Crescent Lake Conservation Area	2,624	6.8	2,713	8.7	
Welaka State Forest	560	6.8	623	8.7	
Seven Sisters Conservation Area	267	7.0	267	8.9	
J. A. Ginn Jr. Parcel	51	6.9	51	8.8	
Deep Creek Conservation Area (SJRWMD)	630	7.2	631	9.1	
Horseshoe Point Conservation Area	2,129	8.0	2,215	9.9	
Ravine Gardens State Park	80	7.1	80	9.0	
Rodman Bomb Target	1,216	5.3	1,241	7.2	
Welaka National Fish Hatchery	40	6.8	85	8.7	
Murphy Creek Conservation Area	1,103	7.1	1,139	9.0	
Palatka-to-Lake Butler State Trail	4	4.9	8	6.8	
Ocala National Forest	7,209	6.9	7,966	8.8	
Dunns Creek Conservation Area	2,724	7.0	2,833	8.9	
Rice Creek Conservation Area	37	2.7	122	4.6	
Lake George Conservation Area	1,047	6.9	1,204	8.8	
Marjorie Harris Carr Cross Florida Greenways State Recreation and	1,075	7.1	1 102	9.0	
Conservation Area	1,073	7.1	1,103	9.0	
Dunns Creek State Park	1,738	7.7	1,842	9.6	
Caravelle Ranch Wildlife Management Area	6,408	6.9	6,560	8.8	
Palatka-to-St. Augustine State Trail	0	2.4	3	5.4	

Table C-11. Historical and Cultural Assets - Bridges with flood depths (ft.) and flood lengths (ft.) for 100-yr surge events: 2040 and 2070 SLR - Intermediate High

Asset Type: Historic and Cultural Assets – Bridges	2040 IH with 1	.00-yr surge	2070 IH with 100-yr surge		
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)	
FORT GATES FERRY- EAST LANDING	1	6.8	1	8.7	

Source: Bureau of Archaeological Research, TBG Work Product

Table C-12. Historical and Cultural Assets - Resources with flood depths (ft.) and flood areas (sq. ft.) for 100-yr surge events: 2040 and 2070 SLR - Intermediate High

Asset Type: Historic and Cultural Assets – Resources	2040 IH with 100	)-yr surge	2070 IH with 100-yr surge		
Asset Name:	Flooded Area (sq. ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)	
PALATKA HISTORIC BUSINESS DISTRICT	9,268	2.4	25,672	4.3	
THE PALMETTOS PLANTATION (FT GATES)	538,236	6.8	723,160	8.7	
PALATKA SOUTH HISTORIC DISTRICT	26,081	6.8	213,620	8.7	
PALATKA NORTH HISTORIC DISTRICT	5,393	2.4	16,027	4.3	
CRESCENT CITY HISTORIC DISTRICT	48,308	6.8	63,033	8.7	
MEMORIAL BRIDGE STATUES	10,118	6.8	10,333	8.7	

Source: Bureau of Archaeological Research, TBG Work Product

Table C-13. Parks with flood depths (ft.) and flood areas (sq. ft.) for 100-yr surge events: 2040 and 2070 SLR - Intermediate High

Asset Type: Parks	2040 IH with 10	0-yr surge	2070 IH with 100-yr surge	
Asset Name:	Flooded Area (sq. ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Palatka-to-Lake Butler State Trail	2,110	4.7	4,262	6.6
Dunns Creek State Park	7,621	6.8	7,761	8.7
Haw Creek Preserve State Park	14,585	6.8	14,585	8.7
Ravine Gardens State Park	2,422	7.0	2,443	8.9
Marjorie Harris Carr Cross Florida Greenways State Recreation and	39,708	6.8	39,783	8.7
Conservation Area				
Palatka-to-St. Augustine State Trail	5,576	3.5	13,455	5.5

### Transportation and Evacuation Route

#### High Tide and Sea Level Rise Events

Table C-14. Airports with flood depths (ft.) and flood areas (sq. ft.) for high tide events: current, 2040, and 2070

Asset Type: Airports	High	Tide	High Tide	2040 IH	High Tide 2070 IH	
Asset Name:	Flooded Area	Max Depth	Flooded Area	Max Depth	Flooded Area	Max Depth
	(sq. ft.)	(ft.)	(sq. ft.)	(ft.)	(sq. ft.)	(ft.)
MOUNT ROYAL AIRPORT	-	-	-	-	1,625	1.7
CRESCENT LAKE FARMS AIRPORT	218,679	2.6	449,833	4.0	851,723	5.9

Source: FDEM, FDOT, TBG Work Product

Table C-15. Bridges with flood depths (ft.) and flood lengths (ft.) for high tide events: current, 2040, and 2070

Asset Type: Bridges	High	Tide	High Tide	2040 IH	High Tide 2070 IH	
Asset Name:	Flooded	Max Depth	Flooded Length	Max Depth	Flooded Length	Max Depth
	Length (ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)
764002	98	2.6	123	4.0	211	5.9
764062	50	2.3	79	3.8	109	5.6
764023	45	2.4	127	4.4	186	6.3
764033	116	2.6	143	4.0	242	5.9
764005	356	1.1	464	2.5	514	4.4
760029	-	-	-	-	334	1.8

Table C-16. Major FDOT Roadways with flood depths (ft.) and flood lengths (ft.) for high tide events: current, 2040, and 2070

Asset Type: Major Roadways -	High	Tide	High Tide 2	.040 IH	High Tide	2070 IH		
FDOT Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)	Evacuation Route	AADT
FR 29	9	1.1	307	2.5	499	4.4		
CR-309	16	2.5	21	4.0	29	5.8	Evacuation Route	800
E BUFFALO BLUFF RD	-	-	-	-	4	1.7		
E RIVER RD	54	1.7	172	3.1	451	5.0		
FEDERAL POINT RD	2	1.4	1,719	3.5	11,955	5.4		450
BARDIN RD	-	-	-	-	10	0.9		2,500
SAN MATEO RD	71	2.5	557	3.9	1,299	5.8		650
RIVER ST	-	-	-	-	360	2.9		3,200
PALMETTO BLUFF RD	14	2.1	23	3.5	679	5.4		1,800
W RIVER RD	84	2.3	1,173	3.8	4,859	5.6		2,500
CR-216	-	-	-	-	4	0.2		4,700
CR-207A	-	-	0	0.1	90	2.5		1,400

Table C-17. Major NTD Roadways with flood depths (ft.) and flood lengths (ft.) for high tide events: current, 2040, and 2070

Asset Type: Major	High Ti	de	High Tide 2	040 IH	High Tide 2	High Tide 2070 IH	
Roadways - NTD	Flooded Length	Max Depth	Flooded Length	Max Depth	Flooded Length	Max Depth	
Asset Name:	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	
Cypress Rd	-	-	938	1.6	953	3.5	
<b>Commercial Ave</b>	992	2.5	1,918	3.9	3,492	5.8	
<b>Huber Fish Camp Rd</b>	39	0.6	332	2.0	567	3.9	
Ridgeline Rd	8	2.6	901	4.0	1,370	5.9	
Bass Dr	236	2.6	611	4.0	611	5.9	
Drayton Island Rd	1,114	1.4	5,097	2.8	6,123	4.7	
Hubers Fish Camp Cir	-	-	3	0.4	3	2.2	
School Rd	645	1.7	2,087	3.1	4,493	5.0	
Sportsman Dr	580	1.5	2,262	2.9	2,408	4.8	
Bimini Ct	-	-	243	1.6	479	3.4	

Asset Type: Major	High Ti	de	High Tide 2	2040 IH	High Tide 2	070 IH
Roadways - NTD	Flooded Length	Max Depth	Flooded Length	Max Depth	Flooded Length	Max Depth
Asset Name:	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)
Bayou Dr	-	-	6	0.6	643	2.4
Barnes	-	-	-	-	158	3.0
Buel St	-	-	18	0.9	56	2.8
Breezewood Dr	308	1.3	590	2.7	591	4.6
<b>Browns Fish Camp Rd</b>	-	-	-	-	119	1.6
Cheffey Rd	-	-	-	-	110	1.5
Crescent Lake Dr	-	-	-	-	153	4.3
Cedar Creek Rd	147	2.6	2,550	4.0	12,038	5.9
<b>Drayton Island Ferry Rd</b>	-	-	17	0.4	98	2.2
Cypress Dr	-	-	-	-	265	3.5
Eagle Creek Rd	-	-	1,014	1.7	1,958	3.6
Finnigan Rd	99	1.3	182	2.8	341	4.7
Clifton Rd	506	2.3	1,144	3.7	2,488	5.6
Cedar Creek Cutoff Rd	-	-	-	-	163	1.4
Cove Dr	-	-	-	-	491	1.2
Driftwood Ln	-	-	-	-	54	0.6
Hart St	-	-	-	-	448	2.2
Marina Ln	103	1.4	374	2.9	597	4.8
Minwill Cir	510	1.3	966	2.7	1,610	4.6
Middle Point Ln	7	0.5	372	2.0	613	3.8
Madison St	-	-	-	-	82	2.6
Ludwig Ave	295	1.7	522	3.2	667	5.0
Kerry	7	2.5	13	3.9	22	5.8
Marina Rd	946	2.4	1,220	3.9	1,338	5.8
Islander Rd	2	0.1	424	1.6	864	3.4
Jondabob Rd	6	0.3	992	2.4	3,182	4.3
Houser Dr	-	-	-	-	15	0.5
Longwood Dr	158	1.3	339	2.8	339	4.7
Joy Ct	-	-	7	0.4	207	4.4
Mays Cove Rd	-	-	26	1.3	1,123	3.2

Asset Type: Major	High Ti	de	High Tide 2	040 IH	High Tide 2	070 IH
Roadways - NTD	Flooded Length	Max Depth	Flooded Length	Max Depth	Flooded Length	Max Depth
Asset Name:	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)
Ganey Ln	-	-	-	-	850	2.6
Hamilton Rd	2	0.3	28	1.7	54	3.6
Lake George Dr S	-	-	2	0.2	500	2.1
Magnolia Trl	330	0.9	1,294	2.3	1,599	4.2
Mulberry St	2	0.5	426	2.0	437	3.8
Myrtle Ave	9	2.5	16	3.9	23	5.8
Petite Rd	16	1.3	147	2.7	427	4.6
S Dunns Creek Rd	112	2.6	290	4.0	2,148	5.9
Ross Rd	-	-	110	1.0	400	2.8
Paradise Point Rd	226	1.2	925	2.7	1,420	4.5
Pine Dr	-	-	-	-	3	0.9
Pt Pleasant	36	1.9	382	3.4	1,038	5.2
River Way	477	1.9	533	3.4	650	5.3
Pioneer Trl	146	2.3	3,134	3.7	6,229	5.6
Redbird Ln	-	-	-	-	320	2.2
Payne Rd	26	1.9	90	3.3	899	5.2
Riverview Ter	-	-	-	-	36	1.1
Osprey Cir	-	-	319	1.7	672	3.6
Palm Trl	-	-	-	-	339	2.0
Pomona Landing Rd	-	-	27	0.6	111	3.3
SE 4th St	78	1.1	197	2.5	409	4.4
SE 3rd Ave	-	-	168	0.7	583	2.6
Smith Ln	-	-	100	1.1	1,490	3.0
St Johns Dr	-	-	15	0.7	1,455	2.9
SE 6th St	-	-	-	-	143	1.4
Trisail	1	1.8	3	3.3	4	5.2
Waterway Ave	15	0.3	772	2.2	1,432	4.0
William Bartram Dr	-	-	16	0.9	510	2.8
Amberjack St	-	-	-	-	16	1.2
Alley Way	-	-	-	-	238	1.1

Asset Type: Major	High Ti	de	High Tide 2	040 IH	High Tide 2070 IH	
Roadways - NTD	Flooded Length	Max Depth	Flooded Length	Max Depth	Flooded Length	Max Depth
Asset Name:	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)
Caroline Blvd	-	-	36	0.8	124	2.6
Atkins Rd	-	-	-	-	7	1.3
Breezeway Ave	-	-	-	-	14	0.8
Bowfin Dr	-	-	-	-	368	1.8
Cleo Rd	-	-	269	0.8	657	2.7
Boca Raton	508	1.2	1,115	2.7	1,217	4.5
Britt St	-	-	-	-	7	1.0
Carlin Rd	283	1.6	2,981	3.0	3,985	4.9
Black Bass Ave	-	-	-	-	351	2.5
Betty Rd	-	-	-	-	220	1.3
Canal Dr	36	2.6	129	4.0	768	5.9
Beechers Point Dr	-	-	469	1.6	1,226	3.5
Carefree Dr	506	1.2	659	2.7	659	4.5
Cheryl Ln	-	-	39	0.6	287	2.8
Belle Dr	-	-	179	1.6	415	3.4
Bill Rd	-	-	-	-	191	1.6
Butler Dr	-	-	-	-	76	1.4
Elvira St	-	-	45	0.5	272	2.4
E Palm Dr	-	-	84	1.4	175	3.3
Floridian Club Ln	193	0.8	341	2.3	439	4.1
Colledge Rd	45	0.4	306	1.9	466	3.7
Cove Rd	-	-	21	0.9	565	2.8
Falcon Dr	245	1.9	1,037	3.3	1,429	5.2
Dunham St	-	-	-	-	31	0.8
Easy St	24	2.0	34	3.4	53	5.3
Creekside Rd	-	-	-	-	913	1.7
Creek Ln	57	0.7	440	2.1	440	4.0
Dexter Ct	-	-	-	-	275	1.5
Gardenia St	-	-	128	1.3	544	3.2
Elsie Dr	418	1.5	591	3.0	785	4.8

Asset Type: Major	High Ti	de	High Tide 2	040 IH	High Tide 2	070 IH
Roadways - NTD	Flooded Length	Max Depth	Flooded Length	Max Depth	Flooded Length	Max Depth
Asset Name:	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)
E Lar Ln	-	-	4	0.5	52	2.4
Eagle Trl	-	-	31	0.2	269	2.1
Edgewater Rd	334	1.2	1,428	2.6	1,431	4.5
Dog Branch Rd	-	-	-	-	3	0.3
Gail Dr	114	1.6	397	3.0	562	4.9
Georgetown Landing Rd	-	-	16	0.9	119	2.8
Indian Mound Rd	188	1.7	193	3.1	200	5.0
Helen Pl	-	-	550	3.1	798	5.0
Groveland Ln E	21	1.6	298	3.1	859	5.0
Johns Pl	182	2.5	220	3.9	620	5.8
Jill Ln	-	-	160	1.1	394	3.0
Hotts Acres	244	1.8	433	3.3	539	5.1
Jack Ln	178	1.7	338	3.1	561	5.0
Heiot Ln	-	-	198	0.9	525	2.8
Hicks Ave	269	1.1	1,300	2.5	1,502	4.4
Happiness Dr	369	1.3	683	2.7	683	4.6
Kingsley St	-	-	309	2.5	1,340	4.4
Grove Ave	-	-	5	0.5	91	2.4
Harbor Dr	-	-	-	-	984	2.1
Magnolia Ave	11	2.5	18	4.0	47	5.8
Nassau	-	-	-	-	165	1.2
N Point Rd	-	-	-	-	34	0.9
Mill St	7	0.5	114	2.1	534	4.0
Mount Royal Ave	-	-	7	0.4	1,586	2.4
Myrtle Wood Point Rd	114	2.2	144	3.6	203	5.5
Marshall Dr	-	-	-	-	4	0.6
River Road Dr	-	-	-	-	30	0.5
Riverview Cir	274	1.4	512	2.8	721	4.7
S Hayes Ave	61	1.5	257	3.0	257	4.9
Pine Tree Rd	-	-	-	-	8	1.6

Asset Type: Major	High Ti	de	High Tide 2	040 IH	High Tide 2	High Tide 2070 IH		
Roadways - NTD	Flooded Length	Max Depth	Flooded Length	Max Depth	Flooded Length	Max Depth		
Asset Name:	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)		
Retreat Ln	-	-	387	1.4	680	3.3		
Rogers Ln	-	-	-	-	17	3.1		
Ramona Rd	-	-	-	-	45	0.8		
Pine St	-	-	586	2.2	1,032	4.1		
Park Ave	37	1.3	256	2.7	425	4.6		
River Haven Ct	-	-	-	-	177	1.7		
Palm Ave	706	1.6	928	3.0	1,097	4.9		
Riverview	201	1.2	447	2.7	1,154	4.6		
Pico Rd	449	2.2	582	3.7	672	5.5		
Palmetto St	-	-	17	1.1	43	2.9		
Ridgeline Ave	-	-	-	-	2	0.7		
Pierce Rd	-	-	106	1.2	1,211	4.0		
Scott	50	0.6	718	2.1	768	4.0		
Putnam Ave	585	2.7	614	4.1	628	6.0		
Riviera Dr	-	-	39	2.1	501	4.0		
Sailboat Ln	-	-	227	1.5	237	3.4		
Parker Rd	-	-	-	-	43	0.7		
Palm Dr	11	0.7	499	2.1	1,334	4.1		
Palm St	-	-	601	1.4	1,069	3.2		
Paradise Lakes Ave	-	-	44	1.0	308	2.8		
Port Rd	1	2.3	3	3.7	4	5.6		
Rivershore Dr	-	-	727	2.6	1,214	4.5		
Sanjan Dr	-	-	115	1.3	394	3.2		
SE 7th St	-	-	63	1.1	558	2.9		
Sugar Plum Dr	-	-	-	-	392	1.8		
St Johns Ave	482	2.8	500	4.3	523	6.1		
Shaffer Ave	50	1.2	281	2.6	443	4.5		
Stokes Landing Rd	0	0.1	69	1.5	129	3.4		
Shadick Ln	-	-	-	-	41	0.9		
Sullivan Dr	-	-	44	0.5	356	2.4		

Asset Type: Major	High Ti	de	High Tide 2	040 IH	High Tide 2	High Tide 2070 IH	
Roadways - NTD	Flooded Length	Max Depth	Flooded Length	Max Depth	Flooded Length	Max Depth	
Asset Name:	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	
Sunset Point Ln	-	-	83	0.9	253	2.7	
Sumter Rd	-	-	-	-	5	0.5	
Tall Palms Ln	-	-	164	1.1	172	2.9	
Tropic Ave	-	-	-	-	2	0.7	
Tropic	-	-	362	1.6	587	3.5	
Walt Ln	94	0.7	819	2.2	1,541	4.0	
18th St N	1,214	2.6	1,243	4.0	1,265	5.9	
Bunon Rd	-	-	-	-	22	0.9	
Bellray Dr	-	-	-	-	160	1.5	
Bonita Dr	-	-	152	1.2	931	3.0	
Barbados	-	-	93	0.8	449	2.7	
Bunch Rd	-	-	9	0.2	288	2.1	
Barnes St	-	-	-	-	70	1.8	
Bass Ave	38	1.3	133	2.7	145	4.6	
Browns Rd	-	-	3	1.4	56	3.3	
Brubaker Ln	-	-	170	1.9	860	3.8	
Beacon Cir	640	1.4	1,653	2.8	1,936	4.7	
Boat Ramp Rd	-	-	418	1.6	680	3.5	
Bridgeport	-	-	-	-	364	0.9	
Canal St	139	2.5	368	4.0	573	5.9	
Cherry Trl	-	-	-	-	2	1.3	
Fishcreek Trl	-	-	26	1.6	234	3.5	
Deer Run Rd	93	1.4	735	2.8	1,191	4.7	
Fishermans Cove Paradise	-	-	3	0.2	103	2.1	
Rd							
Egret Way	-	-	-	-	103	0.8	
E Char Ln	2	0.6	103	2.2	167	4.0	
Crossover Rd	-	-	-	-	43	1.3	
Cow Creek Ct	-	-	32	0.6	715	2.5	
Fran Ln	-	-	429	1.6	1,264	3.5	

Asset Type: Major	High Ti	de	High Tide 2	040 IH	High Tide 2	High Tide 2070 IH	
Roadways - NTD	Flooded Length	Max Depth	Flooded Length	Max Depth	Flooded Length	Max Depth	
Asset Name:	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	
Edgewood Ave	17	2.3	26	3.7	40	5.6	
Floridian Club Rd	15	0.3	453	1.8	574	3.6	
Heidel Ln	-	-	10	0.8	355	3.1	
<b>Hubers Fish Camp Rd</b>	-	-	-	-	44	0.9	
Gum Dip Hollow Dr	-	-	32	0.9	77	2.8	
Hayes Ave	141	1.9	386	3.4	553	5.2	
Lettie Ln	-	-	-	-	5	1.8	
Harris Fish Camp Rd	118	2.6	387	4.0	1,247	5.9	
Lenda Ln	-	-	-	-	357	1.2	
Kingfish Ave	-	-	-	-	0	0.0	
Goodwin St	572	2.6	601	4.1	623	5.9	
<b>Groveland Ln W</b>	100	2.4	337	3.8	500	5.7	
Islander Ln	-	-	-	-	11	0.4	
Jimmie Rd	-	-	-	-	132	1.5	
Lakeshore Dr	-	-	23	0.9	262	2.7	
Hickory Dr	163	1.9	216	3.4	282	5.2	
Must Hold Bndy	122	2.6	154	4.0	258	5.9	
Moonlite Dr	339	0.9	616	2.4	616	4.2	
Morning Star Ln	3	0.3	131	3.4	199	5.2	
Norman Ln	-	-	-	-	228	2.2	
Paradise Dr	665	1.9	799	3.4	799	5.2	
Sage Palm Dr	-	-	-	-	69	0.7	
S 10th St	283	2.1	370	3.5	410	5.4	
River Trl	2,180	3.0	2,204	4.4	2,216	6.3	
Pearce Ln	-	-	-	-	98	2.3	
Port Comfort Dr	-	-	-	-	2	1.8	
Riverview Dr	-	-	-	-	416	2.7	
Preston Dr	-	-	1	0.5	385	2.4	
Pinecrest Cir	-	-	-	-	13	1.3	
Ra Bill Ln	2	1.7	6	3.1	13	5.0	

Asset Type: Major	High Ti	de	High Tide 2	040 IH	High Tide 2	070 IH
Roadways - NTD	Flooded Length	Max Depth	Flooded Length	Max Depth	Flooded Length	Max Depth
Asset Name:	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)
Rivers Edge Dr	-	-	-	-	26	1.2
Palmetto Point Ln	-	-	-	-	178	1.8
Palmetto Bluff Rd	-	-	20	0.4	212	2.2
Peggy Ln	-	-	209	0.9	443	2.8
Paradise Cir	519	2.1	686	3.5	691	5.4
River Shores Rd	-	-	286	1.5	1,467	3.3
Ramadaview Dr	-	-	111	1.1	353	2.9
Sable Palm Dr	-	-	-	-	3	0.3
Riverside Blvd	-	-	15	0.9	213	2.8
Orange Dr	-	-	-	-	6	0.3
Pelican Rd	76	2.6	377	4.0	792	5.9
Riverside	-	-	15	0.8	269	2.7
S Shore Ln	3	1.8	5	3.2	14	5.1
St Johns Ct	-	-	-	-	735	2.0
Sunset Dr	5	1.8	440	3.2	796	5.1
St Johns	173	2.0	1,136	3.5	1,545	5.4
Stella Rd	-	-	-	-	200	2.0
Springside Cutoff Rd	-	-	-	-	17	0.8
Valencia Ct	-	-	-	-	141	1.1
Tobago Ave	-	-	-	-	50	0.5
Union Ave	-	-	1	0.3	18	2.2
Woodbury Trl	-	-	-	-	30	0.3
Widyworm	-	-	-	-	51	1.5
Tarpon Blvd	-	-	1,066	2.0	1,751	3.9
Whitney St	-	-	39	1.3	330	3.1

Source: USGS National Transportation Dataset (NTD), TBG Work Product

Table C-18. Marinas and Boatramps with flood depths (ft.) and flood areas (sq. ft.) for high tide events: current, 2040, and 2070

Asset Type: Marinas and Boatramps	High Ti	de	High Tide 2	.040 IH	High Tide 2	070 IH
Asset Name:	Flooded Areas	Max Depth	Flooded Areas	Max Depth	Flooded Areas	Max Depth
	(sq. ft.)	(ft.)	(sq. ft.)	(ft.)	(sq. ft.)	(ft.)
Brown's Landing Public Boat Ramp (Palatka)	56,015	2.6	57,651	0.0	61,160	5.9
Crescent Lake Public Boat Ramp - FWC # L-1	560	2.5	1,259	0.0	4,499	5.9
East Palatka - Pico Road - FWC # L-36	31,947	2.6	31,958	1.3	31,958	5.9
Boathouse Marina	6,997	2.6	16,286	0.0	20,516	5.9
Rodman Dam Public Ramp	-	-	332,894	0.0	470,865	2.7
Palmetto Bluff - FWC # 69	1,270	2.5	17,330	0.0	25,306	5.9
Drayton Island Ferry Public Boat Ramp	495	2.5	2,756	0.0	6,028	5.8
Lynch's Landing RV Park	-	-	2,336	0.0	10,796	2.6
Welaka Public Boat Ramp	205	1.2	2,164	0.0	4,080	4.5
Margary Neal Nelson Sunrise Park and	5,048	2.6	8,547	0.0	12,282	5.9
Boat Ramp						
JAMES C GODWIN RIVERFRONT PARK & BOAT RAMP	7,266	2.6	16,878	0.0	62,850	5.9
Dunns Creek and Highway 17	68,749	2.6	75,821	0.1	75,821	5.9
Oklawaha River at State Road 19	4,751,128	1.6	5,262,509	0.0	5,315,574	4.9
Georgia Boy's Fish Camp	11,926	2.6	35,349	0.0	57,436	5.9
Elgin Grove - FWC # 14	1,819	2.5	7,492	0.0	13,789	5.9
Crystal Cove Marina	38,319	2.6	49,062	0.0	66,316	5.9
Palatka Riverfront Park and Boat Ramp	7,266	2.6	16,878	0.0	62,850	5.9
Gateway Fish Camp Rv Resort	1,547,586	2.6	1,757,664	0.0	2,041,238	5.9
Shell Harbor Public Boat Ramp - FWC # L-37	624	2.5	1,152	0.0	2,476	5.9
Leonard's Landing Lake Crescent Resort	2,756	2.6	8,353	0.0	20,398	5.9
Bass World Lodge	6,587	1.9	26,802	0.0	76,649	5.2

Table C-19. Ports with flood depths (ft.) and flood areas (sq. ft.) for high tide events: current, 2040, and 2070

Asset Type: Ports	High Tide		High Tide 2040 IH		High Tide 2070 IH	
Asset Name:	Flooded Areas	Max Depth	Flooded Areas	Max Depth	Flooded Areas	Max Depth
	(sq. ft.)	(ft.)	(sq. ft.)	(ft.)	(sq. ft.)	(ft.)
Port Putnam	1,948	2.6	4,155	4.0	11,334	5.9

Source: FDEM, FDOT-SIS, TBG Work Product

Table C-20. Rail Facilities and Crossings with flood depths (ft.) and flood lengths (ft.) for high tide events: current, 2040, and 2070

Asset Type: Rail Facilities and	High Tide		High Tide 2040 IH		High Tide 2070 IH	
Crossings	Flooded Length	Max Depth	Flooded Length	Max Depth	Flooded Length	Max Depth
Asset Name:	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)
CSXT Mainline (A)	315 ft.	2.6	756 ft.	4.0	1856 ft.	5.9

Source: FDOT-SIS, National Transportation Atlas Database (NTAD), TBG Work Product

#### Rainfall

Table C-21. Airports with flood depths (ft.) and flood areas (sq. ft.) for 100-yr rain events: current and 2070

Asset Type: Airports	Rainfall 1	00-yr	Rainfall 100-yr 2070	
Asset Name:	Flooded Area (sq. ft.)	Max Depth (ft.)	Flooded Area (sq. ft.)	Max Depth (ft.)
MOUNT ROYAL AIRPORT	1,900	1.9	10,650	3.6
CRESCENT LAKE FARMS AIRPORT	6,510,750	7.5	7,342,900	7.9
EAGLES NEST AIRPORT & SPB	13,550	2.4	15,650	2.8
OAK RIDGE AIR PARK	156,050	1.7	223,875	2.0
JIM FINLAY FARM AIRPORT	46,000	1.3	110,675	1.6
THUNDERBIRD AIRPARK	629,800	3.8	665,225	4.1
PALATKA MUNICIPAL AIRPORT	1,853,750	7.4	1,964,525	7.7

Table C-22. Bridges with flood depths (ft.) and flood lengths (ft.) for 100-yr rain events: current and 2070

Asset Type: Bridges	Rainfall 1	00-yr	Rainfall 100-	yr 2070
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
764062	210	8.5	227	6.0
764023	199	5.6	199	6.0
764033	229	5.5	236	5.9
764005	654	30.5	654	30.8
760029	917	28.0	917	28.3
760001	398	13.2	398	13.6
764004	199	6.7	199	7.1
764013	200	1.1	216	1.5
764007	418	23.2	418	23.6
764024	406	10.1	406	10.4
760049	294	19.4	294	19.7
764016	88	4.5	102	4.9
764014	515	15.6	515	15.9
760057	1,314	19.5	1,314	19.8
364010	441	13.8	490	14.1

Table C-23. Major FDOT Roadways with flood depths (ft.) and flood lengths (ft.) for 100-yr rain events: current and 2070

Asset Type: Major Roadways - FDOT	Rainfal	l 100-yr	Rainfall 100-yr 2070			
Asset Name:	Flooded	Max Depth	Flooded	Max Depth	<b>Evacuation Route</b>	AADT
	Length (ft.)	(ft.)	Length (ft.)	(ft.)		
FR 29	507	4.4	531	4.7		
CR-309	5,260	21.8	6,533	22.2	Evacuation Route	800
E BUFFALO BLUFF RD	236	14.5	310	14.6		
E RIVER RD	374	4.1	433	4.4		
FEDERAL POINT RD	6,772	4.5	8,767	4.9		450
BARDIN RD	9,400	26.9	10,398	27.3		2,500
SAN MATEO RD	1,232	9.4	1,389	9.7		650
RIVER ST	75	2.1	202	2.4		3,200

Asset Type: Major Roadways - FDOT	Rainfal	l 100-yr	Rainfall 1	00-yr 2070		
Asset Name:	Flooded	Max Depth	Flooded	Max Depth	<b>Evacuation Route</b>	AADT
	Length (ft.)	(ft.)	Length (ft.)	(ft.)		
PALMETTO BLUFF RD	1,730	8.0	2,191	8.4		1,800
W RIVER RD	5,293	8.2	6,077	8.1		2,500
CR-216	4,657	26.5	4,784	26.9		4,700
CR-207A	228	3.8	372	3.7		1,400
CR-310	7,537	12.3	8,915	12.6	Evacuation Route	2,500
RODMAN RD	196	8.3	393	8.6		400
TURNER RD	847	8.8	1,220	9.1		
CORAL FARMS RD	7,435	16.4	7,585	16.8		
EAST END RD	393	4.3	505	4.7		700
KEUKA RD	215	2.7	300	3.0		2,500
SILVER LAKE DR	96	2.5	187	2.9		2,100
MOODY RD	376	13.3	574	14.4	Evacuation Route	4,400
YELVINGTON RD	3,080	6.2	4,115	6.5		
N SR-21	61	5.8	64	6.2		9,500
OLD HWY 17	337	14.0	366	14.3		
N US-17	1,964	24.2	2,659	25.0	Evacuation Route	13,600
ST JOHNS AVE	51	1.7	113	2.1		3,800
PARADISE SHORES RD	321	31.2	374	31.5		
HOLLOWAY RD	335	8.5	392	9.7		
BROWNS LANDING RD	50	2.1	97	2.4		
OLD SAN MATEO RD	1,475	8.4	1,636	8.7		
GEORGETOWN DENVER RD	4,413	5.0	5,430	5.4		1,800
E SR-100	1,269	2.7	1,787	3.2	Evacuation Route	5,400
CR-219	83	2.3	141	2.6		2,100
E CRACKER SWAMP RD	354	3.6	399	3.9		3,300
JIM BRYANT RD	182	3.5	305	3.9		
SR-207	5,034	5.6	5,900	6.0	Evacuation Route	18,200
SR-20	13,809	16.5	15,927	16.9	Evacuation Route	11,964
NE SR-26	4,744	4.8	4,990	5.2	Evacuation Route	3,800
CR 308	1,707	9.4	1,976	9.7	Evacuation Route	3,400

Asset Type: Major Roadways - FDOT	Rainfal	l 100-yr	Rainfall 100-yr 2070			
Asset Name:	Flooded	Max Depth	Flooded	Max Depth	<b>Evacuation Route</b>	AADT
	Length (ft.)	(ft.)	Length (ft.)	(ft.)		
CR-315	1,644	4.4	2,082	4.8	Evacuation Route	2,400
S CR-21	214	2.9	285	3.3		1,200
CR-308B	599	4.1	1,052	4.5		1,900
UNION AVE	2,124	5.3	2,323	5.6		1,500
S US-17	6,147	23.1	6,496	23.5	Evacuation Route	12,000
SR-19	1,303	4.1	1,635	12.1	Evacuation Route	8,500
SR-100	13,648	22.4	15,041	22.8	Evacuation Route	19,500

Table C-24. Major NTD Roadways with flood depths (ft.) and flood lengths (ft.) for 100-yr rain events: current and 2070

Asset Type: Major Roadways - NTD	Rainfall 10	00-yr	Rainfall 100-	yr 2070
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Cypress Rd	956	2.6	956	2.9
Commercial Ave	2,449	6.7	3,108	7.1
Huber Fish Camp Rd	634	15.1	689	15.7
Ridgeline Rd	1,198	5.5	1,286	5.9
Bass Dr	614	6.0	614	6.3
Drayton Island Rd	6,203	4.8	6,368	5.1
Hubers Fish Camp Cir	3	2.1	3	2.5
School Rd	3,417	4.1	3,637	4.4
Sportsman Dr	2,359	3.8	2,386	4.1
Bimini Ct	341	2.5	393	2.9
Bayou Dr	41	1.4	185	1.7
Barnes	169	3.0	178	3.4
Buel St	284	21.2	284	21.6
Breezewood Dr	591	3.6	591	4.0
Browns Fish Camp Rd	134	2.2	161	2.6
Cheffey Rd	19	0.6	41	0.9
Crescent Lake Dr	193	4.4	325	4.7
Cedar Creek Rd	7,708	6.7	9,667	7.1

Asset Type: Major Roadways - NTD	Rainfall 10	00-yr	Rainfall 100-	yr 2070
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Drayton Island Ferry Rd	925	21.0	914	20.3
Cypress Dr	51	2.7	183	3.0
Eagle Creek Rd	3,739	4.8	4,118	5.2
Finnigan Rd	240	3.8	273	4.1
Clifton Rd	2,629	5.7	3,133	6.1
Cedar Creek Cutoff Rd	45	0.5	100	0.9
Cove Dr	72	0.4	212	0.7
Driftwood Ln	74	0.7	148	1.0
Hart St	-	-	-	-
Marina Ln	541	4.0	577	4.4
Minwill Cir	1,628	4.7	1,641	5.0
Middle Point Ln	471	2.8	523	3.1
Madison St	5,292	21.0	5,443	21.4
Ludwig Ave	676	5.1	695	5.4
Kerry	49	6.1	50	6.5
Marina Rd	1,296	4.9	1,319	5.2
Islander Rd	728	2.6	800	2.9
Jondabob Rd	1,862	3.8	2,249	4.1
Houser Dr	14	0.6	24	0.9
Longwood Dr	339	3.7	339	4.1
Joy Ct	224	4.5	267	4.8
Mays Cove Rd	440	1.5	742	1.9
Ganey Ln	733	1.8	814	2.1
Hamilton Rd	48	2.6	50	2.9
Lake George Dr S	580	18.8	768	19.3
Magnolia Trl	1,473	3.3	1,546	3.7
Mulberry St	434	2.6	438	3.0
Myrtle Ave	43	6.6	44	7.0
Petite Rd	446	4.7	481	5.1
S Dunns Creek Rd	2,013	5.6	2,199	6.0
Ross Rd	320	1.9	365	2.3

Asset Type: Major Roadways - NTD	Rainfall 100-yr		Rainfall 100-yr 2070	
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Paradise Point Rd	1,331	3.7	1,363	4.0
Pine Dr	4	0.8	11	1.2
Pt Pleasant	1,061	5.4	1,089	5.7
River Way	709	5.4	856	6.0
Pioneer Trl	6,108	8.8	6,194	9.1
Redbird Ln	105	1.4	158	1.7
Payne Rd	310	4.3	473	4.7
Riverview Ter	2	0.1	16	0.5
Osprey Cir	683	3.6	739	4.0
Palm Trl	163	1.0	222	1.4
Pomona Landing Rd	121	3.4	143	3.8
SE 4th St	887	9.6	968	10.0
SE 3rd Ave	696	7.6	744	7.9
Smith Ln	463	2.0	866	2.3
St Johns Dr	472	2.0	845	2.3
SE 6th St	267	6.6	293	7.0
Trisail	-	-	1	0.0
Waterway Ave	1,246	3.1	1,315	3.5
William Bartram Dr	563	2.8	672	3.2
Amberjack St	3	0.2	9	0.6
Alley Way	276	1.2	353	1.5
Caroline Blvd	871	6.2	1,019	6.6
Atkins Rd	28	1.5	93	1.8
Breezeway Ave	-	-	6	0.3
Bowfin Dr	84	1.0	163	1.4
Cleo Rd	623	1.8	645	2.2
Boca Raton	1,196	3.6	1,208	4.0
Britt St	73	19.3	104	19.6
Carlin Rd	3,730	4.0	3,849	4.4
Black Bass Ave	40	1.6	99	1.9
Betty Rd	234	1.4	261	1.8

Asset Type: Major Roadways - NTD	Rainfall 100-yr		Rainfall 100-yr 2070	
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Canal Dr	876	5.6	895	6.0
Beechers Point Dr	1,246	3.6	1,363	4.0
Carefree Dr	644	3.6	644	4.0
Cheryl Ln	304	2.9	329	3.2
Belle Dr	338	2.6	367	2.9
Bill Rd	201	1.8	239	2.1
Butler Dr	6	0.6	19	0.9
Elvira St	280	2.5	307	2.9
E Palm Dr	134	2.4	154	2.7
Floridian Club Ln	394	3.2	413	3.5
Colledge Rd	392	2.9	410	3.2
Cove Rd	296	1.9	443	2.2
Falcon Dr	1,273	4.3	1,360	4.6
Dunham St	-	-	4	0.2
Easy St	116	4.5	196	4.9
Creekside Rd	331	0.8	584	1.2
Creek Ln	439	3.1	439	3.5
Dexter Ct	296	1.6	345	2.0
Gardenia St	479	2.3	509	2.6
Elsie Dr	687	4.0	731	4.3
E Lar Ln	58	2.4	64	2.8
Eagle Trl	286	2.2	356	2.5
Edgewater Rd	1,434	3.6	1,434	4.0
Dog Branch Rd	1,706	3.4	1,872	3.7
Gail Dr	498	3.8	529	4.1
Georgetown Landing Rd	120	2.7	142	3.0
Indian Mound Rd	201	4.1	201	4.4
Helen Pl	801	4.9	833	5.3
Groveland Ln E	644	4.1	830	4.4
Johns Pl	928	9.9	1,126	10.2
Jill Ln	311	2.2	344	2.5

Asset Type: Major Roadways - NTD	Rainfall 1	Rainfall 100-yr		Rainfall 100-yr 2070	
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)	
Hotts Acres	1,106	7.5	1,211	18.2	
Jack Ln	468	4.1	507	4.5	
Heiot Ln	565	5.3	568	6.2	
Hicks Ave	1,511	4.5	1,534	4.9	
Happiness Dr	680	3.7	680	4.0	
Kingsley St	908	3.5	1,033	3.9	
Grove Ave	150	2.4	114	2.7	
Harbor Dr	188	1.2	483	1.6	
Magnolia Ave	84	6.6	87	7.0	
Nassau	9	0.3	27	0.6	
N Point Rd	44	1.0	62	1.3	
Mill St	336	3.1	453	3.4	
Mount Royal Ave	1,656	2.5	1,823	2.8	
Myrtle Wood Point Rd	171	4.6	183	4.9	
Marshall Dr	6	0.8	8	1.1	
River Road Dr	-	-	-	-	
Riverview Cir	614	3.7	642	4.1	
S Hayes Ave	259	5.3	259	5.6	
Pine Tree Rd	2	1.6	4	1.9	
Retreat Ln	566	2.4	614	2.7	
Rogers Ln	3	1.2	6	1.6	
Ramona Rd	44	1.0	58	1.3	
Pine St	994	3.2	1,025	3.6	
Park Ave	441	4.7	468	5.1	
River Haven Ct	29	0.8	68	1.2	
Palm Ave	2,907	4.8	3,182	5.2	
Riverview	949	3.7	1,097	4.0	
Pico Rd	634	4.6	653	5.0	
Palmetto St	34	2.1	39	2.4	
Ridgeline Ave	1	0.5	3	0.8	
Pierce Rd	1,087	3.1	1,183	3.5	

Asset Type: Major Roadways - NTD	Rainfall 1	Rainfall 100-yr		Rainfall 100-yr 2070	
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)	
Scott	768	3.1	769	3.5	
Putnam Ave	622	5.1	625	5.5	
Riviera Dr	551	3.8	648	4.1	
Sailboat Ln	237	2.5	238	2.9	
Parker Rd	665	9.3	784	9.9	
Palm Dr	1,368	4.1	1,404	4.4	
Palm St	890	2.3	994	2.6	
Paradise Lakes Ave	1,190	3.1	1,308	3.4	
Port Rd	4	3.3	4	3.7	
Rivershore Dr	941	4.3	1,044	4.7	
Sanjan Dr	274	2.2	316	2.5	
SE 7th St	899	8.1	1,133	8.4	
Sugar Plum Dr	132	0.9	275	1.3	
St Johns Ave	509	5.3	513	5.6	
Shaffer Ave	453	4.6	480	4.9	
Stokes Landing Rd	338	7.2	401	7.6	
Shadick Ln	-	-	-	-	
Sullivan Dr	509	18.2	541	14.7	
Sunset Point Ln	218	1.9	233	2.2	
Sumter Rd	-	-	1	0.0	
Tall Palms Ln	173	2.0	173	2.4	
Tropic Ave	78	2.0	127	2.4	
Tropic	537	2.9	566	3.2	
Walt Ln	1,509	3.2	1,533	3.5	
18th St N	1,273	5.6	1,278	6.0	
Bunon Rd	-	-	-	-	
Bellray Dr	9	0.4	35	0.8	
Bonita Dr	561	2.1	726	2.5	
Barbados	444	1.8	450	2.1	
Bunch Rd	121	1.2	211	1.5	
Barnes St	74	1.8	83	2.1	

Asset Type: Major Roadways - NTD	Rainfall 1	Rainfall 100-yr		Rainfall 100-yr 2070	
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)	
Bass Ave	144	3.8	144	4.1	
Browns Rd	14	1.7	29	2.1	
Brubaker Ln	373	2.9	591	3.3	
Beacon Cir	1,962	4.7	2,002	5.1	
Boat Ramp Rd	644	2.6	662	2.9	
Bridgeport	-	-	91	0.3	
Canal St	614	6.6	656	7.0	
Cherry Trl	236	5.7	289	6.0	
Fishcreek Trl	142	2.6	239	2.9	
Deer Run Rd	1,087	3.8	1,140	4.2	
Fishermans Cove Paradise Rd	109	2.2	128	2.6	
Egret Way	96	0.9	141	1.3	
E Char Ln	168	4.2	168	4.5	
Crossover Rd	56	1.4	79	1.8	
Cow Creek Ct	364	1.6	470	1.9	
Fran Ln	1,254	2.2	1,266	2.6	
Edgewood Ave	70	6.6	72	7.0	
Floridian Club Rd	537	2.8	554	3.1	
Heidel Ln	338	1.8	353	2.2	
Hubers Fish Camp Rd	53	1.0	79	1.3	
Gum Dip Hollow Dr	59	2.0	66	2.3	
Hayes Ave	563	5.2	588	5.5	
Lettie Ln	-	-	3	1.3	
Harris Fish Camp Rd	2,806	6.6	3,573	6.9	
Lenda Ln	118	0.3	229	0.6	
Kingfish Ave	-	-	-	-	
Goodwin St	622	5.0	626	5.4	
Groveland Ln W	483	4.8	493	5.2	
Islander Ln	-	-	-	-	
Jimmie Rd	143	1.6	179	1.9	
Lakeshore Dr	722	4.6	876	5.0	

Asset Type: Major Roadways - NTD	Rainfall 100-yr		Rainfall 100-yr 2070	
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Hickory Dr	253	4.3	269	4.7
Must Hold Bndy	264	6.3	277	6.7
Moonlite Dr	615	3.5	615	3.8
Morning Star Ln	173	4.3	184	4.6
Norman Ln	191	1.3	219	1.6
Paradise Dr	801	4.4	801	4.7
Sage Palm Dr	-	-	10	0.1
S 10th St	398	4.5	404	4.8
River Trl	2,215	5.4	2,216	5.8
Pearce Ln	39	1.4	58	1.8
Port Comfort Dr	1	0.9	2	1.3
Riverview Dr	171	1.8	356	2.1
Preston Dr	198	1.5	341	1.8
Pinecrest Cir	-	-	4	0.3
Ra Bill Ln	16	5.8	23	6.2
Rivers Edge Dr	8	0.5	19	0.9
Palmetto Point Ln	93	0.9	106	1.2
Palmetto Bluff Rd	93	1.3	129	1.7
Peggy Ln	453	2.9	472	3.2
Paradise Cir	685	4.5	697	4.8
River Shores Rd	883	2.6	1,153	2.9
Ramadaview Dr	278	2.0	309	2.3
Sable Palm Dr	-	-	-	-
Riverside Blvd	141	1.8	169	2.1
Orange Dr	-	-	-	-
Pelican Rd	894	6.6	1,060	6.9
Riverside	164	1.9	202	2.2
S Shore Ln	21	6.3	38	6.6
St Johns Ct	668	1.2	708	1.5
Sunset Dr	813	5.0	852	5.4
St Johns	1,220	4.5	1,256	4.9

Asset Type: Major Roadways - NTD	Rainfall 10	00-yr	Rainfall 100-yr 2070	
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Stella Rd	214	2.2	228	2.5
Springside Cutoff Rd	984	30.4	1,036	30.7
Valencia Ct	173	1.1	234	1.5
Tobago Ave	-	-	-	-
Union Ave	24	1.4	34	1.7
Woodbury Trl	-	-	-	-
Widyworm	4	0.5	17	0.9
Tarpon Blvd	1,651	3.3	1,678	3.7
Whitney St	189	2.2	246	2.6
Brussels St	171	1.6	366	2.3
Chickasaw Pl	991	5.6	1,070	6.6
1st St	288	5.9	358	6.3
Jenkins Dr	-	-	12	8.0
Hires Rd	528	11.0	554	11.3
Lehardy Ave	1,482	15.1	1,520	15.4
Morgan	709	12.2	859	12.5
Pilchard Rd	6	1.8	14	4.1
Keuka Lake Rd	2,309	11.1	2,415	11.5
Kathy Ct	37	3.0	40	3.4
Rose Ave	346	9.1	346	9.5
Bellamy Rd	658	3.4	670	3.8
Copeland Rd	-	-	1	0.0
Merryfield Ln	2,428	11.3	2,448	11.6
Bay Berry Ln	1	0.4	33	0.8
Byrd Rd	709	4.4	758	4.7
Bostwick Park Dr	1	0.0	21	0.4
Bass Rd	-	-	6	0.2
Ash	114	0.9	177	1.2
Bay Ln	213	1.0	281	1.3
Beecher Springs Rd	51	14.5	51	14.8
Ardmere St	259	2.0	343	2.3

Asset Type: Major Roadways - NTD	Rainfall 100-yr		Rainfall 100-yr 2070	
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Brock Rd	2,648	11.7	2,696	12.1
Belize St	984	5.1	984	5.4
Azalea Ter	617	13.8	641	14.1
August Ave	331	3.6	428	3.9
Bridgeport Pines Ct	511	1.7	534	2.0
Anderson Ave	483	29.8	512	30.1
Ashley Dr	-	-	1	0.2
Baker Rd	8	0.7	14	1.0
Chris Ave	213	1.7	269	2.0
Fillman Ln	696	7.1	710	7.4
Coot Rd	14	0.5	104	0.9
E Boundary Dr	1,669	4.6	1,699	5.2
E Pinellas St	708	2.1	1,124	2.5
Chamberlain Rd	5,054	17.0	5,505	17.4
Florence Ave	147	1.1	273	1.4
Carr Pl	3,343	15.8	3,399	16.1
Dolphin Dr	3,321	6.4	3,321	6.7
Cessna St	983	3.4	1,072	3.8
Eve St	315	1.8	343	2.2
Center Rd	139	1.6	174	2.0
Fisherman Dr	343	6.3	596	6.6
Dogwood Ave	2,153	3.6	2,548	4.0
Cobblestone Rd	4	0.4	20	0.7
Easement Ln	3,477	17.0	3,524	17.4
Dalton Ave	1,149	2.5	1,344	2.9
Delray Ct	337	2.1	393	2.5
Deep Creek Rd	313	4.7	416	5.1
Corbina Way W	3	0.2	16	0.6
Fern St	648	14.6	648	15.0
Cornerstone Cir	-	-	182	18.9
Comfort Rd	-	-	6	0.4

Asset Type: Major Roadways - NTD	Rainfall 1	00-yr	Rainfall 100-	yr 2070
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Cypress	121	2.3	379	3.1
E Bannerville Rd	584	3.7	672	4.1
Cousintown Rd	1,484	2.8	1,588	3.1
Clemons Rd	1,243	8.0	1,391	8.4
Carteret Rd	1,106	2.7	1,277	3.1
E Mc Cormick Rd	105	4.6	234	5.8
E Marion St	377	1.7	536	2.1
E San Jose St	1,273	2.6	1,650	2.9
Division St	2,004	14.9	2,103	15.3
Florida Ave	84	5.8	171	6.2
Center St	2,372	17.5	2,398	17.9
Cracker Swamp Dirt Rd	768	3.5	829	3.9
Douglas St	504	3.1	660	3.5
Medlock Ln	351	3.5	429	3.9
Janye Ave	53	1.8	119	2.1
Hickory Nut Trl	3,183	4.5	3,489	4.9
Foerster Ln	-	-	7	4.0
Griffin Ln	661	7.8	689	8.2
Lake Ida Pt Dr	212	4.7	351	5.1
June Ct St	89	1.5	116	1.8
Lake Shore Dr	884	3.7	976	4.0
Hollender Dr	124	1.5	151	1.8
Lisa Ann Trl	971	1.9	1,539	2.2
Honduras Ave	1,107	5.8	1,184	6.1
Indian Lakes Forest Rd	634	7.2	731	7.5
Jefferson Ave	241	4.3	251	4.7
Meadowview Dr	18	3.5	69	3.8
Lakeview Dr	1,226	5.1	1,569	5.4
Lake Dr	1,119	7.0	1,419	7.4
Millican Rd	1,485	11.7	1,984	12.0
Hunter St	2,815	16.3	2,843	16.6

Asset Type: Major Roadways - NTD	Rainfall 1	00-yr	Rainfall 100-	yr 2070
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Live Oak Blvd	304	1.0	421	1.3
Harvey Branch Rd	1,239	5.5	1,350	5.9
Gator Ln	69	13.6	99	14.0
Forest St	1,887	3.9	1,944	4.2
Husson Ave Exd	79	2.8	129	3.2
Louis Broer Rd	3	0.1	6	0.5
Linderwood Dr	1,470	7.1	1,539	7.5
Gardenia Ave	1,749	4.6	2,178	4.9
Holly Point Ln	446	1.4	523	1.8
Lake Ave	199	6.7	199	7.0
Morris Lake Ln	1,958	9.4	1,997	9.8
Lake Como Dr	2,681	6.8	3,063	7.1
Longtree St	224	3.1	260	3.5
Leisure Ct	47	9.5	73	9.9
Howell Lake Ct	-	-	2	0.1
Litzell Rd	3	2.0	8	2.3
Harwood St	9	7.8	114	8.3
Martin Ave	16	0.7	54	1.0
Loraine Way	13	0.4	88	0.8
Hunter Rd	2,699	16.0	2,848	16.4
Karen Pl	4	1.1	7	1.4
Kolski Dr	1,293	13.1	1,608	13.4
Karen Ct	46	1.0	93	1.3
Hoot Owl Rd	461	5.2	527	5.5
Marlin Rd	1	0.2	2	0.5
Holliste Cemetery Rd	611	24.1	670	24.5
Ida Blvd	1,449	3.9	1,825	4.3
Lakeview Trl	12	0.5	22	0.8
Huntington Shortcut Rd	1,563	3.5	1,931	3.8
Juniper Rd	1,821	6.2	1,968	6.5
Georgia Ave	31	2.6	408	3.6

Asset Type: Major Roadways - NTD	Rainfall 1	00-yr	Rainfall 100-	yr 2070
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Magnolia Blvd	101	2.2	201	2.6
Monroe Aly	310	14.6	355	15.0
Hollister Cemetery St	671	4.4	818	4.8
Glenside St	73	2.5	139	2.8
Moonglow Rd	73	3.3	99	4.2
Lexington St	1,239	6.3	1,249	6.6
Maple Ter	9	0.1	71	0.5
Jewel Ave	720	3.4	885	3.8
Haast Rd	2,593	13.8	2,597	14.2
Hoover Rd	607	1.0	1,144	1.4
Georgetown Dr	359	2.4	414	2.8
Gilbert Rd	120	0.8	271	1.1
Johns Rd	1,054	22.5	1,677	22.8
Kenwood Boat Ramp Rd	67	5.2	76	5.6
Lakeview Way	11	0.5	33	0.8
Maple Ln	233	1.3	319	1.6
Margie Ln	324	5.2	335	5.5
Michigan Ave	330	13.3	334	13.7
Murray Rd	735	5.4	793	5.7
N 2nd St	1,015	5.9	1,054	6.2
Mosswood St	1,192	4.9	1,240	5.3
Myers Ln	36	2.5	45	2.9
Motes Ln	61	3.1	93	3.5
Nettles Rd	1	0.0	33	0.4
Nichols Rd	3,632	9.9	3,667	10.2
Neal Rd	73	1.5	142	1.8
Nobles Ter	21	0.9	28	1.3
North St	1,191	28.9	1,266	29.3
Norman Rd	73	1.7	95	2.1
Plumosa Dr	1,774	4.9	1,932	5.2
Redwood Blvd	1,808	2.6	2,165	3.0

Asset Type: Major Roadways - NTD	Rainfall 1	00-yr	Rainfall 100-	yr 2070
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Ocala Dr	920	3.2	987	3.5
Red Fox Trl	1	0.1	22	2.2
Peeples Rd	813	5.9	839	6.2
Pleasant St	3	0.5	41	2.7
Royal Palm Rd	686	1.1	970	1.5
Plantation Pines Dr	1,526	4.4	1,769	4.7
Quail Ln	1	5.1	34	5.5
Saratoga Cir	174	9.9	289	10.3
Old Gainesville Hwy	934	12.5	1,019	12.8
Palmetto Ct	1,306	3.1	1,445	3.5
Ocala Ct	749	3.1	894	3.4
Palmer Sawmill Rd	324	2.5	490	2.8
Osceola Rd	1,194	3.4	1,352	3.8
Plantation Cir	218	0.5	366	0.9
Palmetto Trl	257	5.1	286	5.5
Orange Springs Cutoff Rd	36	5.8	38	6.2
Reef St	176	2.9	213	3.2
Rusty Ln	167	1.6	308	2.5
Redwood	638	2.2	699	2.6
Ridge Lake Rd	1,141	4.4	1,314	5.1
Sand Lake Dr	292	2.7	315	3.0
Possum Walk Rd	1,316	8.3	1,343	8.7
Pine Cone Dr	1,872	3.7	1,935	4.0
Oak Ridge Dr	846	2.7	1,051	3.1
Old US Hwy 17	113	1.7	176	2.1
Osteen Rd	350	7.0	465	7.3
Penny Acres Rd	316	5.4	335	5.8
Ponderosa Pines Ct	1	0.1	8	0.4
Portland St	389	8.0	401	8.4
Price Rd	771	7.7	910	8.0
Race St	302	4.8	337	5.2

Asset Type: Major Roadways - NTD	Rainfall 1	00-yr	Rainfall 100-	yr 2070
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Railroad Ave	253	0.8	356	1.1
S Main St	1,034	3.0	1,127	3.4
Sasso Dr	1,292	4.6	1,339	4.9
Silver Lake Dr	248	1.5	373	1.9
SE 8th Ave	626	1.4	656	1.7
Shady Cir	3	0.4	8	0.7
Springdale Dr	302	22.7	353	23.1
Spanish Trl	1,660	8.7	1,769	9.0
Shedd Rd	1,258	3.1	1,693	3.4
Seminole PI	1,132	8.0	1,162	8.3
Squirrel Tree Trl	293	7.4	331	7.7
Shelley St	579	2.8	649	3.1
Shorewood St	1,951	3.8	2,272	4.2
South Rd	10	2.2	18	2.5
Susan St	-	-	6	1.2
Starlight Dr	35	0.9	67	1.2
Southern Rose Trl	4,474	12.9	4,486	13.2
Sunshine Ln	183	2.1	223	2.4
Sunnyside Beach Rd	146	5.0	151	5.4
St Johns Fishing Lodge Rd	803	21.0	775	20.8
Seminole Trl	1,240	3.5	1,450	3.8
Shashy Ln	379	8.2	404	8.5
Spring Creek Dr	788	8.2	1,159	8.6
Star Lake Dr	416	9.4	396	9.7
W Harbor Dr	834	2.9	905	3.3
Tabu Trl	64	4.8	69	5.1
Taylor Fury Rd	2,431	7.2	2,511	7.6
Tijuana Trl	318	4.9	353	5.2
Westgate	433	9.6	672	10.0
Tequesta Trl	1,398	10.2	1,581	10.5
Violet Cir	343	2.2	693	2.9

Asset Type: Major Roadways - NTD	Rainfall 1	00-yr	Rainfall 100-	yr 2070
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Young St	215	2.1	253	2.5
Tanner Woods Ct	208	6.1	253	6.5
SW 6th Ter	987	2.6	1,053	3.0
Viola Dr	280	7.0	289	7.4
Tucker Lake Rd	539	4.4	608	4.7
White Pine	799	3.0	907	3.3
West Dr	51	2.2	61	2.5
Violet Fox Dr	317	3.9	401	4.3
Sweetwater Trl	281	3.5	406	4.7
W Peninsular Dr	86	4.0	117	4.4
Walton Rd	156	0.8	241	1.1
Ward Ave	418	31.9	444	32.2
Co Rd 214	1,629	7.7	2,082	8.1
5th St	31	2.2	179	3.0
3rd St	1,060	3.2	1,204	3.6
4th St	424	2.0	524	2.3
5th Ave	5	0.7	24	1.0
Alta St	148	7.4	203	7.7
Blue Pond Trl	8	3.3	33	3.7
Bay St	923	14.7	907	15.0
Cavalier Pl	1,300	10.2	1,334	10.5
Clear Lake Rd	418	2.6	461	2.9
Cactus Dr	164	0.9	249	1.3
Azalea Ln	861	4.1	938	4.4
Bay Berry Rd	517	5.8	548	6.2
Arden St	911	4.1	1,266	4.4
Clark Ln	383	7.1	425	7.4
Buck Springs Rd	353	19.3	384	19.7
Blue Ridge Pl	806	6.4	806	6.8
Cannon Rd	143	3.6	158	4.0
Bostwick Cemetery Rd	296	8.8	341	9.2

Asset Type: Major Roadways - NTD	Rainfall 1	00-yr	Rainfall 100-	-yr 2070
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Blue Bird Ln	105	10.0	113	10.3
Clearwater Lake Ct	80	0.8	237	1.2
Carrier Rd	18	0.4	125	0.8
Cherry St	661	12.2	668	12.6
Clyde Mc Cormick Rd	221	2.4	349	2.8
E Lake Ln	43	4.0	46	4.3
Gas Easement Rd	393	6.1	426	6.5
Duck Ln	8	1.4	14	1.8
Galilee Shore Dr	1	0.2	11	0.6
Forge Ln	851	16.0	851	16.3
Dottie Ct	426	3.4	426	3.8
Dowda Cir	21	5.2	46	5.6
Dorwood Ave	-	-	13	2.2
Ewers Rd	6	0.1	15	0.5
Gertrude	5	0.2	12	0.6
Edgemere Dr	3,534	4.7	4,129	5.1
E Cortez St	26	0.3	94	0.6
E Cowpen Lake Point Rd	653	3.3	778	3.6
Ellen Way	41	1.9	67	2.3
E Keuka Lake Rd	1,202	11.0	1,206	11.4
Glenn St	15	0.5	81	0.9
Congo St	909	5.8	961	6.1
E North St	122	23.8	177	24.1
Depo Dr	-	-	16	0.7
Fern Creek Trl	4,841	8.5	5,138	8.9
Empress Ln	54	0.7	121	1.3
Garden Chapel Rd	1,039	12.1	1,048	12.5
Daren Dr	734	3.1	820	3.5
Davis Dr	294	13.4	325	13.7
Davis Lake Rd	1,416	3.8	1,547	4.4
E Alachua St	826	2.1	1,358	2.4

Asset Type: Major Roadways - NTD	Rainfall 1	00-yr	Rainfall 100-	-yr 2070
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Gas Trasmission Line	169	5.3	230	5.7
Gordon Wilkinson Rd	572	29.1	599	29.4
J St	13	6.8	38	7.9
Huntington Depot Rd	306	4.4	331	4.8
Grove Park Ln	38	0.6	226	1.3
Louis Broer Rd W	14	2.0	18	2.3
Hotel Rd	95	9.8	123	10.1
Heathton St	10	3.1	109	5.4
Heron Rd	100	1.2	165	1.6
Lake Shore Ct	347	2.2	456	2.6
Lime St	61	0.8	77	1.2
Grand Rondo W	886	1.9	1,289	2.3
Madison Ave	359	8.0	368	8.4
Ivanhoe Dr	212	0.3	288	0.6
Magnolia Ln	610	3.2	744	3.5
Green Pond Tri	246	7.0	273	7.4
Lee Ave	316	4.3	326	4.7
Lake Mildred Rd	523	7.7	540	8.0
Magnolia St	-	-	6	0.1
Golf Course St	25	2.4	50	2.7
Landrum Ln	376	8.4	408	8.7
Hyacinth Ct	721	4.7	721	5.1
Lake George Dr N	11	0.5	41	1.3
James Pl	783	5.9	1,080	6.3
Junior Lake Trl	277	2.7	406	3.1
Kirkland Dr	-	-	14	8.9
Helen Ave	83	4.3	109	4.6
Jefferson	2	0.3	36	0.8
Kelly St	316	5.9	363	6.2
Lake Rosa Ln	-	-	3	3.2
Kirby Ln	2,288	5.8	2,390	6.2

Asset Type: Major Roadways - NTD	Rainfall 1	00-yr	Rainfall 100-	yr 2070
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Lake Como Point Rd	115	4.2	139	4.6
Haymaker Rd	369	2.4	439	2.8
Kingston Blvd	663	2.6	765	3.0
Holly St	-	-	3	1.1
Joel Ave	54	3.5	79	3.9
Lake Broward Ln	108	2.2	111	2.5
Hal Jones Logging Rd	16	0.9	154	2.7
Laurie Ln	4	2.9	33	4.0
Graham Rd	848	17.8	916	18.1
Lake Lucy Cres	314	2.4	358	2.7
Jasmine Cove	187	5.3	241	5.6
Light Bay Rd	1,954	1.7	2,297	2.0
Little Sand Lake Trl	22	2.7	48	3.1
Hills Ln	249	6.3	283	6.7
Lakeview St	153	2.8	176	3.2
Lake Ray Rd	7	0.3	24	0.7
Goodson Praire Rd	85	2.2	228	2.6
Gorbutt Rd	885	12.2	1,179	12.6
Jaffa Rd	21	0.8	46	1.2
Knocker Rd	2,973	7.6	3,007	7.9
Lake Melrose Ln	1,171	15.7	1,196	16.1
Lakeway Dr	2,275	6.3	2,326	6.7
Lakewood Dr	259	1.5	371	1.9
Little Sand Lake Ln	92	2.7	300	3.0
Mallard Rd	981	2.6	1,011	3.0
Mandarin Lake Rd	348	2.7	415	3.1
Mullis Ave	28	0.6	91	0.9
Mt Tabor Church Rd	-	-	4	0.2
N Edgeline Rd	387	8.8	412	9.2
Mockingbird Ct	355	2.2	481	2.8
Manning Rd	625	21.4	653	21.7

Asset Type: Major Roadways - NTD	Rainfall 1	00-yr	Rainfall 100-	-yr 2070
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Mockingbird St	1	0.2	1	0.6
Middleton Ave	-	-	59	0.5
McGrady Lake Rd	172	3.0	188	3.3
McKasel Ct	7	0.3	22	0.7
Michael Dr	387	3.4	489	3.8
Marvin Jones Rd	2	0.6	3	1.0
Moccasin Creek Ln	1,380	10.0	1,437	10.3
Mirror Lake Dr	9	0.5	64	0.9
Miller Ave	401	31.4	445	31.8
Morris Lake Dr	206	3.7	236	4.0
Mangels Dr	796	3.4	857	3.7
Martha Ave	71	1.7	98	2.1
Melody Ln	53	0.4	158	0.7
NE 1st Ave	596	4.2	684	4.6
Niagra Ave	583	5.8	646	6.1
Northeast Dr	529	3.6	529	4.0
Needles Ln	612	2.7	724	3.1
Northeast Ct	645	3.4	682	3.8
Northeast Ter	1,238	3.3	1,238	3.7
Niles Rd	93	4.3	71	2.0
Oak Ln	20	3.6	45	4.1
Oak Run Rd	3,080	13.7	3,663	14.7
Old Peniel Rd	154	1.3	264	1.7
Old Starke Rd	488	9.1	803	9.6
Rodman Ln	53	3.2	96	3.5
Rowell Ave	83	3.0	86	3.4
Randolph St	57	3.4	72	3.7
Palm Sst	235	25.7	260	26.0
Putnam	4	0.6	6	1.0
S Hercules Rd	878	3.4	1,159	3.8
Oleander St	1	0.1	3	0.4

Asset Type: Major Roadways - NTD	Rainfall 1	00-yr	Rainfall 100-	yr 2070
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Santa Rosa St	18	0.6	74	1.0
Pine Tree Ln	196	10.2	208	10.6
Paradise Blvd	596	3.7	754	4.0
River Ave	2,208	3.0	2,620	3.4
Patilig Rd	423	2.6	455	2.9
Rose Walk Ln	2,238	9.3	2,629	9.6
Plumosa St	10	0.8	16	1.1
Panama Pl	1,268	16.8	1,296	17.1
S Jasmine Ave	9	0.4	29	0.8
Phillips Rd	207	8.4	232	8.8
Olive St	99	8.7	109	9.1
Rainbow Ln	3	0.4	23	1.5
Putnam Loop Rd	519	6.9	562	7.2
Sandy Ln	318	12.1	364	12.5
Peninsular Dr	463	4.8	488	5.2
Ponderosa Pine Ct	-	-	4	0.1
Savel Rd	413	7.2	427	7.5
Register Dairy Rd	69	0.3	283	0.6
Sadie Ln	1,101	3.3	1,128	3.6
Ridge Rd	546	6.4	565	6.8
S Tuscawilla	206	14.4	231	14.8
Ranchwood Rd	409	3.3	458	3.7
Ruth Dr	272	28.4	298	28.7
Pierce Dr	11	0.6	31	1.0
Roberts Rd	395	1.8	601	2.1
Saratoga Dr	-	-	41	11.6
S Broward Ave	423	2.8	529	3.2
Poor Farm	2,126	25.5	2,126	25.8
Roebuck Rd	42	0.5	136	0.8
Palamino Rd	156	1.0	232	1.3
Palmetto	248	1.2	721	1.5

Asset Type: Major Roadways - NTD	Rainfall 1	00-yr	Rainfall 100-	yr 2070
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Paul Dr	171	1.1	218	1.4
Petitt Rd	1,329	14.0	1,665	15.2
Roddy Rd	1	0.3	1	0.7
S Park Ave	541	1.7	609	2.1
Scenic Dr	13	1.1	16	1.4
SE 2nd Ave	344	3.9	394	4.2
Sunny-Side Dr	47	1.3	53	1.7
Susan Ln	829	2.6	921	3.0
Seminole Cir	199	5.5	223	5.8
Sipprell Rd	2,491	17.4	2,518	17.8
Soto St	162	2.5	306	2.9
Senegal Ave	171	0.9	228	1.3
Snake Hill Rd	1,413	10.7	1,423	11.1
Stein Way	253	10.9	261	11.3
Sunny Lane Branch	75	0.8	139	1.3
Shoreline Branch	71	1.3	121	1.6
Sunshin Dr	367	2.1	398	2.4
Steven Dr	13	1.2	49	2.1
Spruce Dr	44	1.6	134	2.1
Shore Ln	8	0.7	23	1.0
Strickler Rd	75	2.2	100	2.6
Seven Sisters Dr	764	14.4	808	14.7
Sharon St	299	3.1	343	3.5
She She Rd	274	3.4	301	3.7
Sigman St	1,061	4.3	1,192	4.6
Silver Lake Rd	994	2.8	1,124	3.1
Sportsman S Dr	318	4.8	414	5.1
Streamline Rd	91	4.3	117	4.6
W Edgeline Rd	24	0.4	142	0.8
Thebob Ln	1,965	7.0	1,985	7.3
Windmill Creek Cir	168	6.8	298	7.2

Asset Type: Major Roadways - NTD	Rainfall 1	00-yr	Rainfall 100-	yr 2070
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Virginia St	391	3.8	486	4.2
Yearling Rd	220	5.6	273	5.9
Walkup St	3	0.1	37	0.7
Tamarack	249	1.6	256	1.9
Sylvan Glen	217	9.1	234	9.5
Swamp Dr	86	8.0	97	8.3
Tom	-	-	1	0.1
Wayburn St	938	4.9	1,003	5.2
Whispering Pines Rd	3,850	6.0	4,509	6.3
Walker Dr	119	2.5	312	3.4
Waldon Rd	3	0.3	12	0.7
W River Way	-	-	98	1.7
Veal St	21	6.5	46	7.0
Timberview Dr	-	-	30	3.1
Tiki Dr	271	1.6	591	2.0
Turkey	73	2.9	184	4.3
Willow	64	1.2	94	1.6
Walters Dr	9	2.5	36	2.9
Swan Lake Dr	54	1.2	113	1.5
Tall Pine Trl	283	2.2	355	2.6
Tanner Rd	1,349	6.5	1,498	6.9
W Keuka Lake Rd	246	2.7	279	3.1
North Cross	194	1.8	373	2.1
Andorra Ct	169	6.4	198	6.8
Apal	316	2.2	373	2.5
64th St	213	2.6	230	2.9
2nd St	1,175	3.3	1,403	4.0
4th Ave	8	0.1	38	0.5
6th Ave	8	1.0	38	1.7
Alexander St	539	3.2	611	3.5
Anne Blvd	846	4.2	896	4.6

Asset Type: Major Roadways - NTD	Rainfall 1	00-yr	Rainfall 100-	yr 2070
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Camellia Ct	159	4.0	296	5.4
Cherry Ln	3	0.8	6	1.1
Century Ave	673	3.0	678	3.3
Birch	235	2.1	354	2.5
Char Ln	7	0.5	21	0.9
Broadway St	61	1.6	73	2.0
Blair Dr	14	1.6	14	2.0
Camden St	55	1.3	124	1.7
Co Rd 315	1,180	8.5	1,253	8.9
Brandi Ln	518	4.1	575	4.4
Clear Lake Ln	-	-	4	0.1
Cindy St	-	-	3	0.3
Bridgeport Rd	324	3.3	358	3.6
Barwick Ln	401	13.7	453	14.2
Bynum Ln	595	1.8	689	2.1
Bramlitt Ln	193	14.8	219	15.1
Carter-Whittaker Ln	89	4.6	111	4.9
Beatty Ln	334	4.4	391	4.8
Camp George Rd	28	7.5	58	7.9
Breezy Point Ln	72	1.4	79	1.7
Bakers Acres Dr	879	11.0	1,149	11.4
Bellamy Woods Dr	38	0.9	149	3.1
Bland Rd	16	3.2	47	3.5
Camp Joy Rd	2,475	6.9	2,588	7.2
Clearwater Lake Dr	152	1.1	255	1.5
East St	203	24.8	203	25.2
E Bannerville	58	0.9	69	1.2
Flat Rd	-	-	136	1.8
Deer Stand Rd	346	3.4	424	3.8
Draper	49	9.5	81	9.8
Douglas Rd	675	1.3	716	1.6

Asset Type: Major Roadways - NTD	Rainfall 1	00-yr	Rainfall 100-	yr 2070
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Flora Ter	372	1.2	520	1.6
Crouse Ln	152	2.1	183	2.4
Doewood	3	0.6	11	1.0
Creasman Rd	9	1.3	42	2.1
Echo Tri	559	3.8	576	4.1
E Satsuma St	186	1.1	234	1.6
E End Rd	256	4.3	578	4.7
Elks Rd	146	2.3	150	2.6
Frankfort St	974	7.6	1,000	8.0
Dabney Ln	1,645	6.9	1,649	7.2
Dechaine Ln	251	1.4	270	1.8
Duncawton Ave	9	0.3	44	0.7
Drake Dr	158	29.7	184	30.0
Ferncreek Dr	1,113	5.6	1,113	6.0
Diamond Dr	318	2.6	554	3.0
Francis	493	6.9	501	7.2
Crosby Rd	636	9.5	792	9.9
Gibbs Ave	343	25.4	293	25.8
Door Lite Rd	61	18.6	86	19.3
Dunkle-Snyder Rd	302	15.6	306	15.9
E Don Quixote St	39	1.3	98	1.6
Curtis St	21	0.6	126	1.0
Gilbert	4	8.0	26	8.3
Crane Ln	-	-	3	1.3
Daisy Dr	121	7.4	133	7.8
Davis St	-	-	8	0.7
Douglas Ave	294	1.3	364	1.7
Fawn Trl	1,913	4.8	1,943	5.1
George Ave	24	1.1	66	1.4
Georgetown Shortcut Rd	-	-	16	0.6
Lee Ln	172	1.0	377	1.4

Asset Type: Major Roadways - NTD	Rainfall 1	00-yr	Rainfall 100-	yr 2070
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Landmark Ave	-	-	2	0.1
Illinois St	3	2.6	29	3.1
Lodge Pine	215	1.9	254	2.2
Hillside Dr	123	5.4	127	5.7
Lonesome Trl	1,277	9.6	1,378	9.9
Harbor Farms Dr	9	0.5	108	0.9
Gordon Chapel Rd	170	7.3	201	7.7
Live Oak Cir	279	1.3	360	2.2
Jack Rd	-	-	73	2.4
Lucy Ct	176	13.9	176	14.2
Gordon Chappel Rd	-	-	4	0.2
Harvey Dr	2	1.9	27	2.6
Hibiscus Rd	19	2.4	27	2.7
Ivey Rd	-	-	1	0.4
Hubers Fish Camp S	-	-	8	14.5
Hercules Rd	2,199	4.0	2,213	4.2
Heidt Rd	33	5.5	17	0.9
Hoey Ln	611	11.1	724	11.4
Hunt Rd	1,109	11.2	1,108	11.6
Indiana St	-	-	22	1.8
Knight Dr	200	3.0	226	3.4
Lake Cir	207	2.0	256	2.3
Lyons Lake Ln	267	6.2	279	6.6
Howell Lake Rd	102	1.2	259	1.6
Grandale St	415	2.1	677	2.5
Hunter Ave	44	9.9	84	10.3
Little Branch Trl	-	-	1	0.1
Lake St	53	23.2	101	23.7
Ketter Cswy	364	15.4	409	15.8
Lake Shore	99	1.5	159	1.8
Kirby Trl	35	1.4	49	1.8

Asset Type: Major Roadways - NTD	Rainfall 10	00-yr	Rainfall 100-	yr 2070
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Krueger Ln	15	1.7	39	2.1
Jim Smith Dr	142	9.6	148	10.0
Hemlock St	-	-	1	0.0
Henry Norwood Way	3	0.3	94	0.6
June Ave	453	3.8	485	4.2
Lake George Point Dr	9	0.2	83	0.5
Landvale St	2,696	3.9	2,810	4.3
Levine St	87	2.3	111	2.6
Live Oak Loop	-	-	46	0.6
McMeekin Lake Ln	216	1.7	329	2.1
Mullis Ave Exd	5	0.3	11	0.6
Meadow Rd	183	5.8	245	6.4
Midway Dr	37	1.4	51	1.8
Massachusetts Ave	105	2.9	121	3.3
Minnesota St	421	1.7	556	2.0
Marcy Ln	-	-	14	0.8
Mc Clure St	231	1.2	270	1.5
N Sipprell Rd	1,646	9.3	1,682	9.7
Mills St	2	2.7	24	3.5
Marsh Pl	1	0.0	9	0.4
Martin St	895	1.4	1,045	1.7
Mullis Rd	86	13.0	110	13.4
Meadow Dr	638	11.8	753	12.2
New Jersey St	96	2.1	152	2.5
Newgate Pl	871	14.7	904	15.0
Northeast Ave	936	3.3	1,044	3.6
Northeast Blvd	460	2.7	594	5.6
Old Wolf Bay Rd	1,395	1.6	1,570	1.9
Old Woods Rd	6	0.6	13	1.0
Oklahoma St	3	0.6	8	0.9
Old Bostwick Rd	87	1.5	256	1.8

Asset Type: Major Roadways - NTD	Rainfall 1	00-yr	Rainfall 100-	yr 2070
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Register Rd	17	0.3	93	0.7
Sabal Palm Dr	106	1.5	223	1.9
Orange Tree Rd	-	-	13	2.4
Plantation Pines Rd	25	0.4	219	1.0
Peninsula Rd	229	3.8	263	4.2
Sandpiper Ln	363	3.4	401	3.8
Sculpin Dr	58	0.9	126	1.6
Pond Rd	200	6.9	200	7.3
Robin Rd	74	6.1	99	6.4
Providence Church Rd N	-	-	120	0.3
Round Lake Rd	516	5.6	601	6.0
Patrician Pl	-	-	62	6.1
Reynolds Island	529	1.7	601	2.1
Ranch Rd	207	2.6	269	3.3
Ozias Rd	609	8.4	648	8.7
Pleasant Trl	293	5.2	321	5.6
Sabal Palm Ct	190	5.2	223	5.6
River St	1	0.4	3	0.7
Rowland Ave	-	-	19	1.2
Quail Trl	59	1.0	134	1.4
Scott Ave	-	-	3	0.3
Pine Ter	31	0.7	67	1.0
Prospect St	156	1.7	246	2.0
Rabbit Track Rd	638	4.9	694	5.2
Rector Rd	1,256	10.0	1,361	10.4
Rosewood St	464	3.8	757	4.2
S Georgetown Point Rd	62	1.1	121	1.7
Sleepy Hollow Rd	-	-	6	0.3
Shirley Cir	93	0.5	252	0.9
Smiley Store Rd	6	0.2	90	0.5
Shoreside Way	84	4.8	94	5.1

Asset Type: Major Roadways - NTD	Rainfall 1	00-yr	Rainfall 100-	yr 2070
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Seaman Cove Ln	11	0.5	26	0.8
Stardust Blvd	49	1.3	104	1.7
Silver Pond Ln	592	4.8	634	5.2
Stacy Dr	376	17.0	546	17.4
Sunset Strip Dr	-	-	3	0.6
Spring Lake Trl	232	4.2	308	4.5
Sunset Point Rd	4	0.2	16	0.7
Shell St	620	3.8	648	4.2
Shoreside Trl	16	1.2	23	1.5
Silver Beach Blvd	533	2.8	553	3.1
Silver Lake Blvd	-	-	1	0.0
Silver Pond Rd	413	2.9	435	3.2
Sisco Rd	3	0.4	3	0.7
Songbird Rd	1,246	13.0	1,309	13.3
SW 5th Ave	575	2.3	601	2.7
Turkey Run Rd	-	-	1	0.0
Trl End	801	7.1	908	7.4
Tallow Ln	572	5.2	572	5.5
Winding Trl	117	3.2	206	3.6
Tina Ln	54	0.8	80	1.1
Yelvington Rd	896	3.2	965	3.6
Walters Ln	8	0.2	23	0.6
Tahiti Pl	-	-	1	0.1
Union Camp Rd	418	3.8	784	4.1
Tanners Wood Cir	24	3.5	28	3.9
Taylor St	-	-	1	0.3
Terri Ave	25	5.3	51	5.7
Weerts Rd	21	3.1	128	3.7
Waterway Dr	-	-	1	0.1
SW Main	229	2.4	254	2.7
Tuscawilla E	359	12.9	359	13.2

Asset Type: Major Roadways - NTD	Rainfall 100-yr		Rainfall 100-yr 2070	
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
W Tocoi Rd	933	7.5	1,246	7.8
Washington Ave	279	4.0	292	4.3
Wildwood Ln	4,439	12.9	4,439	13.2
Vickie Dr	353	32.2	353	32.6
Tallow Rd	1,091	5.7	1,191	6.0
Tinsley Rd	-	-	9	1.6
Washington St	1,086	10.2	1,171	10.6
West St	194	2.5	281	2.9
Willow Ln	66	0.7	108	1.1
Woodbine Rd	191	5.3	215	5.7

Source: USGS National Transportation Dataset (NTD), TBG Work Product

Table C-25. Marinas and Boatramps with flood depths (ft.) and flood areas (sq. ft.) for 100-yr rain events: current and 2070

Asset Type: Marinas and Boatramps	Rainfall 10	Rainfall 100-yr		yr 2070
Asset Name:	Flooded Area (sq. ft.)	Max Depth (ft.)	Flooded Area (sq. ft.)	Max Depth (ft.)
Brown's Landing Public Boat Ramp (Palatka)	67,875	5.6	68,825	6.0
Crescent Lake Public Boat Ramp - FWC # L-1	7,225	6.6	8,100	7.0
East Palatka - Pico Road - FWC # L-36	37,425	6.6	37,425	7.0
Boathouse Marina	20,750	6.7	21,500	7.1
Rodman Dam Public Ramp	7,768,075	28.8	7,850,425	29.1
Palmetto Bluff - FWC # 69	26,325	5.9	26,425	6.3
Drayton Island Ferry Public Boat Ramp	38,625	21.0	38,175	20.3
Lynch's Landing RV Park	7,650	1.7	9,625	2.1
Welaka Public Boat Ramp	3,350	4.0	3,725	4.3
Margary Neal Nelson Sunrise Park and Boat Ramp	36,900	6.6	37,475	7.0
JAMES C GODWIN RIVERFRONT PARK & BOAT RAMP	57,625	6.7	65,525	7.1
Dunns Creek and Highway 17	82,025	5.6	82,025	6.0
Oklawaha River at State Road 19	6,315,225	8.0	6,776,800	8.3
Georgia Boy's Fish Camp	62,700	5.9	66,550	6.3
Elgin Grove - FWC # 14	11,825	5.6	12,900	6.0
Crystal Cove Marina	83,075	5.6	85,975	6.0

Asset Type: Marinas and Boatramps	Rainfall 10	Rainfall 100-yr		yr 2070
Asset Name:	Flooded Area (sq. ft.)	Max Depth (ft.)	Flooded Area (sq. ft.)	Max Depth (ft.)
Palatka Riverfront Park and Boat Ramp	57,625	6.7	65,525	7.1
Gateway Fish Camp Rv Resort	6,395,825	26.2	7,094,000	26.5
Shell Harbor Public Boat Ramp - FWC # L-37	4,000	5.5	4,425	5.8
Leonard's Landing Lake Crescent Resort	156,375	7.6	169,700	8.0
Bass World Lodge	79,850	5.4	85,050	5.8
Rodman Dam Campground Public Ramp	17,283,175	15.6	17,599,200	15.9
Lake Grandin Public Boat Ramp	13,698,275	4.6	13,717,325	4.9
Lake Stella - FWC # R-5	2,759,100	1.7	2,774,125	2.1
Lake Ida Public Boat Ramp (Interlachen)	1,834,425	8.6	1,834,425	9.0
George's Lake Public Boat Ramp	246,700	2.9	291,725	3.3
Cowpen Lake - Race Street Public Access	21,754,100	9.1	21,756,100	9.5
Boll Green Lake Public Boat Ramp	-	-	9,925	0.2
LAKE JEWEL BOAT RAMP	9,850	3.1	11,900	3.4
Kenwood Public Boat Ramp	9,109,850	15.6	9,222,725	15.9

Source: FDEM, TBG Work Product

Table C-26. Ports with flood depths (ft.) and flood areas (sq. ft.) for 100-yr rain events: current and 2070

Asset Type: Ports	Rainfall 100-yr		Rainfall 100-yr 2070	
Asset Name:	Flooded Area (sq. ft.)	Max Depth (ft.)	Flooded Area (sq. ft.)	Max Depth (ft.)
Port Putnam	25,900	5.6	27,475	6.0

Source: FDEM, FDOT-SIS, TBG Work Product

Table C-27. Rail Facilities and Crossings with flood depths (ft.) and flood areas/lengths for 100-yr rain events: current and 2070

Asset Type: Rail Facilities and Crossings	Rainfall 100-yr		Rainfall 100-yr 2070		
Asset Name:	Flooded Area/Length	Max Depth (ft.)	Flooded Area /Length	Max Depth (ft.)	
CSXT Mainline (A)	6612 ft.	26.6	7613 ft.	26.0	
620959S	1675 sq. ft.	21.1	1675 sq. ft.	21.4	
937428A	0 sq. ft.	-	25 sq. ft.	0.0	

Source: FDOT-SIS, National Transportation Atlas Database (NTAD), TBG Work Product

## Surge and Sea Level Rise Events

Table C-28. Airports with flood depths (ft.) and flood areas (sq. ft.) for 100-yr surge events: 2040 and 2070 SLR - Intermediate High

Asset Type: Airports	2040 IH with 100-yr surge		2070 IH with 100-yr surge	
Asset Name:	Flooded Area (sq. ft.)	Max Depth (ft.)	Flooded Area (sq. ft.)	Max Depth (ft.)
MOUNT ROYAL AIRPORT	6,749	2.7	12,454	4.6
CRESCENT LAKE FARMS AIRPORT	1,101,854	6.8	1,684,933	8.7

Source: FDEM, FDOT, TBG Work Product

Table C-29. Bridges with flood depths (ft.) and flood lengths (ft.) for 100-yr surge events: 2040 and 2070 SLR - Intermediate High

Asset Type: Bridges	2040 IH with 100-yr surge		2070 IH with 100-yr surge	
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
764062	124	6.6	198	8.5
764023	186	7.2	186	9.1
764033	243	6.8	243	8.7
764005	529	5.3	558	7.2
760029	518	2.8	681	4.7
764004	-	-	34	2.5
764024	-	-	405	9.7

Source: FDOT, TBG Work Product

Table C-30. Major FDOT Roadways with flood depths (ft.) and flood lengths (ft.) for 100-yr surge events: 2040 and 2070 SLR - Intermediate High

Asset Type: Major Roadways - FDOT	2040 IH wit	h 100-yr surge	2070 IH with 100-yr surge			
Asset Name:	Flooded	Max Depth	Flooded Length	Max Depth	<b>Evacuation Route</b>	AADT
	Length (ft.)	(ft.)	(ft.)	(ft.)		
FR 29	562	5.3	646	7.2		
CR-309	34	6.8	98	8.7	Evacuation Route	800
E BUFFALO BLUFF RD	4	2.7	61	4.6		
E RIVER RD	667	5.9	1,057	7.8		
FEDERAL POINT RD	16,606	6.3	25,027	8.2		450
BARDIN RD	52	1.8	385	3.7		2,500
SAN MATEO RD	1,659	6.7	2,445	8.6		650

Asset Type: Major Roadways - FDOT	2040 IH wit	2040 IH with 100-yr surge 2070 IH with 100-yr surge		0-yr surge	ge	
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)	Evacuation Route	AADT
RIVER ST	554	3.9	902	5.8		3,200
PALMETTO BLUFF RD	1,368	6.3	2,838	8.2		1,800
W RIVER RD	6,631	6.6	9,555	8.5		2,500
CR-216	198	1.1	1,680	3.2		4,700
CR-207A	256	3.5	2,043	6.5		1,400
N US-17	-	-	56	1.3	Evacuation Route	13,600
PARADISE SHORES RD	-	-	8	0.9		
BROWNS LANDING RD	-	-	41	1.7		
OLD SAN MATEO RD	-	-	952	6.1		
JIM BRYANT RD	-	-	2	1.3		
SR-207	-	-	1,129	3.6	Evacuation Route	18,200
S US-17	61	0.7	2,035	2.6	Evacuation Route	12,000
SR-19	0	0.0	355	1.9	Evacuation Route	8,500

Source: FDOT, TBG Work Product

Table C-31. Major NTD Roadways with flood depths (ft.) and flood lengths (ft.) for 100-yr surge events: 2040 and 2070 SLR - Intermediate High

Asset Type: Major Roadways - NTD	2040 IH with 10	2040 IH with 100-yr surge		00-yr surge
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Cypress Rd	953	4.4	953	6.3
Commercial Ave	3,529	6.7	3,530	8.6
Huber Fish Camp Rd	643	4.8	737	6.7
Ridgeline Rd	1,753	6.8	2,892	8.7
Bass Dr	611	6.8	611	8.7
Drayton Island Rd	6,528	5.6	7,714	7.5
<b>Hubers Fish Camp Cir</b>	3	3.1	132	5.0
School Rd	5,183	5.9	5,245	7.8
Sportsman Dr	2,453	5.7	2,529	7.6
Bimini Ct	515	4.3	516	6.2
Bayou Dr	1,232	3.3	1,722	5.2
Barnes	192	3.9	246	5.8

Asset Type: Major Roadways - NTD	2040 IH with 10	00-yr surge	2070 IH with 10	00-yr surge
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Buel St	85	3.7	189	5.6
Breezewood Dr	591	5.5	591	7.4
Browns Fish Camp Rd	203	2.6	365	4.5
Cheffey Rd	345	2.4	656	4.3
Crescent Lake Dr	516	5.2	1,118	7.1
Cedar Creek Rd	16,089	6.8	21,758	8.7
Drayton Island Ferry Rd	144	3.1	230	5.0
Cypress Dr	481	4.5	767	6.4
Eagle Creek Rd	2,318	4.5	3,097	6.4
Finnigan Rd	409	5.6	543	7.5
Clifton Rd	3,511	6.5	4,778	8.4
Cedar Creek Cutoff Rd	421	2.3	1,027	4.2
Cove Dr	883	3.2	1,124	5.1
Driftwood Ln	239	1.5	519	3.4
Hart St	1,574	3.1	2,716	5.0
Marina Ln	597	5.7	597	7.6
Minwill Cir	1,642	5.5	1,642	7.4
Middle Point Ln	1,549	4.8	2,061	6.7
Madison St	130	3.5	215	5.4
Ludwig Ave	727	5.9	835	7.8
Kerry	33	6.7	208	8.6
Marina Rd	1,383	6.7	1,479	8.6
Islander Rd	999	4.4	1,510	6.3
Jondabob Rd	4,377	5.2	4,773	7.1
Houser Dr	94	1.4	618	3.3
Longwood Dr	339	5.6	339	7.5
Joy Ct	305	5.3	500	7.2
Mays Cove Rd	1,948	4.1	2,530	6.0
Ganey Ln	877	3.5	886	5.4
Hamilton Rd	65	4.5	102	6.4
Lake George Dr S	809	3.0	1,271	4.9

Asset Type: Major Roadways - NTD	2040 IH with 10	2040 IH with 100-yr surge		00-yr surge
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Magnolia Trl	1,652	5.1	1,652	7.0
Mulberry St	437	4.8	437	6.7
Myrtle Ave	25	6.7	31	8.6
Petite Rd	533	5.5	630	7.4
S Dunns Creek Rd	2,697	6.8	2,707	8.7
Ross Rd	437	3.7	437	5.6
Paradise Point Rd	1,546	5.5	1,998	7.4
Pine Dr	26	1.8	91	3.7
Pt Pleasant	1,125	6.2	1,199	8.1
River Way	684	6.2	731	8.1
Pioneer Trl	6,513	6.5	6,730	8.4
Redbird Ln	895	3.1	1,574	5.0
Payne Rd	1,564	6.1	1,601	8.0
Riverview Ter	67	2.1	111	4.0
Osprey Cir	1,119	4.5	2,020	6.4
Palm Trl	587	2.9	1,009	4.8
Pomona Landing Rd	163	4.2	293	6.1
SE 4th St	544	5.3	1,319	7.2
SE 3rd Ave	725	3.5	735	5.4
Smith Ln	1,560	3.9	1,667	5.8
St Johns Dr	1,674	3.8	1,797	5.7
SE 6th St	244	2.4	1,663	4.3
Trisail	6	6.1	29	8.0
Waterway Ave	1,514	5.0	1,702	6.9
William Bartram Dr	822	3.7	977	5.6
Amberjack St	170	2.2	353	4.1
Alley Way	447	2.0	653	3.9
Caroline Blvd	280	3.5	295	5.4
Atkins Rd	202	2.3	545	4.2
Breezeway Ave	165	1.7	358	3.6
Bowfin Dr	759	2.8	1,519	4.7

Asset Type: Major Roadways - NTD	2040 IH with 10	2040 IH with 100-yr surge		00-yr surge
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Cleo Rd	686	3.6	686	5.5
Boca Raton	1,217	5.5	1,217	7.4
Britt St	17	2.0	42	3.9
Carlin Rd	4,391	5.8	5,454	7.7
Black Bass Ave	449	3.5	450	5.4
Betty Rd	319	2.2	479	4.1
Canal Dr	768	6.8	768	8.7
Beechers Point Dr	1,458	4.4	1,855	6.3
Carefree Dr	659	5.5	659	7.4
Cheryl Ln	348	3.7	413	5.6
Belle Dr	513	4.4	757	6.3
Bill Rd	276	2.6	464	4.5
Butler Dr	205	2.4	470	4.3
Elvira St	343	3.3	474	5.2
E Palm Dr	211	4.2	275	6.1
Floridian Club Ln	492	5.0	570	6.9
Colledge Rd	557	4.7	685	6.6
Cove Rd	565	3.7	565	5.6
Falcon Dr	1,574	6.1	2,486	8.0
Dunham St	235	1.7	393	3.6
Easy St	75	6.2	228	8.1
Creekside Rd	1,222	2.6	1,294	4.5
Creek Ln	440	4.9	440	6.8
Dexter Ct	344	2.5	344	4.4
Gardenia St	621	4.1	621	6.0
Elsie Dr	912	5.8	1,150	7.7
E Lar Ln	75	3.3	162	5.2
Eagle Trl	537	3.0	1,167	4.9
Edgewater Rd	1,431	5.4	1,431	7.3
Dog Branch Rd	434	2.0	2,047	3.9
Gail Dr	663	5.8	844	7.7

Asset Type: Major Roadways - NTD	2040 IH with 10	00-yr surge	2070 IH with 10	00-yr surge
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Georgetown Landing Rd	168	3.7	281	5.6
Indian Mound Rd	204	5.9	211	7.8
Helen Pl	886	5.9	1,008	7.8
Groveland Ln E	893	5.9	893	7.8
Johns Pl	688	6.7	731	8.6
Jill Ln	496	3.9	703	5.8
Hotts Acres	630	6.0	734	7.9
Jack Ln	658	5.9	1,040	7.8
Heiot Ln	555	3.7	572	5.6
Hicks Ave	1,560	5.3	1,652	7.2
Happiness Dr	683	5.5	683	7.4
Kingsley St	2,341	5.3	2,604	7.2
Grove Ave	113	3.3	158	5.2
Harbor Dr	1,177	3.0	1,664	4.9
Magnolia Ave	59	6.7	130	8.6
Nassau	594	2.1	644	4.0
N Point Rd	87	1.8	382	3.7
Mill St	788	4.9	806	6.8
Mount Royal Ave	2,025	3.3	2,762	5.2
Myrtle Wood Point Rd	255	6.4	587	8.3
Marshall Dr	16	1.6	79	3.5
River Road Dr	142	1.4	465	3.3
Riverview Cir	723	5.6	723	7.5
S Hayes Ave	257	5.8	257	7.7
Pine Tree Rd	28	2.5	735	4.4
Retreat Ln	802	4.2	885	6.1
Rogers Ln	35	4.1	276	6.0
Ramona Rd	112	1.8	515	3.7
Pine St	1,032	5.0	1,032	6.9
Park Ave	494	5.5	625	7.4
River Haven Ct	280	2.7	501	4.6

Asset Type: Major Roadways - NTD	2040 IH with 10	00-yr surge	2070 IH with 10	00-yr surge
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Palm Ave	1,125	5.8	1,125	7.7
Riverview	1,155	5.5	1,248	7.4
Pico Rd	712	6.5	774	8.4
Palmetto St	55	3.8	76	5.7
Ridgeline Ave	6	1.7	181	3.6
Pierce Rd	1,218	4.9	1,218	6.8
Scott	768	4.9	768	6.8
Putnam Ave	633	6.9	649	8.8
Riviera Dr	737	4.9	1,311	6.8
Sailboat Ln	237	4.3	237	6.2
Parker Rd	100	1.7	277	3.6
Palm Dr	1,429	5.0	1,647	6.9
Palm St	1,073	4.2	1,073	6.1
Paradise Lakes Ave	489	3.8	676	5.7
Port Rd	9	6.5	307	8.4
Rivershore Dr	1,257	5.4	1,297	7.3
Sanjan Dr	479	4.1	684	6.0
SE 7th St	837	3.9	1,930	5.8
Sugar Plum Dr	572	2.7	633	4.6
St Johns Ave	531	7.1	544	9.0
Shaffer Ave	530	5.4	689	7.3
Stokes Landing Rd	188	4.3	303	6.2
Shadick Ln	103	1.8	142	3.7
Sullivan Dr	449	3.3	603	5.2
Sunset Point Ln	303	3.7	621	5.6
Sumter Rd	48	1.5	439	3.4
Tall Palms Ln	172	3.8	172	5.7
Tropic Ave	61	1.6	224	3.5
Tropic	593	4.4	609	6.3
Walt Ln	1,541	5.0	1,541	6.9
18th St N	1,270	6.8	1,288	8.7

Asset Type: Major Roadways - NTD	2040 IH with 10	2040 IH with 100-yr surge		00-yr surge
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Bunon Rd	262	1.8	304	3.7
Bellray Dr	310	2.4	310	4.3
Bonita Dr	1,202	3.9	2,849	5.8
Barbados	449	3.6	449	5.5
Bunch Rd	312	3.0	312	4.9
Barnes St	91	2.7	126	4.6
Bass Ave	145	5.5	145	7.4
Browns Rd	99	4.2	174	6.1
Brubaker Ln	955	4.7	961	6.6
Beacon Cir	2,098	5.6	3,219	7.5
Boat Ramp Rd	693	4.4	693	6.3
Bridgeport	1,101	1.8	1,724	3.7
Canal St	686	6.8	966	8.7
Cherry Trl	4	2.2	16	4.1
Fishcreek Trl	314	4.4	374	6.3
Deer Run Rd	1,248	5.6	1,299	7.5
Fishermans Cove Paradise Rd	166	3.0	327	4.9
Egret Way	296	1.8	366	3.7
E Char Ln	167	5.0	167	6.9
Crossover Rd	107	2.2	253	4.1
Cow Creek Ct	762	3.4	762	5.3
Fran Ln	1,264	4.4	1,264	6.3
Edgewood Ave	47	6.5	67	8.4
Floridian Club Rd	616	4.6	651	6.5
Heidel Ln	355	4.0	355	5.9
Hubers Fish Camp Rd	105	1.8	231	3.7
Gum Dip Hollow Dr	116	3.7	206	5.6
Hayes Ave	631	6.2	769	8.1
Lettie Ln	8	2.8	22	4.7
Harris Fish Camp Rd	2,096	6.8	3,852	8.7
Lenda Ln	377	2.1	377	4.0

Asset Type: Major Roadways - NTD	2040 IH with 10	2040 IH with 100-yr surge		00-yr surge
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Kingfish Ave	114	1.0	262	2.9
Goodwin St	637	6.9	662	8.8
Groveland Ln W	539	6.6	552	8.5
Islander Ln	341	1.3	723	3.2
Jimmie Rd	210	2.4	327	4.3
Lakeshore Dr	488	3.6	1,319	5.5
Hickory Dr	288	6.1	305	8.0
Must Hold Bndy	282	6.8	282	8.7
Moonlite Dr	616	5.2	616	7.1
Morning Star Ln	219	6.1	251	8.0
Norman Ln	228	3.1	228	5.0
Paradise Dr	799	6.2	799	8.1
Sage Palm Dr	116	1.6	355	3.5
S 10th St	417	6.3	429	8.2
River Trl	2,221	7.2	2,231	9.1
Pearce Ln	178	3.2	275	5.1
Port Comfort Dr	51	2.7	281	4.6
Riverview Dr	506	3.6	651	5.5
Preston Dr	471	3.3	642	5.2
Pinecrest Cir	158	2.2	577	4.1
Ra Bill Ln	27	5.9	128	7.8
Rivers Edge Dr	193	2.2	374	4.1
Palmetto Point Ln	344	2.7	860	4.6
Palmetto Bluff Rd	311	3.1	322	5.0
Peggy Ln	494	3.7	578	5.6
Paradise Cir	756	6.3	1,084	8.2
River Shores Rd	1,581	4.2	1,581	6.1
Ramadaview Dr	378	3.9	378	5.8
Sable Palm Dr	88	1.2	310	3.1
Riverside Blvd	385	3.7	827	5.6
Orange Dr	235	1.3	545	3.2

Asset Type: Major Roadways - NTD	2040 IH with 10	00-yr surge	2070 IH with 10	00-yr surge
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Pelican Rd	1,093	6.8	1,169	8.7
Riverside	429	3.6	669	5.5
S Shore Ln	72	6.0	266	7.9
St Johns Ct	742	3.0	742	4.9
Sunset Dr	872	6.0	982	7.9
St Johns	2,388	6.3	2,652	8.2
Stella Rd	259	3.0	460	4.9
Springside Cutoff Rd	425	5.2	1,563	7.1
Valencia Ct	314	2.0	429	3.9
Tobago Ave	153	1.4	355	3.3
Union Ave	62	3.1	349	5.0
Woodbury Trl	284	1.2	817	3.1
Widyworm	195	2.4	711	4.3
Tarpon Blvd	1,880	4.8	3,080	6.7
Whitney St	536	4.0	787	5.9
Bass Rd	59	0.7	425	2.6
Lakeview Dr	25	1.0	137	2.9
Plantation Cir	455	1.3	1,281	3.2
SE 8th Ave	-	-	1,382	3.3
St Johns Fishing Lodge Rd	-	-	31	1.4
Cannon Rd	-	-	185	3.6
Clyde Mc Cormick Rd	-	-	45	1.8
Duck Ln	31	2.3	122	4.2
Gertrude	31	1.0	408	2.9
Lake George Dr N	80	1.5	1,048	3.4
Jefferson	-	-	262	3.1
NE 1st Ave	-	-	397	1.8
S Tuscawilla	1	0.0	33	1.9
Poor Farm	-	-	966	2.1
SE 2nd Ave	-	-	31	2.5
Anne Blvd	-	-	4	0.7

Asset Type: Major Roadways - NTD	2040 IH with 10	0-yr surge	2070 IH with 10	00-yr surge
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Char Ln	44	1.6	117	3.5
Bridgeport Rd	182	0.7	1,980	2.6
Bland Rd	-	-	471	3.2
Landmark Ave	91	1.6	1,098	3.5
Lake George Point Dr	251	1.0	424	2.9
Orange Tree Rd	-	-	155	1.8
Prospect St	-	-	1,538	3.6
Rector Rd	58	6.5	287	8.4
Weerts Rd	0	0.0	101	1.9
Waterway Dr	-	-	289	3.5
Tuscawilla E	-	-	1	1.1
Wildwood Ln	-	-	0	0.0
Woodbine Rd	9	0.8	74	2.7
Hockey Dr	-	-	62	1.1
Bellray	1	0.1	1,107	2.8
Coolwater Ave	6	0.5	1,446	2.4
Circle Dr	-	-	111	1.2
Lucyrilla Ln	-	-	0	0.1
Million	38	0.7	318	2.6
Hermits Dr	-	-	743	2.2
Lunker Lodge Rd	-	-	30	0.5
McClain Blvd	-	-	32	0.9
Mourning Dove Rd	12	0.6	71	2.5
N Pt Rd	-	-	10	0.1
Orange Ave	-	-	316	1.8
Riverside Dr	-	-	253	1.0
Poinsettia Dr	-	-	71	0.9
Sandra Ln	-	-	132	1.6
Old Brick Rd	-	-	61	0.5
SE 5th St	-	-	1,080	3.0
Shoreline Ave	-	-	3	0.2

Asset Type: Major Roadways - NTD	2040 IH with 10	00-yr surge	2070 IH with 10	0-yr surge
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Squirrel Trl	-	-	107	1.1
White Rd	-	-	237	1.6
Wyman	-	-	10	0.3
Basin Dr	-	-	1,075	3.4
Click Rd	53	0.6	1,027	2.5
Bass Trl	-	-	40	0.6
Fire Trl	-	-	300	1.5
County Line	-	-	34	0.4
Dorman Dr	60	0.9	123	2.8
Eraot	71	2.8	116	4.7
County Line Rd	-	-	3	1.0
Crescent Lake Shore Dr	-	-	1	0.7
Magnolia Dr	-	-	59	0.8
Leisure Dr	-	-	381	1.5
Lobster Pl	83	1.5	981	3.4
Merchant Way	-	-	64	1.1
N 12nd St	-	-	93	1.6
N Buchanan Cir	4	0.3	458	2.2
Maxwell Dr	-	-	6	1.8
N 1st St	-	-	36	0.8
Margarita	-	-	10	0.5
Major Ln	4	0.2	83	2.1
N Dunns Creek Rd	86	1.0	577	2.9
N 4th St	-	-	12	1.4
N 3rd St	-	-	2	0.4
Mimosa Ct	-	-	4	0.3
Mockingbird	-	-	53	1.9
N 9th St	-	-	3	0.7
NE 2nd Ave	31	0.8	347	2.7
Pineway Ave	-	-	718	1.5
Perch	-	-	106	1.1

Asset Type: Major Roadways - NTD	2040 IH with 10	00-yr surge	2070 IH with 10	0-yr surge
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
Pineway	-	-	594	1.7
Red Bird Ln	12	0.4	309	2.5
Red Barn Ln	22	0.4	281	2.3
Pine Lake Dr	-	-	547	1.7
Shaggy Ln	-	-	30	1.7
Shangri-la Ln	-	-	71	1.1
Violet Ct	-	-	252	1.7
W Pineway	-	-	583	2.2
Tuna Ave	-	-	4	0.5
2nd Ave	2	0.5	17	2.4
Camellia Dr	-	-	465	1.1
Brewster St	-	-	13	0.5
Bass	59	1.4	320	3.3
Donald Blvd	-	-	558	2.3
Elgin Rd	344	1.4	748	3.3
Doe Bay Rd	36	0.7	657	2.6
Esperanza Grove Rd	-	-	0	0.2
Cypress Point Cir	-	-	4	0.5
E Pineway Ave	-	-	129	1.4
E Grandview Rd	-	-	162	3.2
Fisherman Rd	-	-	3	0.2
Lewis Ln	11	0.9	20	2.8
Indian Mound Dr	-	-	10	0.7
Lakeview Ave	1	0.1	98	2.0
Leyda Blvd	-	-	197	2.1
Laurel Ln	-	-	11	1.1
Mackerel St	-	-	124	1.2
Incline Rd	8	0.5	356	2.4
Moritani Point Rd	13	0.4	646	2.3
Millican	0	0.2	824	2.3
Mulholland Park	-	-	74	1.1

Asset Type: Major Roadways - NTD	2040 IH with 10	00-yr surge	2070 IH with 100-yr surge	
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Length (ft.)	Max Depth (ft.)
N Shore Ln	-	-	3	1.1
Mullis Trl	-	-	96	1.4
Riverside Ave	-	-	232	1.6
Pecan Ct	-	-	117	1.6
Palmer Ave	-	-	13	0.6
Osprey Ln	-	-	255	1.8
SE 7th Ave	-	-	59	1.8
Snapper Pl	-	-	12	0.6
Sunglow Ave	-	-	2	0.3
Shores Ln	-	-	90	1.3
Wildcat Trl	-	-	724	1.3
W Buchanan Cir	-	-	64	1.3
Walt McCormick Rd	-	-	0	0.1
W Grandview Dr	-	-	745	3.0

Source: USGS National Transportation Dataset (NTD), TBG Work Product

Table C-32. Marinas and Boatramps with flood depths (ft.) and flood areas (sq. ft.) for 100-yr surge events: 2040 and 2070 SLR - Intermediate High

Asset Type: Marinas and Boatramps	2040 IH with 100-yr surge		2070 IH with 100-yr surge	
Asset Name:	Flooded Area (sq. ft.)	Max Depth (ft.)	Flooded Area (sq. ft.)	Max Depth (ft.)
Brown's Landing Public Boat Ramp (Palatka)	63,410	6.8	66,209	8.7
Crescent Lake Public Boat Ramp - FWC # L-1	7,190	6.8	10,419	8.7
East Palatka - Pico Road - FWC # L-36	31,958	6.8	31,958	8.7
Boathouse Marina	22,561	6.8	25,769	8.7
Rodman Dam Public Ramp	614,897	3.7	903,110	5.6
Palmetto Bluff - FWC # 69	25,306	6.8	25,306	8.7
Drayton Island Ferry Public Boat Ramp	7,933	6.7	11,259	8.6
Lynch's Landing RV Park	11,130	3.5	11,130	5.4
Welaka Public Boat Ramp	4,758	5.4	5,812	7.3
Margary Neal Nelson Sunrise Park and Boat Ramp	13,799	6.8	18,191	8.7
JAMES C GODWIN RIVERFRONT PARK & BOAT RAMP	96,939	6.8	202,737	8.7
Dunns Creek and Highway 17	75,821	6.8	75,821	8.7

Asset Type: Marinas and Boatramps	2040 IH with 100-yr surge		2070 IH with 100-yr surge	
Asset Name:	Flooded Area (sq. ft.)	Max Depth (ft.)	Flooded Area (sq. ft.)	Max Depth (ft.)
Oklawaha River at State Road 19	5,339,847	5.8	5,594,520	7.7
Georgia Boy's Fish Camp	69,179	6.8	91,041	8.7
Elgin Grove - FWC # 14	16,157	6.8	21,269	8.7
Crystal Cove Marina	126,831	6.8	203,146	8.7
Palatka Riverfront Park and Boat Ramp	96,939	6.8	202,737	8.7
Gateway Fish Camp Rv Resort	2,215,710	6.8	2,516,108	8.7
Shell Harbor Public Boat Ramp - FWC # L-37	3,208	6.8	4,639	8.7
Leonard's Landing Lake Crescent Resort	25,683	6.8	37,017	8.7
Bass World Lodge	89,674	6.1	107,703	8.0

Source: FDEM, TBG Work Product

Table C-33. Ports with flood depths (ft.) and flood areas (sq. ft.) for 100-yr surge events: 2040 and 2070 SLR - Intermediate High

Asset Type: Ports	2040 IH with 100-yr surge		2070 IH with 100-yr surge	
Asset Name:	Flooded Area (sq. ft.)	Max Depth (ft.)	Flooded Area (sq. ft.)	Max Depth (ft.)
Port Putnam	17,373	6.8	95,551	8.7

Source: FDEM, FDOT-SIS, TBG Work Product

Table C-34. Rail Facilities with flood depths (ft.) and flood lengths for 100-yr surge events: 2040 and 2070 SLR - Intermediate High

Asset Type: Rail Facilities and Crossings	2040 IH with 100-yr surge		2070 IH with 100-yr surge	
Asset Name:	Flooded Length (ft.)	Max Depth (ft.)	Flooded Area (ft.)	Max Depth (ft.)
CSXT Mainline (A)	2,949	6.8	6,463	8.7

Source: FDOT-SIS, National Transportation Atlas Database (NTAD), TBG Work Product

## Critical Infrastructure

# High Tide and Sea Level Rise Events

Table C-35. Communications Facilities with flood depths (ft) and flood areas (sq. ft.) for high tide events: current, 2040, and 2070

Asset Type: Communications Facilities	High Tide		High Tide	e <b>2040 IH</b>	High Tide 2070 IH	
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
Hall Broadcasting Co Inc Dba = Wiyd Radio					56,424	3.0
Florida Power & Light Company	344	2.6	495	4.0	775	5.9
Pentecostal Revival Association, Inc.	856,632	2.3	876,792	3.8	895,575	5.6
Putnam, County Of:	3,714	2.6	10,441	4.0	22,238	5.9
Sba Towers Ii LLC	781,166	2.6	1,012,245	4.0	1,427,924	5.9
T-Mobile South LLC			497,797	3.5	573,983	5.3
Stc Two Llc	88,511	2.3	266,987	3.8	520,379	5.7

Source: FDEM, USGS NSD, TBG Work Product

Table C-36. Drinking Water Facilities with flood depths (ft) and flood areas (sq. ft.) for high tide events: current, 2040, and 2070

Asset Type: Drinking Water Facilities	High Tide		High Tid	e <b>2040 IH</b>	High Tide 2070 IH	
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
Crescent City WTP	5,048	2.6	8,547	4.0	12,282	5.9
Palm Port Subdivision			140	1.0	323	2.8
Rpuma	86	2.0	506	3.5	775	5.3
Rodeheaver Boys Ranch	11,456,716	2.7	12,149,565	4.1	12,739,963	6.0
River Villas	18,697	2.6	25,295	4.0	34,401	5.9
Wooten's MHP	22	0.4	990	1.9	1,905	3.7
Crescent City WTP	5,048	2.6	8,547	4.0	12,282	5.9
San Mateo Estates			97,327	2.8	252,370	4.7

Table C-37. Electric production and supply facilities eGRID with flood depths (ft) and flood areas (sq. ft.) for high tide events: current, 2040, and 2070

Asset Type: Electric Production	High Tide		High Tio	de 2040 IH	High Tide 2070 IH	
Facilities	Flooded area	Max Depth	Flooded area	Max Depth	Flooded area	Max Depth
Asset Name:	(sq. ft.)	(ft.)	(sq. ft.)	(ft.)	(sq. ft.)	(ft.)
<b>Georgia-Pacific Palatka Operations</b>	7,354,068	2.8	8,689,659	4.2	9,484,237	6.1
Seminole (136)	3,714	2.6	10,441	4.0	22,238	5.9

Table C-38. Electric production and supply facilities substation with flood depths (ft) and flood areas (sq. ft.) for high tide events: current, 2040, and 2070

Asset Type: Electric Production Facilities	High Tide		High Tide	2040 IH	High Tide 2070 IH	
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
SEMINOLE (FL)	3,714	2.6	10,441	4.0	22,238	5.9
UNKNOWN120506	34,843	2.6	74,185	4.0	124,376	5.9
UNKNOWN120507	34,843	2.6	74,185	4.0	124,376	5.9
PUTNAM	34,843	2.6	74,185	4.0	124,376	5.9

Table C-39. Electric production and supply facilities transmission with flood depths (ft) and flood areas (sq. ft.) for high tide events: current, 2040, and 2070

Asset Type: Electric Production Facilities	High Tide		High Tid	e 2040 IH	High Tide 2070 IH	
Asset Name:	Flooded area	Max Depth	Flooded area	Max Depth	Flooded area	Max Depth
	(sq. ft.)	(ft.)	(sq. ft.)	(ft.)	(sq. ft.)	(ft.)
DUVAL	820,314	2.9	1,056,344	4.3	1,085,385	6.2
UNKNOWN120496	184,503	2.6	208,302	4.0	217,839	5.9
SEMINOLE (FL)	623,863	2.7	751,867	4.1	953,216	6.0
SEMINOLE (FL)					96,337	1.9
PUTNAM	107,875	2.6	222,812	4.0	511,693	5.9
UNKNOWN120477	558,623				99,577	1.9
SEMINOLE (FL)	113,333				61,774	1.6
UNKNOWN150864	362,742	2.7	989,436	4.2	1,050,220	6.0
TAP143292	460,048	2.5	137,950	4.0	182,437	5.9
UNKNOWN120496	35,618	2.6	399,641	4.0	487,463	5.9

Asset Type: Electric Production Facilities	High Tide		High Tid	e 2040 IH	High Tide 2070 IH	
Asset Name:	Flooded area   Max Depth		Flooded area	Max Depth	Flooded area	Max Depth
	(sq. ft.)	(ft.)	(sq. ft.)	(ft.)	(sq. ft.)	(ft.)
PUTNAM	16,092	2.6	690,782	4.1	857,891	5.9
UNKNOWN120506	64,702	2.5	35,715	4.0	35,854	5.9
UNKNOWN120506	395,077	2.5	16,092	3.9	16,157	5.8
SALT SPRINGS	1,453	2.6	79,157	4.0	109,415	5.9

Table C-40. Solid and hazardous waste facilities with flood depths (ft) and flood areas (sq. ft.) for high tide events: current, 2040, and 2070

Asset Type: Solid Waste	High T	ide	High Tide 2	2040 IH	High Tide 2070 IH		
Asset Name:	Flooded area	Max Depth	Flooded area	Max Depth	Flooded area	Max Depth	
	(sq. ft.)	(ft.)	(sq. ft.)	(ft.)	(sq. ft.)	(ft.)	
N. 10TH STREET AND OCEAN STREET	1,020,791	2.2	1,248,006	3.7	1,426,697	5.5	
FORMER FLORIDA FURNITURE INDUSTRIES, INC	10,506	2.6	19,450	4.0	21,775	5.9	
FORMER WILSON CYPRESS COMPANY	3,132	2.5	7,470	3.9	8,805	5.8	

Source: EPA, FDEP, TBG Work Product

Table C-41. Stormwater treatment facilities and pump stations with flood depths (ft) and flood areas (sq. ft.) for high tide events: current, 2040, and 2070

Asset Type: Stormwater Treatment	High Tide		High Tide	e 2040 IH	High Tide 2070 IH	
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
NHD Reservoir					5,005	2.2
NHD Reservoir					15,209	2.5
NHD Reservoir	57,597	1.3	62,215	2.7	62,344	4.6
NHD Reservoir					13,638	2.4
NHD Reservoir					19,364	3.7
NHD Reservoir					11,442	1.4
NHD Reservoir			14,908	1.7	14,908	3.6
NHD Reservoir			2,131	2.1	40,623	3.9
NHD Reservoir			12,884	0.7	12,970	2.6
NHD Reservoir					68,577	0.5
NHD Reservoir			49,309	3.4	49,718	5.3

Asset Type: Stormwater Treatment	High	Tide	High Tide	e 2040 IH	High Tide	2070 IH
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
NHD Reservoir					157,325	2.5
NHD Reservoir	4,693	1.5	4,811	3.0	4,811	4.8
NHD Reservoir					7,772	1.2
NHD Reservoir					59,373	4.9
NHD Reservoir					2,551	1.7
NHD Reservoir					12,626	1.9
D2SWF76000-00955			35,122	1.8	40,031	3.6
NHD Reservoir					72,226	3.0
NHD Reservoir					18,546	2.5
NHD Reservoir					5,468	3.2
NHD Reservoir			17,900	2.0	17,911	3.8
NHD Reservoir					1,808	3.3
NHD Reservoir			36,156	1.8	36,522	3.7
NHD Reservoir	9,375	0.4	10,527	1.8	10,527	3.7
NHD Reservoir					74,906	2.0
NHD Reservoir					40,042	2.7
NHD Reservoir			12,938	2.0	13,347	3.9
NHD Reservoir					8,073	0.7
NHD Reservoir			26,232	1.7	26,232	3.6
NHD Reservoir					20,537	1.5
NHD Reservoir	179,003	2.1	179,035	3.5	179,035	5.4
NHD Reservoir					20,936	2.0
NHD Reservoir	872	1.7	46,618	3.2	47,878	5.0
Gibbs Avenue Dam	1,701	2.6	3,606	4.0	7,126	5.9

Source: FDOT D2, NHD, US Army Corps of Engineers (USCOE) National Inventory of Dams, TBG Work Product

Table C- 42. Wastewater treatment facilities and lift stations with flood depths (ft) and flood areas (sq. ft.) for high tide events: current, 2040, and 2070

Asset Type: Wastewater Treatment Facilities	High Tide		High Tide	2040 IH	High Tide 2070 IH	
Asset Name:	Flooded area	Max Depth	Flooded area	Max Depth	Flooded area	Max Depth
	(sq. ft.)	(ft.)	(sq. ft.)	(ft.)	(sq. ft.)	(ft.)
Crescent City, City of WWTF	5,048	2.6	8,547	4.0	12,282	5.9
Captain Joes WWTF	14,381	2.6	22,217	4.0	38,352	5.9
Port Buena Vista WWTF					1,808	1.3
San Mateo Estates (Jan's Modular Estates) WWTF			97,327	2.8	252,370	4.7
Palm Port WWTF			33,282	4.4	39,826	6.3
River Villas WWTF	18,697	2.6	25,295	4.0	34,401	5.9
Paradise Point Pump Station	15,199	1.3	41,322	2.8	42,625	4.6
City of Palatka Pump Station					17,814	3.3

Table C- 43. Water utility conveyance systems with flood depths (ft) and flood areas (sq. ft.) for high tide events: current, 2040, and 2070

Asset Type: Water Utility	Water Utility High Tide		High Tide	2040 IH	High Tide 2070 IH	
Asset Name:	Flooded area	Flooded area Max Depth		Max Depth	Flooded area	Max Depth
	(sq. ft.)	(ft.)	(sq. ft.)	(ft.)	(sq. ft.)	(ft.)
RODEHEAVER BOYS RANCH	11,456,716	2.7	12,149,565	4.1	12,739,963	6.0
CRESCENT CITY WTP	5,048	2.6	8,547	4.0	12,282	5.9
SAN MATEO ESTATES			97,327	2.8	252,370	4.7
RIVER VILLAS	18,697	2.6	25,295	4.0	34,401	5.9
RPUMA	86	2.0	506	3.5	775	5.3

## Rainfall

Table C-44. Communications facilities with flood depths (ft) and flood areas (sq. ft.) for 100-yr. rain events: current and 2070

Asset Type: Communications Facilities	Rainfall 10	00-yr	Rainfall 100	-yr 2070
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
T-MOBILE SOUTH LLC	70,500	3.2	100,125	3.6
PUTNAM COUNTY	654,150	26.8	682,075	27.1
PALATKA, CITY OF	1,853,750	7.4	1,964,525	7.7
NEW CINGULAR WIRELESS PCS, LLC	205,425	14.8	210,925	15.1
AMERICAN TOWERS, INC.	216,400	7.2	230,550	7.5
NEW CINGULAR WIRELESS PCS, LLC	39,250	6.3	55,325	6.8
HALL BROADCASTING CO INC DBA = WIYD RADIO	925	2.1	1,275	2.5
FLORIDA POWER & LIGHT COMPANY	5,725	6.6	5,775	7.0
TOWERCO ASSETS LLC	128,900	4.3	175,100	4.7
SBA TOWERS, INC	2,625	4.2	5,625	4.6
PENTECOSTAL REVIVAL ASSOCIATION, INC.	884,975	4.7	888,250	5.1
PUTNAM, COUNTY OF:	14,082,900	19.3	14,508,800	21.0
SBA TOWERS II LLC	1,861,450	32.6	1,861,450	33.0
TOWERCO ASSETS LLC	2,384,675	5.4	2,408,925	5.7
NEW CINGULAR WIRELESS PCS, LLC	2,699,075	24.2	2,807,925	24.6
AMERICAN TOWERS, INC.	174,400	8.4	206,050	8.8
SANDERS JR, DORSEY A	753,100	17.7	794,175	18.1
TOWERCO ASSETS LLC	2,700	2.5	4,225	2.9
NEW CINGULAR WIRELESS PCS, LLC			275	0.1
RADIO PALATKA INC	130,350	1.9	161,475	2.2
T-MOBILE SOUTH LLC	1,162,050	8.7	1,325,700	9.0
NEW CINGULAR WIRELESS PCS, LLC	1,835,350	18.7	1,876,225	19.1
ALLTEL COMMUNICATIONS, LLC	2,829,000	12.6	2,855,975	12.9
STC TWO LLC	1,718,200	10.8	2,112,100	11.2
Putnam Hall Post Office	17,025	5.0	17,025	5.3

Source: FDEM, USGS NSD, TBG Work Product

Table C-45. Disaster debris management sites with flood depths (ft) and flood areas (sq. ft.) for 100-yr. rain events: current and 2070

Asset Type: Disaster Debris Sites	Rainfall 100-yr		Rainfall 100-	yr 2070
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
PUTNAM COUNTY HUNTINGTON LANDFILL	78,200	2.1	87,800	2.4
PUTNAM COUNTY CENTRAL LANDFILL	6,825	0.7	11,250	1.0

Table C-46. Drinking water facilities with flood depths (ft) and flood areas (sq. ft.) for 100-yr. rain events: current and 2070

Asset Type: Drinking Water Facilities	Rainfall 100-yr		Rainfall 100-yr 2070		
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)	
CRESCENT CITY WTP	36,900	6.6	37,475	7.0	
PALM PORT SUBDIVISION	175	2.2	225	2.5	
RPUMA	750	5.9	750	6.2	
RODEHEAVER BOYS RANCH	14,415,775	5.5	15,287,375	5.8	
RIVER VILLAS	30,400	5.0	31,800	5.4	
WOOTEN'S MHP	2,275	6.0	2,275	6.3	
R. C. WILLIS WTP (CITY OF PALATKA)	1,853,750	7.4	1,964,525	7.7	
SAN MATEO ESTATES	36,900	6.6	37,475	7.0	
CRESCENT CITY WTP	204,150	3.6	219,325	4.0	

Source: FDEP, TBG Work Product

Table C-47. Electric production and supply facilities eGRID with flood depths (ft) and flood areas (sq. ft.) for 100-yr. rain events: current and 2070

Asset Type: Electric Production Facilities	Rainfall 100-yr		Rainfall 100-yr 2070	
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
Coral Farms Solar Energy Center	10,294,850	14.6	10,311,100	14.9
Georgia-Pacific Palatka Operations	10,536,575	32.6	10,795,075	33.0
Seminole (136)	14,082,900	19.3	14,508,800	21.0
Twin Lakes	4,738,850	27.2	5,222,675	27.6

Table C-48. Electric production and supply facilities substation with flood depths (ft) and flood areas (sq. ft.) for 100-yr. rain events: current and 2070

Asset Type: Electric Production Facilities	Rainfall 100-yr		Rainfall 100-yr 2070	
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
SEMINOLE (FL)	14,082,900	19.3	14,508,800	21.0
UNKNOWN120506	515,450	14.4	622,400	14.8
UNKNOWN120507	600	14.4	622,400	14.8
PUTNAM	828,750	14.4	622,400	14.8
UNKNOWN121627	136,900	2.1	800	2.5
PUTNAM	515,450	14.4	622,400	14.8
UNKNOWN150864	515,450	6.8	950,000	7.1
FRUITLAND	515,450	14.7	136,900	15.1

Table C-49. Electric production and supply facilities transmission with flood depths (ft) and flood areas (sq. ft.) for 100-yr. rain events: current and 2070

Asset Type: Electric Production Facilities	Rainfall 1	00-yr	Rainfall 100-yr 2070	
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
UNKNOWN121627	100	0.5	150	0.8
DUVAL	3,081,400	14.5	3,480,350	14.9
TAP150865	117,150	10.3	154,350	10.6
UNKNOWN120496	1,613,600	26.8	1,716,625	27.2
UNKNOWN121783	158,700	10.7	184,400	11.1
POMONA PARK	463,975	9.6	508,725	10.0
TAP154079	320,050	14.0	322,425	14.4
UNKNOWN120473	62,775	7.2	65,825	7.5
TAP150865	50	0.0	225	0.4
SEMINOLE (FL)	2,714,275	32.6	2,859,525	33.0
SEMINOLE (FL)	976,800	28.0	1,044,425	28.3
UNKNOWN121783	118,950	14.5	140,575	14.8
PUTNAM	545,425	5.5	647,125	5.8
TAP143295	703,975	19.5	750,925	19.9
TAP143290	104,875	8.4	107,350	8.8
TAP143294	303,750	8.6	340,900	9.0

Asset Type: Electric Production Facilities	Rainfall 1	00-yr	Rainfall 100	-yr 2070
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
TAP143294	300,625	12.4	334,825	12.7
UNKNOWN120496	303,625	27.7	351,975	28.0
PUTNAM	1,923,725	10.3	2,319,375	10.7
RICE	666,300	14.8	690,025	15.2
UNKNOWN120507	679,750	5.9	742,850	6.3
UNKNOWN120477	1,826,925	28.0	1,923,200	28.4
SEMINOLE (FL)	527,350	27.7	556,000	28.1
UNKNOWN120497	302,750	24.7	319,875	25.0
UNKNOWN150864	2,447,675	10.0	2,609,950	10.3
UNKNOWN120492	374,425	23.9	404,375	24.3
TAP143292	448,025	9.7	477,950	10.0
TAP150786	189,550	16.5	235,800	16.8
UNKNOWN120496	962,600	32.6	1,004,800	33.0
PUTNAM	1,923,325	32.6	2,031,550	33.0
UNKNOWN108250	295,075	14.7	318,225	15.0
PUTNAM	183,475	4.9	231,225	5.3
DUVAL	160,975	18.3	204,650	19.3
UNKNOWN121626	75	0.5	1,275	1.3
TAP143295	308,875	0.1	1,875	0.4
UNKNOWN120506	40,625	7.7	414,175	8.8
UNKNOWN120506	375,500	6.6	40,625	7.0
SALT SPRINGS	162,950	12.4	387,175	12.7
TAP143290	1,510,150	3.7	182,300	4.1
SEMINOLE (FL)	38,300	32.6	1,585,175	33.0
UNKNOWN120506	277,000	8.5	45,350	8.9
UNKNOWN120506	123,125	10.9	318,650	11.3
CRESCENT CITY	210,900	14.4	155,475	14.8
CRESCENT CITY	532,700	8.1	237,175	8.5
UNKNOWN150864	111,150	4.9	595,700	5.3
TAP150865	20,500	2.6	117,300	2.9
UNKNOWN120506	1,825	9.8	22,400	10.2

Asset Type: Electric Production Facilities	Rainfall 100-yr		Rainfall 100-yr 2070	
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
UNKNOWN120506	215,975	3.2	3,050	3.5
HAWTHORNE OCB ELECTRIC	11,075	14.5	260,625	14.8

Table C-50. Stormwater treatment facilities and pump stations with flood depths (ft) and flood areas (sq. ft.) for 100-yr. rain events: current and 2070

Asset Type: Stormwater Treatment	Rainfall 1	00-yr	Rainfall 100-yr 2070	
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
NHD Reservoir	5,125	2.3	5,125	2.7
NHD Reservoir	15,250	2.6	15,250	3.0
NHD Reservoir	8,450	9.7	8,450	10.1
NHD Reservoir	46,125	2.1	46,475	2.5
NHD Reservoir	14,200	0.3	18,825	0.6
NHD Reservoir	725	0.1	23,525	0.5
NHD Reservoir	27,500	0.3	41,200	0.7
NHD Reservoir	19,275	2.6	19,275	2.9
NHD Reservoir	30,700	3.3	30,700	3.7
NHD Reservoir	7,225	4.3	10,175	4.6
NHD Reservoir	35,250	5.6	35,250	6.0
NHD Reservoir	36,450	4.6	36,450	4.9
NHD Reservoir	3,800	4.6	3,800	4.9
NHD Reservoir	28,325	5.3	28,325	5.7
NHD Reservoir	9,450	5.0	9,450	5.3
NHD Reservoir	14,100	4.7	14,100	5.1
NHD Reservoir	62,275	4.7	62,275	5.0
NHD Reservoir	145,100	3.3	145,100	3.6
NHD Reservoir			2,025	0.1
NHD Reservoir	5,475	1.2	5,475	1.5
NHD Reservoir	8,575	0.3	11,325	0.6
NHD Reservoir	4,375	11.7	4,375	12.0
NHD Reservoir	7,800	11.0	7,800	11.4
NHD Reservoir	6,475	10.2	10,325	10.6

Asset Type: Stormwater Treatment	Rainfall 1	00-yr	Rainfall 100-yr 2070	
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
NHD Reservoir	65,000	3.2	65,000	3.6
NHD Reservoir	13,600	2.5	13,600	2.8
NHD Reservoir	19,550	1.9	19,825	2.2
NHD Reservoir	74,850	1.5	74,925	1.8
NHD Reservoir	19,275	3.8	19,275	4.1
NHD Reservoir	10,200	1.7	10,200	2.1
NHD Reservoir	95,675	0.5	103,100	0.9
NHD Reservoir	28,450	4.1	28,450	4.5
NHD Reservoir	51,025	2.8	51,025	3.1
NHD Reservoir	16,700	1.0	16,725	1.3
NHD Reservoir	13,600	5.7	13,600	6.1
NHD Reservoir	13,425	5.7	13,425	6.1
NHD Reservoir	775	1.3	6,125	2.2
NHD Reservoir	7,250	0.5	7,250	0.9
NHD Reservoir	11,225	1.5	13,825	1.9
NHD Reservoir	5,275	15.1	5,275	15.5
NHD Reservoir	5,675	6.1	5,675	6.5
NHD Reservoir	186,100	8.6	186,100	8.9
NHD Reservoir	18,975	11.0	18,975	11.4
NHD Reservoir	11,125	1.8	11,875	2.1
NHD Reservoir	2,950	0.4	5,150	0.8
NHD Reservoir	10,825	0.5	11,250	0.8
NHD Reservoir	135,975	1.5	135,975	1.9
NHD Reservoir	2,025	0.7	4,050	1.1
NHD Reservoir			250	0.2
D2SWF76000-00559	10,150	5.8	10,150	6.2
NHD Reservoir	15,025	2.7	15,025	3.1
NHD Reservoir	10,750	5.0	10,750	5.4
NHD Reservoir	23,700	6.3	23,725	6.7
NHD Reservoir	100,625	3.4	100,625	3.8
NHD Reservoir	26,225	8.4	26,225	8.8

Asset Type: Stormwater Treatment	Rainfall 1	00-yr	Rainfall 100-yr 2070	
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
NHD Reservoir	15,400	3.0	15,400	3.3
NHD Reservoir	14,300	8.7	14,300	9.0
NHD Reservoir	33,775	5.5	33,775	5.8
NHD Reservoir	58,000	5.2	58,000	5.5
NHD Reservoir	8,500	3.7	8,500	4.0
NHD Reservoir	27,100	7.9	27,100	8.2
NHD Reservoir	15,775	8.2	15,775	8.6
NHD Reservoir	92,525	8.7	92,700	9.1
NHD Reservoir	14,400	3.0	22,025	3.3
NHD Reservoir	12,975	1.7	12,975	2.1
NHD Reservoir			500	8.2
NHD Reservoir	38,250	5.1	38,250	5.5
NHD Reservoir	28,650	4.3	28,650	4.6
NHD Reservoir	8,400	3.3	8,400	3.7
NHD Reservoir	5,850	3.5	6,425	3.8
NHD Reservoir	59,025	2.8	59,025	3.2
NHD Reservoir	12,175	11.2	12,175	11.5
NHD Reservoir	31,450	10.3	31,450	10.7
NHD Reservoir	45,450	10.4	45,450	10.7
NHD Reservoir	19,525	9.6	19,525	9.9
NHD Reservoir	39,600	10.7	39,600	11.0
NHD Reservoir	33,300	14.8	33,300	15.1
NHD Reservoir	37,000	10.8	37,000	11.2
NHD Reservoir	5,550	14.5	9,200	14.9
NHD Reservoir	2,225	14.6	2,950	15.0
NHD Reservoir	63,350	0.6	66,325	1.0
NHD Reservoir	6,475	7.5	6,500	7.9
NHD Reservoir	11,075	1.5	11,075	1.8
NHD Reservoir	17,900	2.7	17,900	3.1
NHD Reservoir	16,300	2.8	16,300	3.1
NHD Reservoir	129,550	1.8	129,700	2.2

Asset Type: Stormwater Treatment	Rainfall 1	00-yr	Rainfall 100-yr 2070	
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
NHD Reservoir	1,850	0.6	6,250	0.9
NHD Reservoir	29,125	2.3	29,125	2.7
NHD Reservoir	113,025	2.6	147,700	3.0
NHD Reservoir			175	0.3
NHD Reservoir	7,650	12.6	7,650	12.9
NHD Reservoir	49,700	4.4	49,700	4.7
D2SWF76000-00561	110,200	0.6	112,325	0.9
NHD Reservoir	9,850	4.3	9,950	4.6
NHD Reservoir	46,525	8.8	46,525	9.2
NHD Reservoir	28,375	0.3	34,575	0.7
NHD Reservoir	575	0.2	875	0.5
NHD Reservoir	5,100	0.2	7,050	0.6
NHD Reservoir	975	3.2	3,975	3.8
NHD Reservoir	159,450	2.6	163,075	2.9
NHD Reservoir	12,625	0.2	15,450	0.5
NHD Reservoir	40,575	0.2	48,725	0.6
NHD Reservoir	391,400	0.0	391,600	0.4
NHD Reservoir			1,100	3.0
NHD Reservoir	4,175	2.9	4,175	3.2
D2SWF76000-00556	7,725	5.8	22,300	6.2
NHD Reservoir	4,775	4.0	4,775	4.3
NHD Reservoir	125,125	4.6	126,025	5.0
NHD Reservoir	7,475	8.2	7,475	8.6
NHD Reservoir	925	7.5	5,475	7.9
NHD Reservoir			825	0.6
D2SWF76000-00552	16,000	20.8	25,475	21.1
NHD Reservoir	110,250	3.8	110,800	4.1
NHD Reservoir	59,750	3.9	59,750	4.2
NHD Reservoir	19,500	1.9	26,750	2.2
NHD Reservoir	8,525	4.4	8,525	4.8
NHD Reservoir	37,075	12.9	37,075	13.2

Asset Type: Stormwater Treatment	Rainfall 1	00-yr	Rainfall 100-yr 2070	
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
NHD Reservoir	4,125	2.8	4,125	3.2
NHD Reservoir	12,525	2.3	16,900	2.7
NHD Reservoir			925	2.0
NHD Reservoir	59,325	4.0	59,325	4.4
NHD Reservoir	82,175	22.0	82,625	22.3
D2SWF76000-00578	75	0.5	1,500	1.2
D2SWF76000-00575	173,800	0.1	180,100	0.5
NHD Reservoir	3,600	4.0	3,775	4.3
NHD Reservoir	26,575	3.9	26,575	4.2
NHD Reservoir	33,550	5.9	33,550	6.3
D2SWF76000-00569	167,000	0.6	170,275	1.0
NHD Reservoir			1,350	4.3
D2SWF76000-00954	9,600	1.0	21,100	1.4
NHD Reservoir	15,425	4.3	15,425	4.7
NHD Reservoir	64,875	3.0	64,875	3.4
NHD Reservoir	9,000	13.3	13,350	13.6
NHD Reservoir	2,225	0.7	2,450	1.0
NHD Reservoir	110,025	1.0	110,275	1.4
NHD Reservoir	122,500	2.3	128,600	2.7
NHD Reservoir	12,575	1.0	12,575	1.4
NHD Reservoir	27,300	22.7	38,025	23.1
NHD Reservoir	3,225	16.3	6,425	16.6
D2SWF76000-00955	37,875	2.7	38,775	3.1
NHD Reservoir	6,550	1.7	6,550	2.1
NHD Reservoir	93,425	3.3	94,350	3.7
NHD Reservoir	2,425	3.7	2,425	4.1
NHD Reservoir	32,425	15.0	70,950	15.4
NHD Reservoir	1,675	22.0	4,075	22.3
NHD Reservoir	4,800	2.0	9,600	2.3
NHD Reservoir	12,875	6.4	12,875	6.7
D2SWF76000-00554	106,875	3.0	107,650	3.4

Asset Type: Stormwater Treatment	Rainfall 1	00-yr	Rainfall 100	Rainfall 100-yr 2070	
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)	
D2SWF76000-00570	225,500	13.1	225,500	13.5	
NHD Reservoir	5,450	6.8	10,975	7.2	
NHD Reservoir	6,750	4.1	6,750	4.4	
NHD Reservoir	5,950	3.5	8,525	3.8	
NHD Reservoir	12,525	2.0	19,900	2.4	
NHD Reservoir	104,125	1.0	104,225	1.4	
NHD Reservoir	126,000	6.2	126,000	6.5	
NHD Reservoir	200	3.2	2,025	3.5	
NHD Reservoir	18,375	1.6	18,475	1.9	
NHD Reservoir	59,650	0.9	60,575	1.3	
NHD Reservoir	295,250	1.7	295,250	2.0	
NHD Reservoir			700	0.1	
NHD Reservoir	2,300	1.9	2,300	2.2	
NHD Reservoir	5,450	2.3	5,500	2.7	
NHD Reservoir	17,950	2.9	17,950	3.3	
NHD Reservoir	1,825	2.4	1,825	2.7	
NHD Reservoir	62,300	7.4	82,325	7.7	
NHD Reservoir	13,975	2.3	13,975	2.6	
NHD Reservoir	25,500	2.6	25,575	2.9	
NHD Reservoir	229,450	4.1	229,450	4.4	
NHD Reservoir	25	0.3	50	0.6	
NHD Reservoir			1,250	0.2	
D2SWF76000-00567	325	9.2	4,450	9.6	
NHD Reservoir	14,850	24.4	14,850	24.8	
NHD Reservoir	1,850	0.4	6,100	0.7	
NHD Reservoir	38,975	5.6	38,975	5.9	
NHD Reservoir			725	10.1	
NHD Reservoir	4,125	13.9	4,125	14.2	
NHD Reservoir	354,325	0.4	355,500	0.7	
NHD Reservoir	500	0.1	5,575	0.5	
NHD Reservoir			1,450	3.4	

Asset Type: Stormwater Treatment	Rainfall 1	00-yr	Rainfall 100	-yr 2070
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
NHD Reservoir	10,375	0.6	10,450	0.9
NHD Reservoir	7,425	3.6	7,625	4.0
NHD Reservoir	450	0.3	3,125	0.9
NHD Reservoir	7,875	3.1	7,875	3.4
NHD Reservoir	23,925	1.1	24,175	1.5
NHD Reservoir	88,050	5.8	88,050	6.2
NHD Reservoir	117,675	1.3	117,925	1.6
NHD Reservoir	6,050	3.7	6,050	4.0
NHD Reservoir	10,375	7.6	10,375	8.0
NHD Reservoir	47,275	0.4	54,050	0.7
NHD Reservoir			75	0.5
NHD Reservoir	12,500	5.6	12,500	6.0
NHD Reservoir	848,675	3.4	848,675	3.8
NHD Reservoir	180,550	25.2	180,550	25.6
NHD Reservoir	36,575	2.8	36,575	3.1
NHD Reservoir	10,500	2.8	10,500	3.2
NHD Reservoir	13,825	5.8	13,825	6.2
NHD Reservoir	77,425	10.3	77,425	10.7
NHD Reservoir	204,525	11.3	204,525	11.7
NHD Reservoir	78,550	4.7	78,550	5.1
NHD Reservoir	11,875	0.4	12,875	0.8
NHD Reservoir	8,400	2.0	8,400	2.3
NHD Reservoir	72,950	1.1	74,200	1.4
NHD Reservoir	8,300	1.0	8,450	1.3
NHD Reservoir	3,375	12.2	6,475	12.5
NHD Reservoir	35,075	6.5	35,075	6.8
NHD Reservoir	16,725	6.3	16,725	6.7
NHD Reservoir	38,975	1.8	39,400	2.1
NHD Reservoir	44,225	1.3	45,350	1.7
NHD Reservoir	6,200	3.5	6,200	3.9
NHD Reservoir	8,450	0.4	9,775	0.7

Asset Type: Stormwater Treatment	Rainfall 1	00-yr	Rainfall 100	Rainfall 100-yr 2070	
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)	
NHD Reservoir	145,150	5.7	145,150	6.1	
NHD Reservoir	53,325	4.9	53,325	5.2	
NHD Reservoir	7,400	2.4	7,400	2.8	
NHD Reservoir	14,250	7.7	14,250	8.1	
NHD Reservoir	26,375	8.9	26,375	9.2	
NHD Reservoir	7,250	22.6	10,775	23.0	
NHD Reservoir	26,900	4.0	26,900	4.4	
NHD Reservoir	528,225	8.1	528,225	8.5	
NHD Reservoir	13,350	3.0	13,400	3.4	
NHD Reservoir	50,125	3.2	50,800	3.6	
NHD Reservoir	14,900	7.1	14,900	7.5	
NHD Reservoir	78,500	1.3	80,575	1.7	
NHD Reservoir	6,700	5.2	9,625	5.5	
NHD Reservoir	116,225	7.1	126,375	7.4	
D2SWF76000-00564	61,800	4.5	71,375	4.9	
NHD Reservoir	8,175	3.2	8,175	3.6	
NHD Reservoir	102,900	6.8	102,900	7.2	
NHD Reservoir	16,050	5.8	16,050	6.1	
NHD Reservoir	11,475	7.1	11,475	7.4	
NHD Reservoir	10,350	3.2	10,350	3.6	
NHD Reservoir	22,900	3.7	22,900	4.0	
NHD Reservoir			2,525	0.2	
NHD Reservoir	18,850	6.8	18,850	7.2	
NHD Reservoir	10,025	8.4	10,025	8.7	
NHD Reservoir	244,175	8.2	244,175	8.6	
NHD Reservoir	110,125	23.9	110,125	24.2	
NHD Reservoir	130,725	2.4	133,150	2.8	
NHD Reservoir	7,825	31.6	7,825	32.0	
NHD Reservoir	3,600	4.6	5,200	5.0	
NHD Reservoir	54,550	2.1	54,550	2.4	
NHD Reservoir	6,125	38.6	6,925	39.0	

Asset Type: Stormwater Treatment	Rainfall 1	00-yr	Rainfall 100	-yr 2070
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
NHD Reservoir	10,475	0.2	84,525	0.5
NHD Reservoir			37,550	0.2
NHD Reservoir	70,100	6.1	70,100	6.5
NHD Reservoir	41,525	1.7	42,875	2.1
NHD Reservoir	10,300	6.5	10,300	6.9
NHD Reservoir	7,275	24.0	7,275	24.3
NHD Reservoir	17,075	24.1	17,075	24.4
NHD Reservoir	247,550	18.2	418,600	18.6
NHD Reservoir	61,675	2.0	62,175	2.4
NHD Reservoir	65,325	10.1	65,325	10.5
NHD Reservoir	6,525	7.6	6,525	7.9
NHD Reservoir	68,025	9.2	68,025	9.6
NHD Reservoir	2,675	1.7	2,675	2.1
NHD Reservoir	18,125	3.5	18,125	3.8
NHD Reservoir	700	1.2	2,950	1.6
NHD Reservoir	50,475	7.2	50,475	7.5
NHD Reservoir	20,225	7.4	20,225	7.7
NHD Reservoir	7,375	1.4	12,200	1.7
NHD Reservoir	38,225	3.9	38,225	4.2
NHD Reservoir	10,975	2.0	11,400	2.3
NHD Reservoir	11,500	0.7	21,475	1.2
NHD Reservoir	13,875	10.0	13,875	10.4
NHD Reservoir	59,900	5.9	59,900	6.2
NHD Reservoir	75,275	8.0	75,275	8.3
NHD Reservoir	10,525	1.7	10,525	2.0
NHD Reservoir			975	4.4
NHD Reservoir			1,175	0.1
NHD Reservoir	149,525	1.0	152,225	1.4
NHD Reservoir	34,900	1.3	34,900	1.7
NHD Reservoir	35,200	3.9	35,225	4.3
NHD Reservoir	114,825	1.2	117,600	1.5

Asset Type: Stormwater Treatment	Rainfall 1	00-yr	Rainfall 100	Rainfall 100-yr 2070	
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)	
NHD Reservoir	41,650	1.3	44,275	1.7	
NHD Reservoir	10,325	0.2	12,900	0.5	
NHD Reservoir			25	0.0	
NHD Reservoir	26,125	2.6	26,125	3.0	
NHD Reservoir	60,850	0.3	71,100	0.7	
NHD Reservoir	233,425	1.0	236,500	1.3	
NHD Reservoir	3,975	2.2	5,150	2.6	
NHD Reservoir	4,350	0.1	55,875	0.4	
NHD Reservoir	10,975	2.7	11,100	3.0	
NHD Reservoir	7,075	0.7	9,150	1.0	
NHD Reservoir	8,000	1.7	9,450	2.1	
NHD Reservoir	8,400	1.2	9,150	1.6	
NHD Reservoir	27,175	0.7	28,550	1.1	
NHD Reservoir	32,975	12.1	32,975	12.5	
NHD Reservoir	24,675	2.1	24,675	2.4	
NHD Reservoir	17,275	4.0	17,350	4.3	
NHD Reservoir	82,125	0.7	82,200	1.0	
NHD Reservoir	8,725	24.6	8,725	25.0	
NHD Reservoir	50	1.5	200	1.8	
NHD Reservoir	19,975	0.6	20,375	0.9	
NHD Reservoir	6,150	13.4	6,150	13.8	
NHD Reservoir	8,525	1.7	9,000	2.0	
NHD Reservoir	91,225	7.8	93,725	8.1	
NHD Reservoir	2,850	3.7	2,850	4.0	
NHD Reservoir	12,425	1.2	12,425	1.5	
NHD Reservoir	39,550	4.1	39,550	4.5	
NHD Reservoir	5,975	2.0	5,975	2.4	
NHD Reservoir	179,025	31.5	179,025	31.8	
NHD Reservoir	57,550	10.6	57,550	11.0	
NHD Reservoir	20,675	1.1	20,850	1.5	
NHD Reservoir	53,800	0.7	55,400	1.1	

Asset Type: Stormwater Treatment	Rainfall 1	.00-yr	Rainfall 100	-yr 2070
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
NHD Reservoir			950	0.5
NHD Reservoir	87,175	1.9	88,325	2.2
NHD Reservoir	34,325	0.4	40,325	0.7
NHD Reservoir	47,875	4.9	47,875	5.3
NHD Reservoir	15,275	9.1	15,275	9.5
NHD Reservoir	52,525	2.8	52,525	3.2
NHD Reservoir	25,125	4.5	25,125	4.9
NHD Reservoir	9,850	24.4	9,850	24.8
NHD Reservoir	69,600	1.2	71,050	14.3
NHD Reservoir	61,500	9.1	61,500	9.5
NHD Reservoir	40,150	9.1	47,925	9.5
NHD Reservoir	1,925	3.3	5,625	4.8
NHD Reservoir	10,125	3.4	11,875	3.8
NHD Reservoir	1,250	0.6	3,625	0.9
NHD Reservoir	10,025	2.1	14,375	2.4
D2SWF76000-01959	1,375	7.7	1,375	8.1
D2SWF76000-01649	1,350	25.1	1,350	25.4
D2SWF76000-02008	1,325	5.0	1,325	5.3
D2SWF76000-01645	975	16.1	1,325	16.4
D2SWF76000-01600	850	1.5	1,325	2.9
D2SWF76000-01728	1,275	1.5	1,325	2.9
D2SWF76000-02012	1,050	6.8	1,275	7.1
D2SWF76000-01644	850	16.4	1,325	16.7
D2SWF76000-02009	1,325	4.4	1,375	4.8
D2SWF76000-01724	1,375	1.1	1,350	2.3
D2SWF76000-01596	1,050	1.1	1,350	2.3
Gibbs Avenue Dam	75,075	29.1	73,850	28.9
Ketter Causeway Dam	105,875	28.6	108,575	28.9

Source: FDOT D2, NHD, US Army Corps of Engineers (USCOE) National Inventory of Dams, TBG Work Product

Table C-51. Wastewater treatment facilities and lift stations with flood depths (ft) and flood areas (sq. ft.) for 100-yr. rain events: current and 2070

Asset Type: Wastewater Treatment	Rainfall 10	00-yr	Rainfall 100-yr 2070		
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)	
Crescent City, City of WWTF	36,900	6.6	37,475	7.0	
Welaka, Town of WWTF	5,875	2.1	8,250	2.5	
Captain Joes WWTF	33,175	6.6	36,275	7.0	
Port Buena Vista WWTF	175	0.4	700	0.8	
Palatka, City of WWTF	2,000	2.0	4,825	2.3	
San Mateo Estates (Jan's Modular Estates) WWTF	204,150	3.6	219,325	4.0	
Palm Port WWTF	48,325	7.7	48,475	7.8	
Bass Capital Mobile Home Park WWTF	381,975	2.3	401,625	2.7	
River Villas WWTF	30,400	5.0	31,800	5.4	
Cherry Blossom Campground WWTF	29,350	25.9	41,050	26.4	
Paradise Point Pump Station	42,275	3.7	42,500	4.1	
City of Palatka Pump Station	3,100	2.4	4,825	2.8	

Table C-52. Water utility conveyance systems with flood depths (ft) and flood areas (sq. ft.) for 100-yr. rain events: current and 2070

Asset Type: Water Utility	Rainfall 100-yr		Rainfall 100-yr 2070	
Asset Name:	Flooded area (sq. ft.)	Flooded area (sq. ft.) Max Depth (ft.)		Max Depth (ft.)
RODEHEAVER BOYS RANCH	14,415,775	5.5	15,287,375	5.8
CRESCENT CITY WTP	36,900	6.6	37,475	7.0
SAN MATEO ESTATES	204,150	3.6	219,325	4.0
RIVER VILLAS	30,400	5.0	31,800	5.4
RPUMA	750	5.9	750	6.2

Source: FDEP, TBG Work Product

## Surge and Sea Level Rise Events

Table C-53. Communications facilities with flood depths (ft) and flood areas (sq. ft.) for 100-yr surge events: 2040 and 2070 SLR - Intermediate High

Asset Type: Con	nmunications Facilities	2040 IH with 10	2040 IH with 100-yr surge		00-yr surge
Asset Name:		Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
<b>PUTNAM COUN</b>	TY			492,651	3.5

Asset Type: Communications Facilities	2040 IH with 100-yr surge		2070 IH with 100-yr surge	
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
HALL BROADCASTING CO INC DBA = WIYD RADIO	88,759	4.0	161,318	5.9
FLORIDA POWER & LIGHT COMPANY	872	6.8	1,012	8.7
PENTECOSTAL REVIVAL ASSOCIATION, INC.	909,149	6.5	933,744	8.4
PUTNAM, COUNTY OF:	29,256	6.8	49,794	8.7
SBA TOWERS II LLC	1,565,303	6.8	1,729,915	8.7
T-MOBILE SOUTH LLC	604,510	6.2	670,729	8.1
STC TWO LLC	658,738	6.6	964,066	8.5

Source: FDEM, USGS NSD, TBG Work Product

Table C-54. Drinking water facilities with flood depths (ft) and flood areas (sq. ft.) for 100-yr surge events: 2040 and 2070 SLR - Intermediate High

Asset Type: Drinking Water Facilities	2040 IH with	2040 IH with 100-yr surge		100-yr surge
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
CRESCENT CITY WTP	13,799	6.8	18,191	8.7
PALM PORT SUBDIVISION	409	3.8	635	5.7
RPUMA	775	6.3	775	8.2
RODEHEAVER BOYS RANCH	12,996,929	6.9	13,453,521	8.8
RIVER VILLAS	38,449	6.8	47,070	8.7
WOOTEN'S MHP	38,449	6.8	47,070	8.7
SAN MATEO ESTATES	2,185	4.6	4,338	6.5

Source: FDEP, TBG Work Product

Table C-55. Electric production and supply facilities eGRID with flood depths (ft) and flood areas (sq. ft.) for 100-yr surge events: 2040 and 2070 SLR - Intermediate High

Asset Type: Electric Production Facilities	2040 IH with 100-yr surge		2070 IH with 100-yr surge	
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
Georgia-Pacific Palatka Operations	9,762,817	7.0	10,181,069	8.9
Seminole (136)	29,256	6.8	49,794	8.7

Table C-56. Electric production and supply facilities substation with flood depths (ft) and flood areas (sq. ft.) for 100-yr surge events: 2040 and 2070 SLR - Intermediate High

Asset Type: Electric Production Facilities	2040 IH with 1	2040 IH with 100-yr surge		00-yr surge
Asset Name:	Flooded area (sq. ft.) Max Depth (ft.)		Flooded area (sq. ft.)	Max Depth (ft.)
SEMINOLE (FL)	29,256	6.8	49,794	8.7
UNKNOWN120506	168,842	6.8	408,833	8.7
UNKNOWN120507	168,842	6.8	408,833	8.7
PUTNAM	168,842	6.8	408,833	8.7

Table C-57. Electric production and supply facilities transmission with flood depths (ft) and flood areas (sq. ft.) for 100-yr surge events: 2040 and 2070 SLR - Intermediate High

Asset Type: Electric Production Facilities	2040 IH with 10	00-yr surge	2070 IH with 10	0-yr surge
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
DUVAL	1,090,068	7.1	1,104,362	9.0
UNKNOWN120496	227,602	6.8	440,307	8.7
SEMINOLE (FL)	1,052,383	6.9	1,417,375	8.8
SEMINOLE (FL)	101,988	2.8	109,770	4.7
UNKNOWN120496			205,127	4.4
PUTNAM	845,459	6.8	1,475,619	8.7
UNKNOWN120477	104,958	2.8	112,181	4.7
SEMINOLE (FL)	67,500	2.5	73,097	4.4
UNKNOWN150864	1,055,440	7.0	1,069,013	8.9
TAP143292	204,320	6.8	313,250	8.7
UNKNOWN120496	516,267	6.8	693,979	8.7
PUTNAM	898,449	6.9	1,335,064	8.8
UNKNOWN120506	35,897	6.8	37,447	8.7
UNKNOWN120506	16,157	6.7	17,233	8.6
SALT SPRINGS	144,505	6.8	161,996	8.7
SEMINOLE (FL)	682,881	6.8	846,169	8.7
UNKNOWN120506	4,575	6.8	171,953	9.7

Table C-58. Solid and hazardous waste facilities with flood depths (ft) and flood areas (sq. ft.) for 100-yr surge events: 2040 and 2070 SLR - Intermediate High

Asset Type: Solid Waste Facilities	2040 IH with 100-yr surge		2070 IH with 100-yr surge	
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
N. 10TH STREET AND OCEAN STREET	1,475,963	6.5	1,603,558	8.4
FORMER FLORIDA FURNITURE INDUSTRIES, INC	22,195	6.8	22,766	8.7
FORMER WILSON CYPRESS COMPANY	9,106	6.7	9,569	8.6

Source: EPA, FDEP, TBG Work Product

Table C-59. Stormwater treatment facilities and pump stations with flood depths (ft) and flood areas (sq. ft.) for 100-yr surge events: 2040 and 2070 SLR - Intermediate High

Asset Type: Stormwater Treatment	2040 IH with 10	00-yr surge	2070 IH with 100	)-yr surge
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
NHD Reservoir	5,005	3.1	5,005	5.0
NHD Reservoir	15,209	3.4	15,209	5.3
NHD Reservoir	62,344	5.5	62,344	7.4
NHD Reservoir	13,638	3.3	13,638	5.2
NHD Reservoir			8,116	2.1
NHD Reservoir	74,927	2.3	74,938	4.2
NHD Reservoir	19,364	4.6	19,364	6.5
NHD Reservoir	13,649	3.6	14,198	5.5
NHD Reservoir	11,442	2.3	11,442	4.2
D2SWF76000-00559			10,064	5.5
NHD Reservoir	14,908	4.5	14,908	6.4
NHD Reservoir			100,136	1.7
NHD Reservoir	44,907	4.8	48,114	6.7
NHD Reservoir	12,970	3.5	12,970	5.4
NHD Reservoir	78,759	1.4	78,802	3.3
NHD Reservoir	49,718	6.2	49,718	8.1
NHD Reservoir	12,368	2.1	12,518	4.0
NHD Reservoir			24,240	1.2
NHD Reservoir			8,794	1.1
NHD Reservoir			1,249	2.9
NHD Reservoir			9,698	2.9

Asset Type: Stormwater Treatment	2040 IH with 10	00-yr surge	2070 IH with 10	0-yr surge
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
NHD Reservoir	165,182	3.4	165,699	5.3
NHD Reservoir			18,374	2.9
NHD Reservoir	11,302	2.6	11,302	4.5
NHD Reservoir	4,811	5.8	4,811	7.7
NHD Reservoir	7,179	2.2	7,384	4.1
NHD Reservoir	7,772	2.1	7,772	4.0
NHD Reservoir			116,110	6.4
NHD Reservoir	59,373	5.8	59,373	7.7
NHD Reservoir			33,368	1.7
D2SWF76000-00560			206,989	5.8
NHD Reservoir	2,551	2.6	2,551	4.5
NHD Reservoir	12,626	2.9	12,626	4.8
D2SWF76000-00955	41,258	4.5	41,990	6.4
NHD Reservoir			15,758	0.8
NHD Reservoir	73,528	4.0	73,722	5.9
NHD Reservoir	18,546	3.4	18,546	5.3
NHD Reservoir	26,199	0.5	29,041	2.4
NHD Reservoir			109,910	1.4
NHD Reservoir			2,196	2.0
NHD Reservoir			3,111	2.2
NHD Reservoir			22,669	2.1
NHD Reservoir	5,468	4.1	5,468	6.0
NHD Reservoir	17,911	4.7	17,911	6.6
NHD Reservoir	1,808	4.2	1,808	6.1
NHD Reservoir			180,811	1.9
NHD Reservoir	36,522	4.6	36,522	6.5
NHD Reservoir	10,527	4.6	10,527	6.5
NHD Reservoir	75,229	2.9	75,336	4.8
NHD Reservoir	40,440	3.6	40,440	5.5
NHD Reservoir	47,479	2.1	52,269	4.0
NHD Reservoir	15,145	1.4	15,145	3.3

Asset Type: Stormwater Treatment	2040 IH with 10	00-yr surge	2070 IH with 100	)-yr surge
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
NHD Reservoir	13,347	4.8	13,347	6.7
NHD Reservoir			7,126	1.5
NHD Reservoir	8,073	1.6	8,073	3.5
NHD Reservoir			3,929	1.3
NHD Reservoir			17,136	0.8
NHD Reservoir			387	0.8
NHD Reservoir			16,975	2.7
NHD Reservoir	26,232	4.5	26,232	6.4
NHD Reservoir			8,708	1.3
NHD Reservoir	20,850	2.4	20,957	4.3
NHD Reservoir	179,035	6.3	179,035	8.2
NHD Reservoir	20,936	2.9	20,936	4.8
NHD Reservoir	87,446	2.0	90,330	3.9
NHD Reservoir	47,878	5.9	47,878	7.8
NHD Reservoir			129	0.9
Gibbs Avenue Dam	9,042	6.8	12,701	8.7

Source: FDOT D2, NHD, US Army Corps of Engineers (USCOE) National Inventory of Dams, TBG Work Product

Table C-60. Wastewater treatment facilities and lift stations with flood depths (ft) and flood areas (sq. ft.) for 100-yr surge events: 2040 and 2070 SLR - Intermediate High

Asset Type: Wastewater Treatment	2040 IH with 10	0-yr surge	2070 IH with 100-yr surge	
Asset Name:	Flooded area (sq. ft.)	Max Depth (ft.)	Flooded area (sq. ft.)	Max Depth (ft.)
Crescent City, City of WWTF	13,799	6.8	18,191	8.7
Captain Joes WWTF	46,575	6.8	59,567	8.7
Port Buena Vista WWTF	4,144	2.2	4,187	4.1
San Mateo Estates (Jan's Modular Estates) WWTF	322,163	5.6	449,714	7.5
Palm Port WWTF	44,433	7.2	56,252	9.1
River Villas WWTF	38,449	6.8	47,070	8.7
Hiawatha Pump Station	1,808	0.7	30,085	3.2
Paradise Point Pump Station	42,625	5.6	42,625	7.5
City of Palatka Pump Station	24,865	4.2	33,465	6.1

Table C-61. Water utility conveyance systems with flood depths (ft) and flood areas (sq. ft.) for 100-yr surge events: 2040 and 2070 SLR - Intermediate High

Asset Type: Water Utility	2040 IH with 1	100-yr surge	2070 IH with 100-yr surge		
Asset Name:	Flooded area (sq. ft.) Max Depth (ft.)		Flooded area (sq. ft.)	Max Depth (ft.)	
RODEHEAVER BOYS RANCH	12,996,929	6.9	13,453,521	8.8	
CRESCENT CITY WTP	13,799	6.8	18,191	8.7	
SAN MATEO ESTATES	322,163	5.6	449,714	7.5	
RIVER VILLAS	38,449	6.8	47,070	8.7	
RPUMA	775	6.3	775	8.2	

# Critical Community and Emergency Facilities

### High Tide and Sea Level Rise Events

Table C-62. Affordable Public Housing with flood depths (ft) and flood areas (sq. ft.) for high tide events: current, 2040, and 2070

Asset Type: Affordable Public Housing	High '	High Tide High Tide 2040 IH		High Tide 2070 IH		
Asset Name:	Flooded Area	Max Depth	Flooded Area	Max Depth	Flooded Area	Max Depth
	(sq. ft.)	(ft.)	(sq. ft.)	(ft.)	(sq. ft.)	(ft.)
Arc of Putnam County Group Home	689	1.3	1,453	2.7	3,272	4.6

Source: Florida Housing Data Clearinghouse, TBG Work Product

Table C-63. Health Care Facilities with flood depths (ft) and flood areas (sq. ft.) for high tide events: current, 2040, and 2070

Asset Type: H	ealth Care Facilities	High Tide		High Tide	2040 IH	High Tide 2070 IH	
Asset Name:		Flooded	Max Depth	Flooded Area	Max Depth	Flooded Area	Max Depth
		Area (sq. ft.)	(ft.)	(sq. ft.)	(ft.)	(sq. ft.)	(ft.)
LAKEWOOD N	IURSING CENTER	1,959	1.8	5,124	3.2	9,278	5.1

#### Rainfall

Table C-64. Affordable Public Housing with flood depths (ft) and flood areas (sq. ft.) for 100-yr rain events: current and 2070

Asset Type: Affordable Public Housing	Rainfall '	100-yr	Rainfall 100-yr 2070		
Asset Name:	Flooded Area (sq. ft.)	Max Depth (ft.)	Flooded Area (sq. ft.)	Max Depth (ft.)	
Smith Thomas Inc.	34,850	7.9	27,125	8.3	
Arc of Putnam County Group Home	2,200	3.6	2,575	4.0	
John's Place	46,850	2.4	48,375	2.7	

Source: Florida Housing Data Clearinghouse, TBG Work Product

Table C-65. Community Centers with flood depths (ft) and flood areas (sq. ft.) for 100-yr rain events: current and 2070

Asset Type: Community Centers	Rainfall 100-yr		Rainfall 100-yr 2070		
Asset Name:	Flooded Area (sq. ft.)	Max Depth (ft.)	Flooded Area (sq. ft.)	Max Depth (ft.)	
BOSTWICK COMMUNITY CENTER			375	0.2	
BOSTWICK PUBLIC LIBRARY			50	0.6	

Source: FDEM, TBG Work Product

Table C-66. Correctional Facilities with flood depths (ft) and flood areas (sq. ft.) for 100-yr rain events: current and 2070

Asset Type: Correctional Facilities	Rainfall 100-yr		Rainfall 100-yr 2070		
Asset Name:	Flooded Area (sq. ft.)	Max Depth (ft.)	Flooded Area (sq. ft.)	Max Depth (ft.)	
PUTNAM COUNTY JAIL	654,150	26.8	682,075	27.1	
PUTNAM CORRECTIONAL INSTITUTION	448,525	10.1	490,400	10.4	

Source: FDEM, TBG Work Product

Table C-67. Emergency Medical Service Facilities with flood depths (ft) and flood areas (sq. ft.) for 100-yr rain events: current and 2070

Asset Type: Emergency Medical Facilities	Rainfall 100-yr		Rainfall 100-yr 2070	
Asset Name:	Flooded Area (sq. ft.)	Max Depth (ft.)	Flooded Area (sq. ft.)	Max Depth (ft.)
PUTNAM COUNTY EMS ST 81/85 - MAIN STATION	654,150	26.8	682,075	27.1

Table C-68. Fire Stations with flood depths (ft) and flood areas (sq. ft.) for 100-yr rain events: current and 2070

Asset Type: Fire Stations	Rainfall 100-yr		Rainfall 100-yr 2070	
Asset Name:	Flooded Area (sq. ft.)	Max Depth (ft.)	Flooded Area (sq. ft.)	Max Depth (ft.)
PALATKA FD ST 11	654,150	26.8	682,075	27.1

Table C-69. Health Care Facilities with flood depths (ft) and flood areas (sq. ft.) for 100-yr rain events: current and 2070

Asset Type: Health Care Facilities	Rainfall 100-yr		Rainfall 100-yr 2070	
Asset Name:	Flooded Area (sq. ft.)	Max Depth (ft.)	Flooded Area (sq. ft.)	Max Depth (ft.)
LAKEWOOD NURSING CENTER	9,500	5.4	10,325	5.8
FIVE OAKS REST HOME	78,600	7.6	86,700	7.9
APPLE HOUSE II	229,650	4.9	174,925	5.2

Source: FDEM, TBG Work Product

Table C-70. Risk Shelter Inventory with flood depths (ft) and flood areas (sq. ft.) for 100-yr rain events: current and 2070

Asset Type: Risk Shelter Inventory	Rainfall 100-yr		Rainfall 100-yr 2070	
Asset Name:	Flooded Area (sq. ft.)	Max Depth (ft.)	Flooded Area (sq. ft.)	Max Depth (ft.)
Middleton Burney ES	2,400	1.9	3,825	2.3

Source: FDEM, TBG Work Product

Table C-71. Schools with flood depths (ft) and flood areas (sq. ft.) for 100-yr rain events: current and 2070

Asset Type: Schools	Rainfall	Rainfall 100-yr		Rainfall 100-yr 2070		
Asset Name:	Flooded Area (sq. ft.)	Max Depth (ft.)	Flooded Area (sq. ft.)	Max Depth (ft.)		
STONESOUP SCHOOL	942,950	4.4	964,825	4.7		
PENTECOSTAL REVIVAL ACADEMY	31,000	3.7	31,575	4.1		
CHILDRENS READING CENTER	309,225	2.9	334,125	3.2		
MELLON LEARNING CENTER	100	0.5	300	0.9		

Table C-72. State Government Facilities with flood depths (ft) and flood areas (sq. ft.) for 100-yr rain events: current and 2070

Asset Type: State Government Facilities	Rainfall 100-yr		Rainfall 100-yr 2070	
Asset Name:	Flooded Area (sq. ft.)	Max Depth (ft.)	Flooded Area (sq. ft.)	Max Depth (ft.)
PUTNAM CORRECTIONAL INSTITUTION	448,525	10.1	490,400	10.4

### Surge and Sea Level Rise Events

Table C-73. Affordable Public Housing with flood depths (ft) and flood areas (sq. ft.) for 100-yr surge events: 2040 and 2070 SLR - Intermediate High

Asset Type: Affordable Public Housing	2040 IH with 100-yr surge		2070 IH with 100-yr surge	
Asset Name:	Flooded Area (sq. ft.)	Max Depth (ft.)	Flooded Area (sq. ft.)	Max Depth (ft.)
Arc of Putnam County Group Home	3,907	5.5	4,650	7.4

Source: Florida Housing Data Clearinghouse, TBG Work Product

Table C-74. Emergency Medical Service Facilities with flood depths (ft) and flood areas (sq. ft.) for 100-yr surge events: 2040 and 2070 SLR - Intermediate High

Asset Type: Emergency Medical Facilities	2040 IH with 100-yr surge		2070 IH with 100-yr surge		
Asset Name:	Flooded Area (sq. ft.)	Max Depth (ft.)	Flooded Area (sq. ft.)	Max Depth (ft.)	
PUTNAM COUNTY EMS ST 81/85 - MAIN STATION			492,651	3.5	

Source: FDEM, TBG Work Product

Table C-75. Fire Stations with flood depths (ft) and flood areas (sq. ft.) for 100-yr surge events: 2040 and 2070 SLR - Intermediate High

Asset Type: Fire Stations	2040 IH with 100-yr surge		2070 IH with 100-yr surge	
Asset Name:	Flooded Area (sq. ft.)	Max Depth (ft.)	Flooded Area (sq. ft.)	Max Depth (ft.)
PALATKA FD ST 11			492,651	3.5

Source: FDEM, TBG Work Product

Table C-76. Health Care Facilities with flood depths (ft) and flood areas (sq. ft.) for 100-yr surge events: 2040 and 2070 SLR - Intermediate High

Asset Type: Health Care Facilities	2040 IH with 100-yr surge		2070 IH with 100-yr surge	
Asset Name:	Flooded Area (sq. ft.)	Max Depth (ft.)	Flooded Area (sq. ft.)	Max Depth (ft.)
LAKEWOOD NURSING CENTER	11,367	6.0	16,996	7.9

Table C-77. Law Enforcement Facilities with flood depths (ft) and flood areas (sq. ft.) for 100-yr surge events: 2040 and 2070 SLR - Intermediate High

Asset Type: Law Enforcement Facilities	2040 IH with 100-yr surge		2070 IH with 100-yr surge	
Asset Name:	Flooded Area (sq. ft.)	Max Depth (ft.)	Flooded Area (sq. ft.)	Max Depth (ft.)
PUTNAM COUNTY SHERIFF DEPT HEADQUARTERS			492,651	3.5

Table C-78. State Government Facilities with flood depths (ft) and flood areas (sq. ft.) for 100-yr surge events: 2040 and 2070 SLR - Intermediate High

Asset Type: State Government Facilities	2040 IH with 100-yr surge		2070 IH with 100-yr surge	
Asset Name:	Flooded Area (sq. ft.)	Max Depth (ft.)	Flooded Area (sq. ft.)	Max Depth (ft.)
PUTNAM CORRECTIONAL INSTITUTION			409,468	9.7