Guana Tolomato Matanzas National Estuarine Research Reserve



National Estuarine Research Reserve System



LIST OF RESERVES

Great Lakes
1. Lake Superior, Wisconsin
2. Old Woman Creek, Ohio

Northeast
3. Wells, Maine
4. Great Bay, New Hampshire
5. Waquoit Bay, Massachusetts
6. Narragansett Bay, Rhode Island
7. Connecticut (*Proposed*)

Mid-Atlantic
8. Hudson River, New York
9. Jacques Cousteau, New Jersey
10. Delaware
11. Chesapeake Bay, Maryland
12. Chesapeake Bay, Virginia

Southeast
13. North Carolina
14. North Inlet-Winyah Bay, South Carolina
15. ACE Basin, South Carolina
16. Sapelo Island, Georgia
17. Guana Tolomato Matanzas, Florida

Gulf of Mexico
18. Rookery Bay, Florida
19. Apalachicola, Florida
20. Weeks Bay, Alabama
21. Grand Bay, Mississippi
22. Mission-Aransas, Texas

West
23. Tijuana River, California
24. Elkhorn Slough, California
25. San Francisco Bay, California
26. South Slough, Oregon
27. Padilla Bay, Washington
28. Kachemak Bay, Alaska

Pacific
29. He'eia, Hawai'i

Caribbean
30. Jobos Bay, Puerto Rico

Managing Agencies





Partners in Conservation





















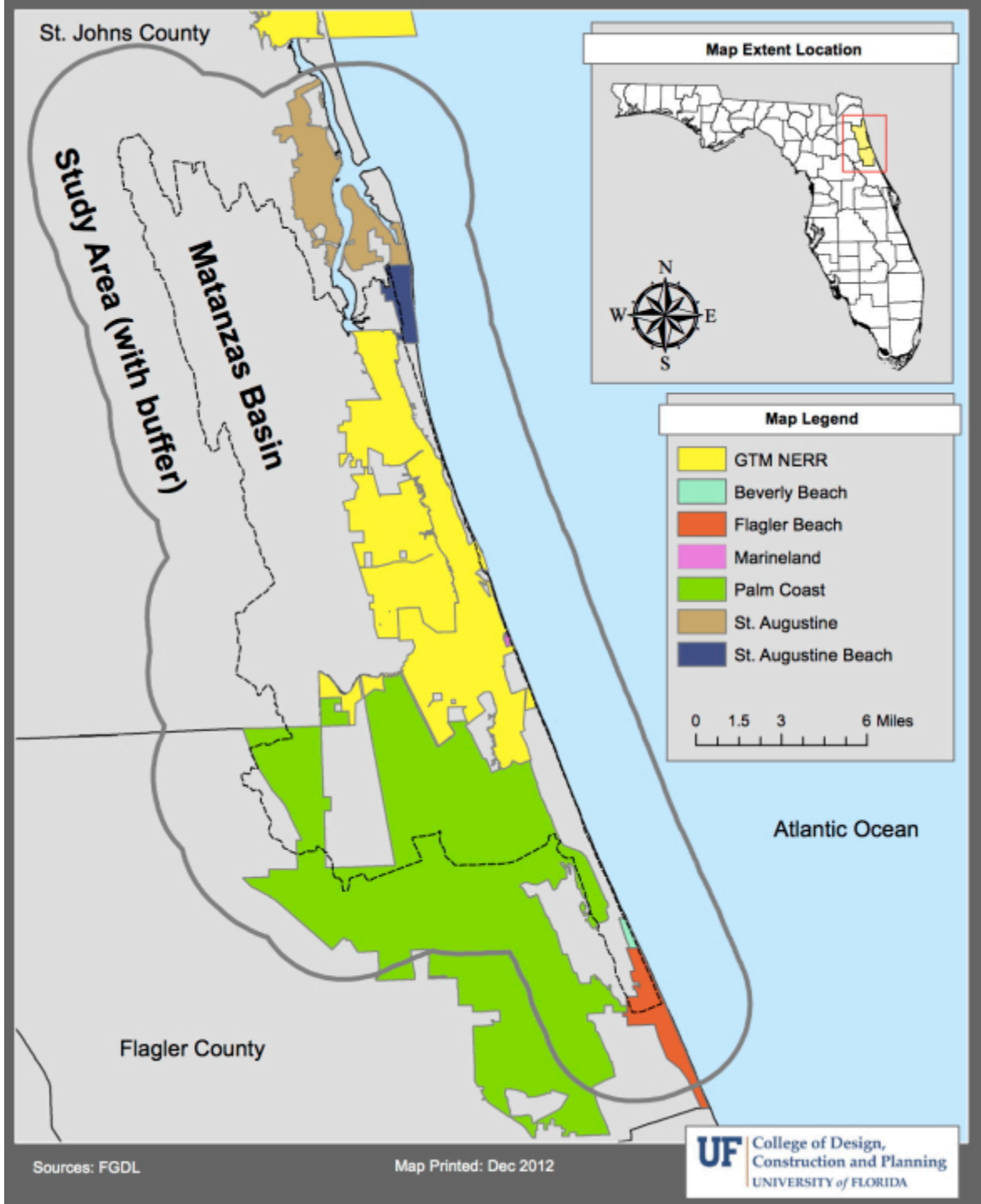




Planning for Sea Level Rise in the Matanzas Basin

UF UNIVERSITY of FLORIDA

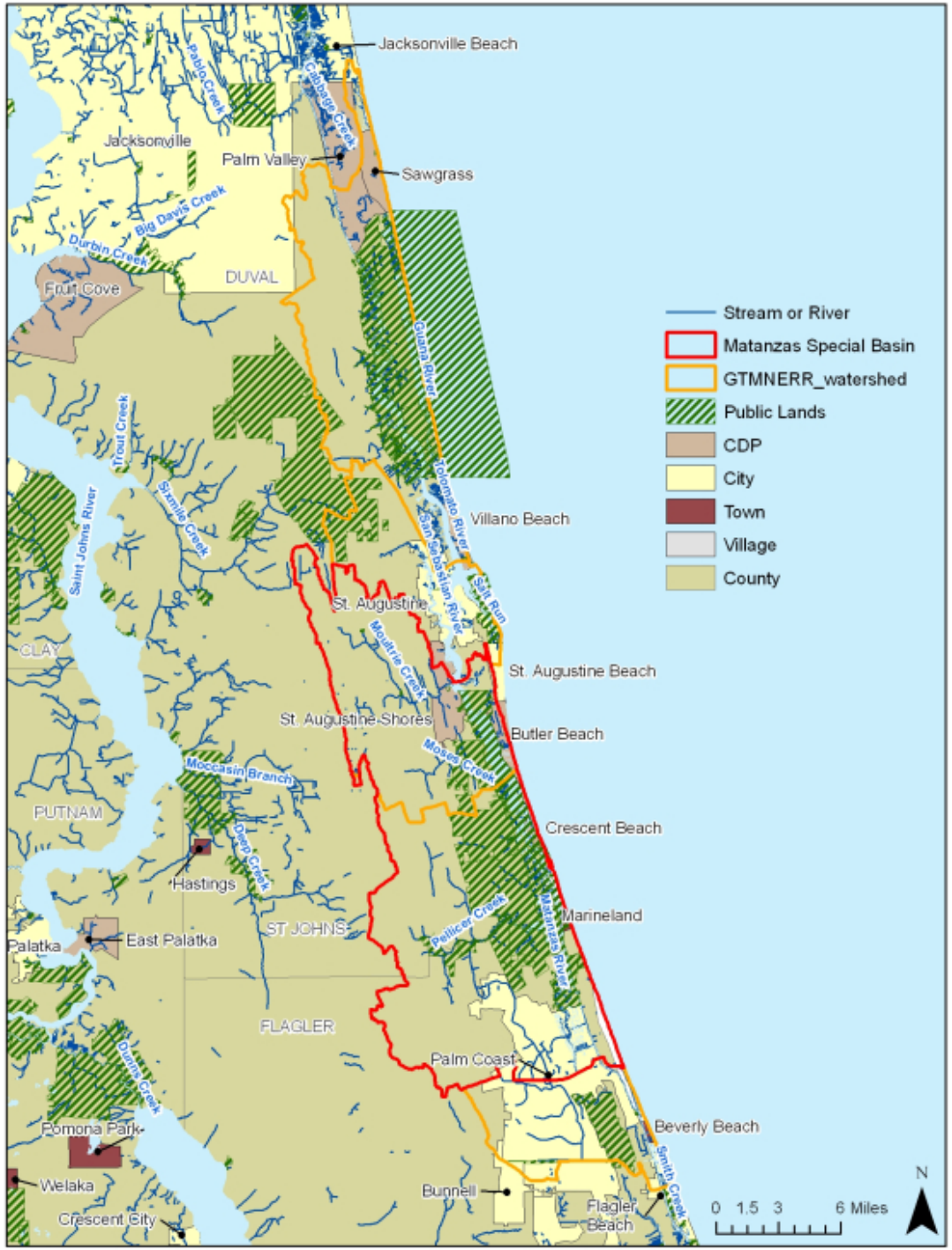
GTM RESEARCH RESERVE



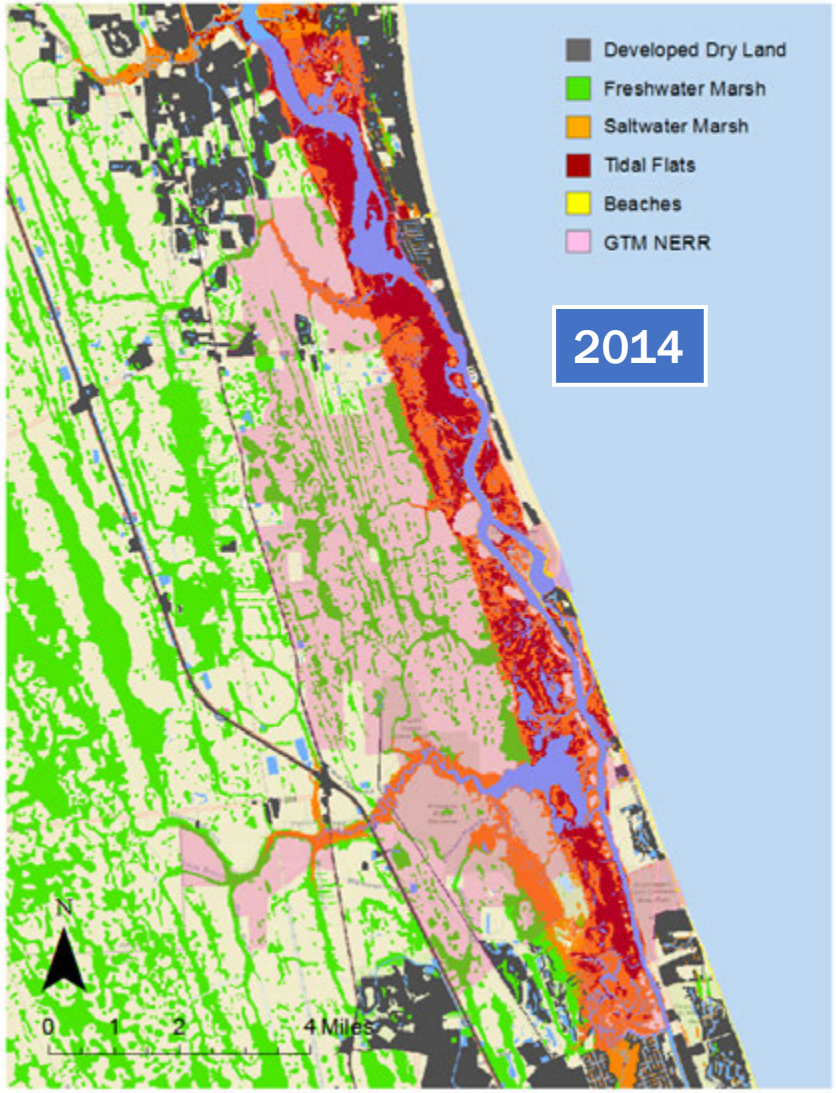
Planning for Sea Level Rise in the Matanzas Basin

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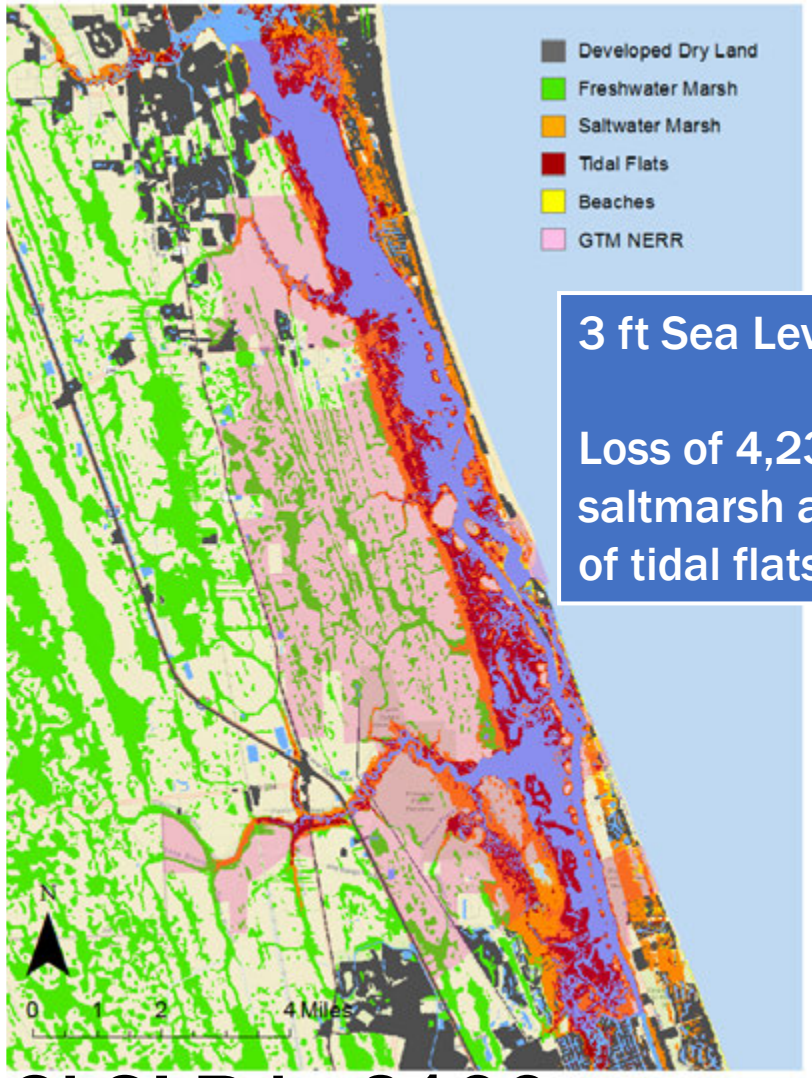
GTM RESEARCH RESERVE



Sea Level Affecting Marshes Model



2014 Conditions



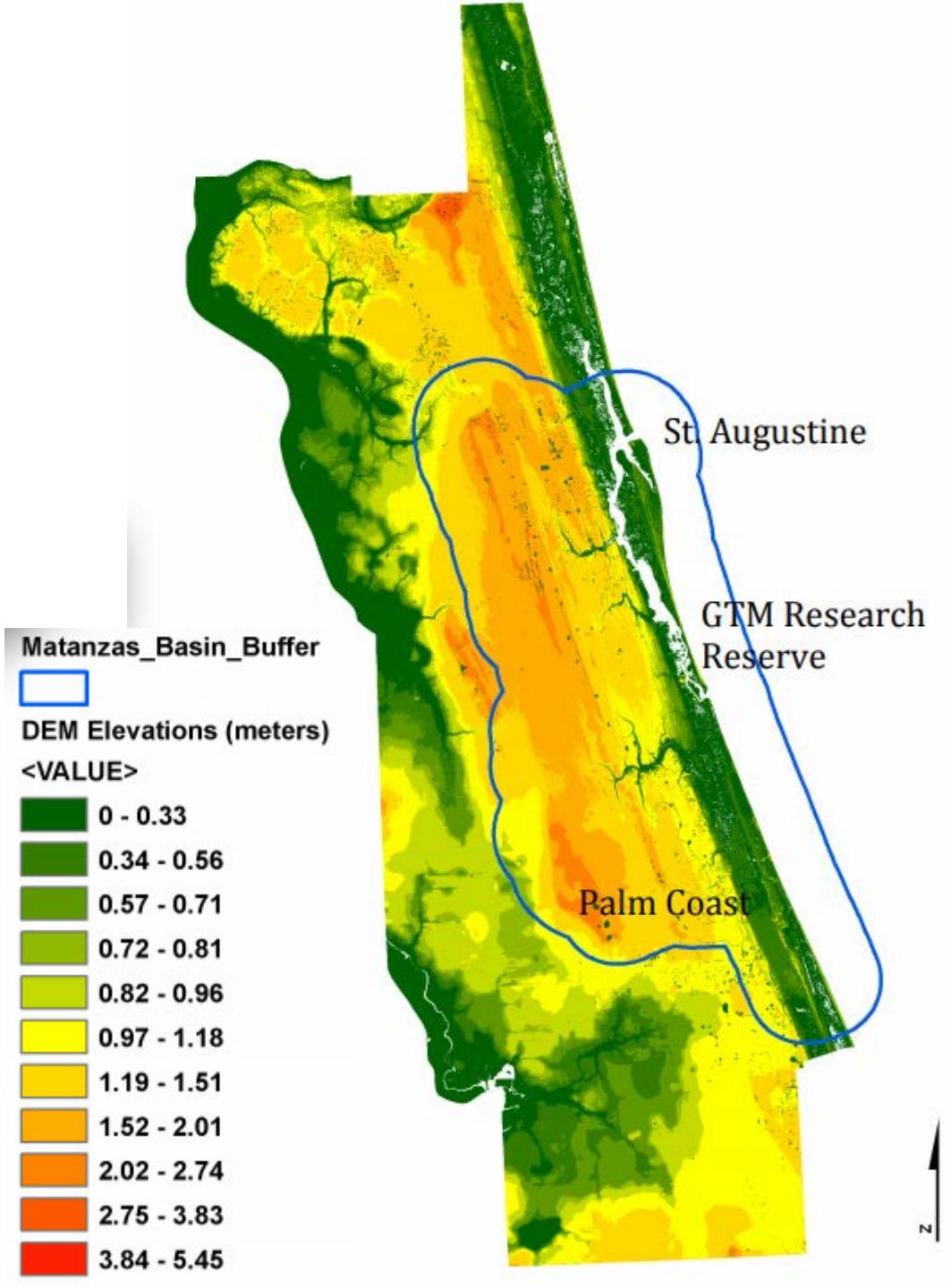
3’ SLR in 2100

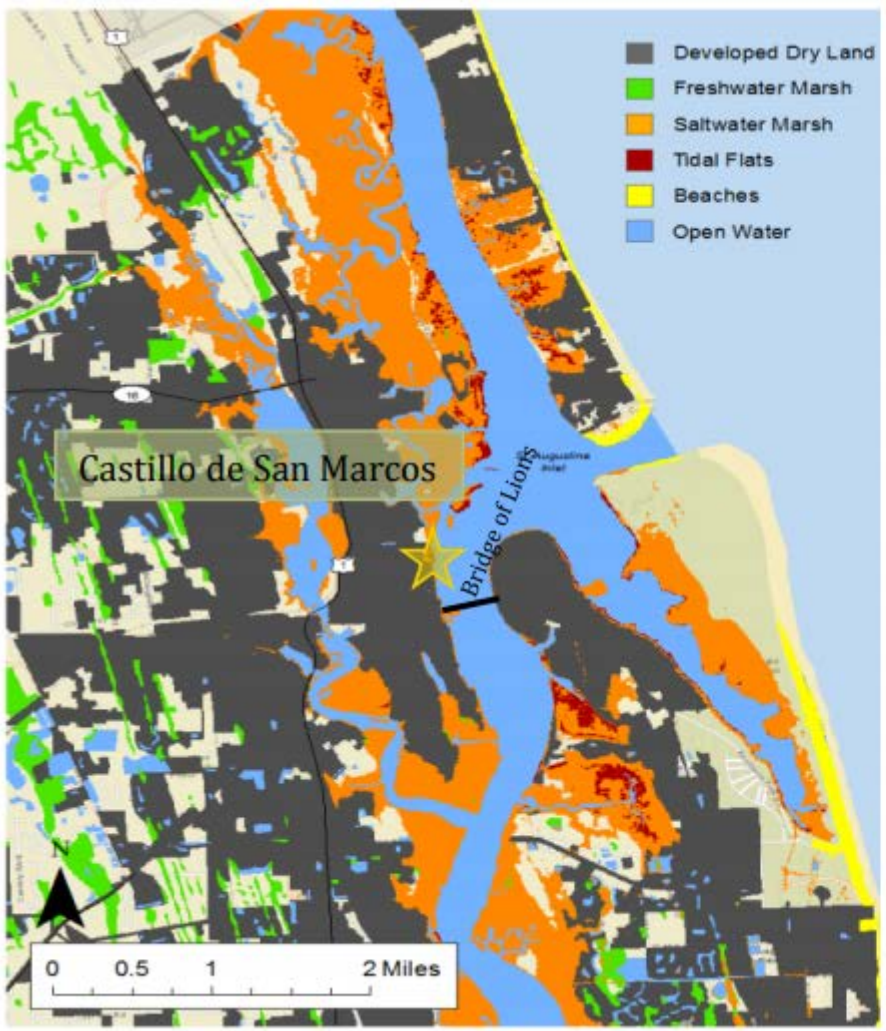
3 ft Sea Level Rise

Loss of 4,230 acres of saltmarsh and 790 acres of tidal flats

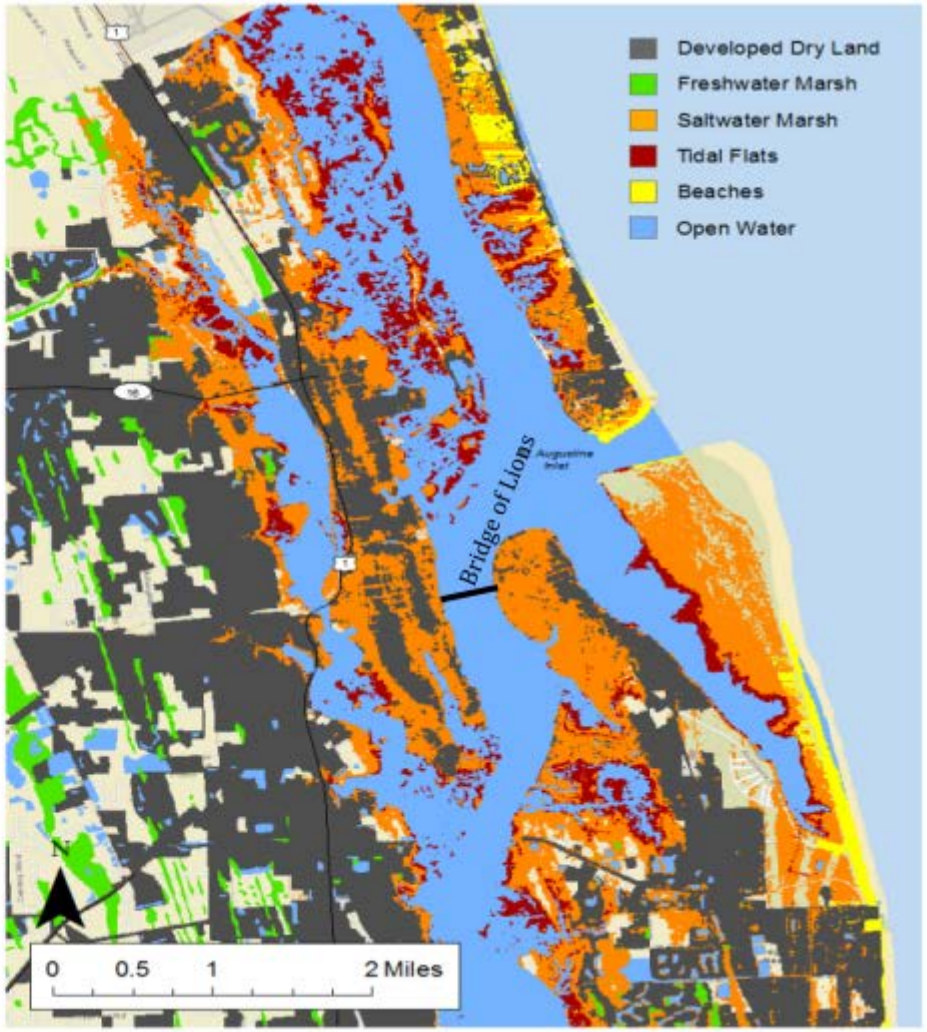
Vulnerabilities

Land Use	Parcels Affected	Acres Affected
Residential	13,362	2,456
Vacant Residential	4,518	1,637
Commercial	1,446	609
Vacant Commercial	310	268
Government	641	1,140

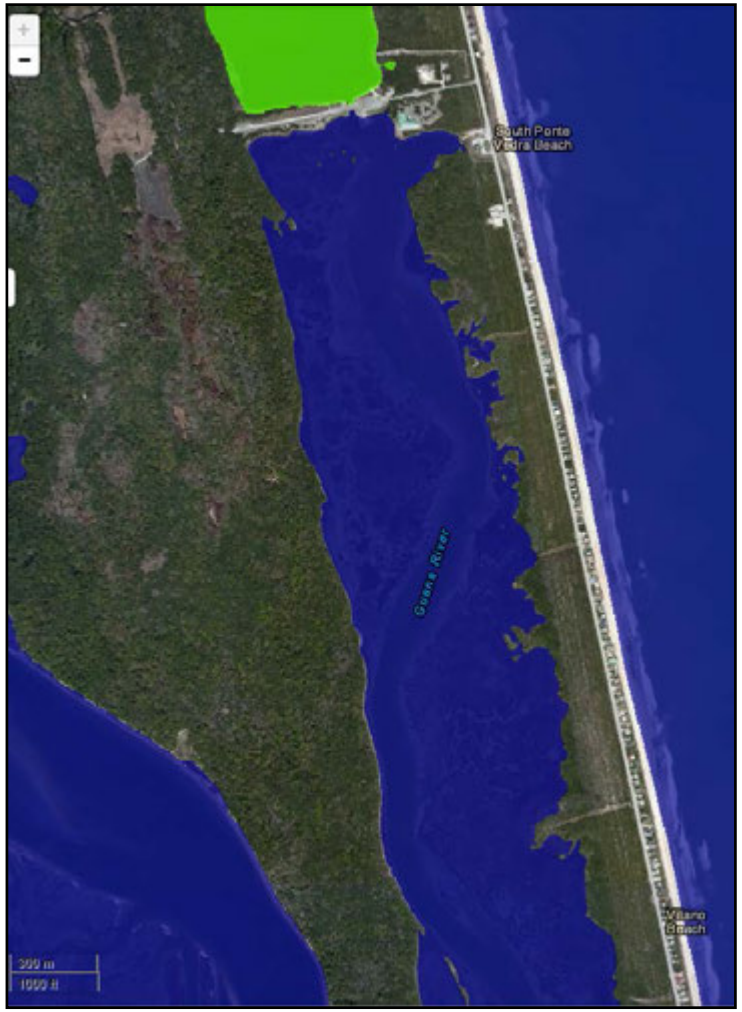




2014 Conditions



3’ SLR in 2100



Current



2 feet SLR



5 feet SLR

Guana Dam, South Ponte Vedra

Water Depth

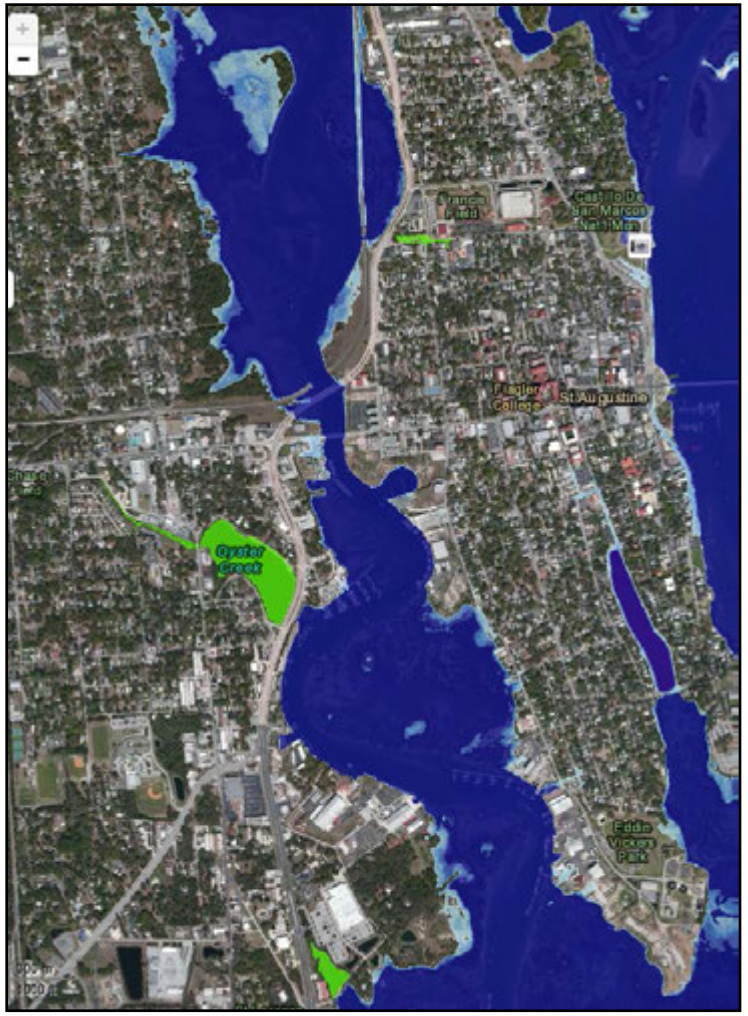
Low-lying Areas

Water level = Mean Higher High Water

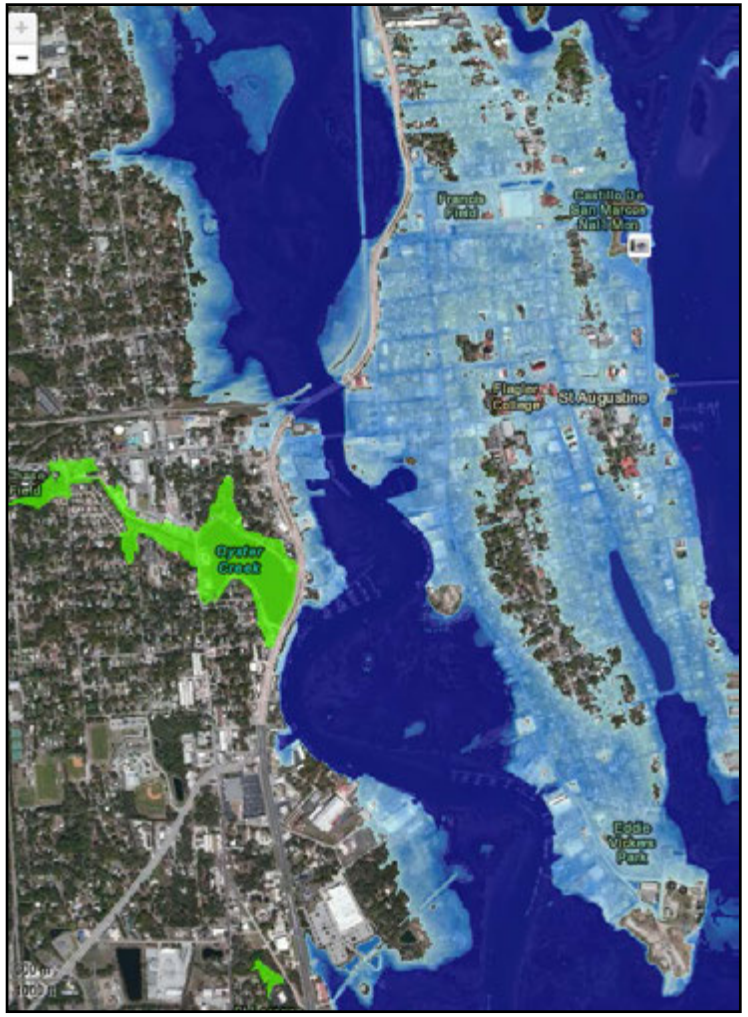
300 1000 ft



Current



2 feet SLR



5 feet SLR

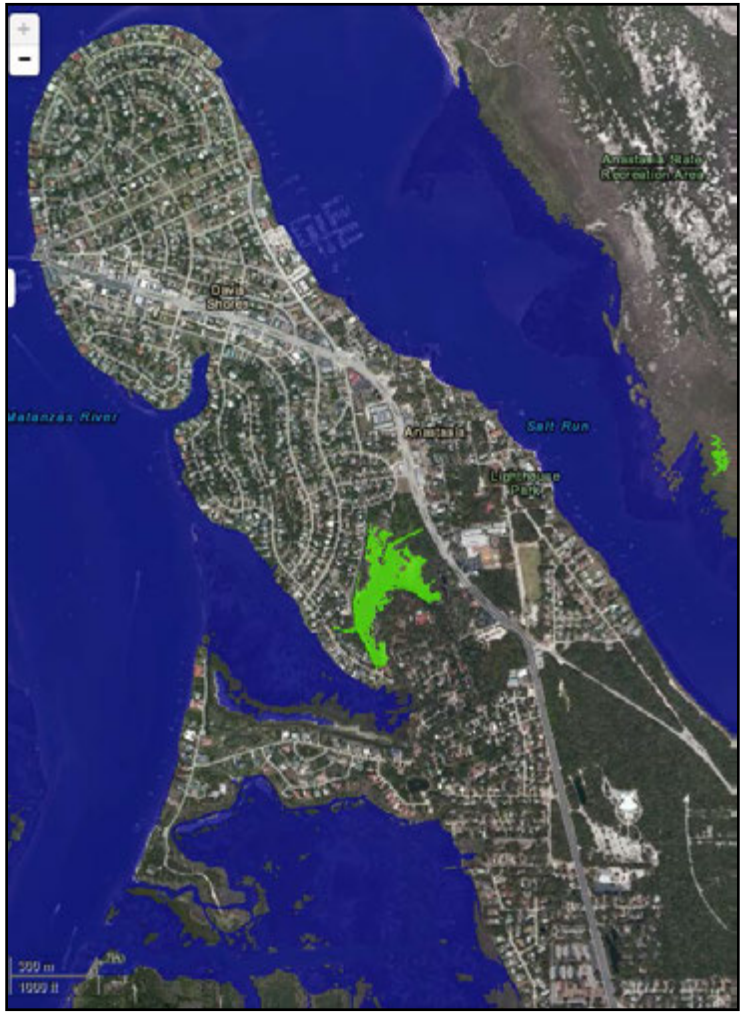
Downtown & West St. Augustine

Water Depth

Low-lying Areas

Water level = Mean Higher High Water

300 0 1000 ft



Current



2 feet SLR



5 feet SLR

Davis Shores, Salt Run

Water Depth

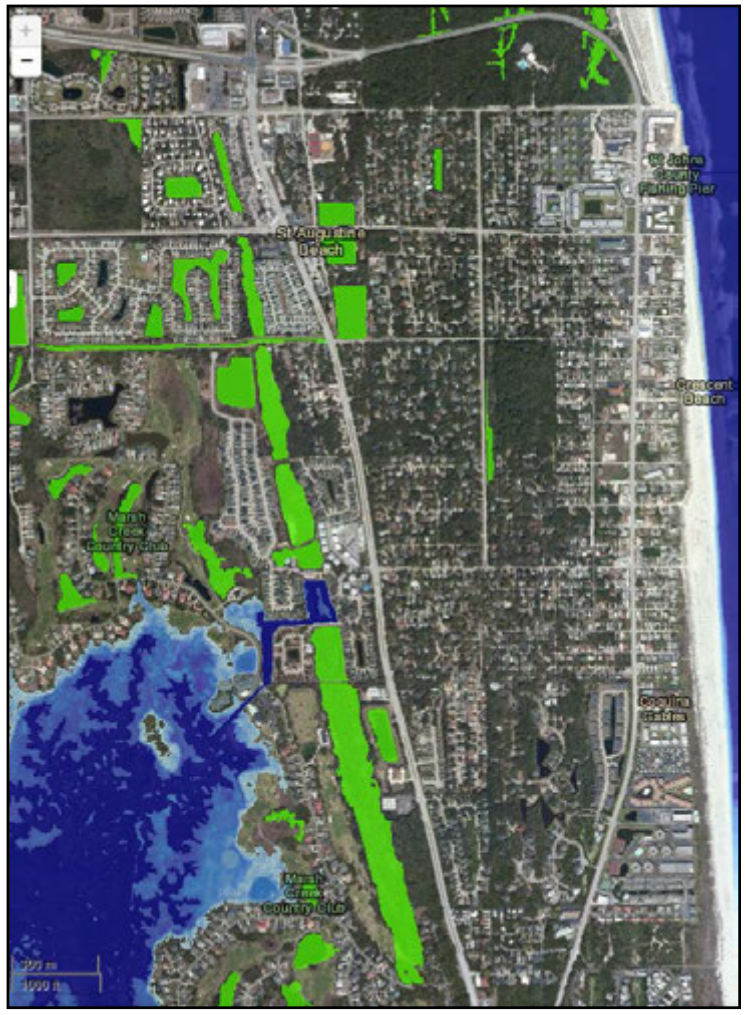
Low-lying Areas

Water level = Mean Higher High Water

300 m
1000 ft



Current



2 feet SLR



5 feet SLR

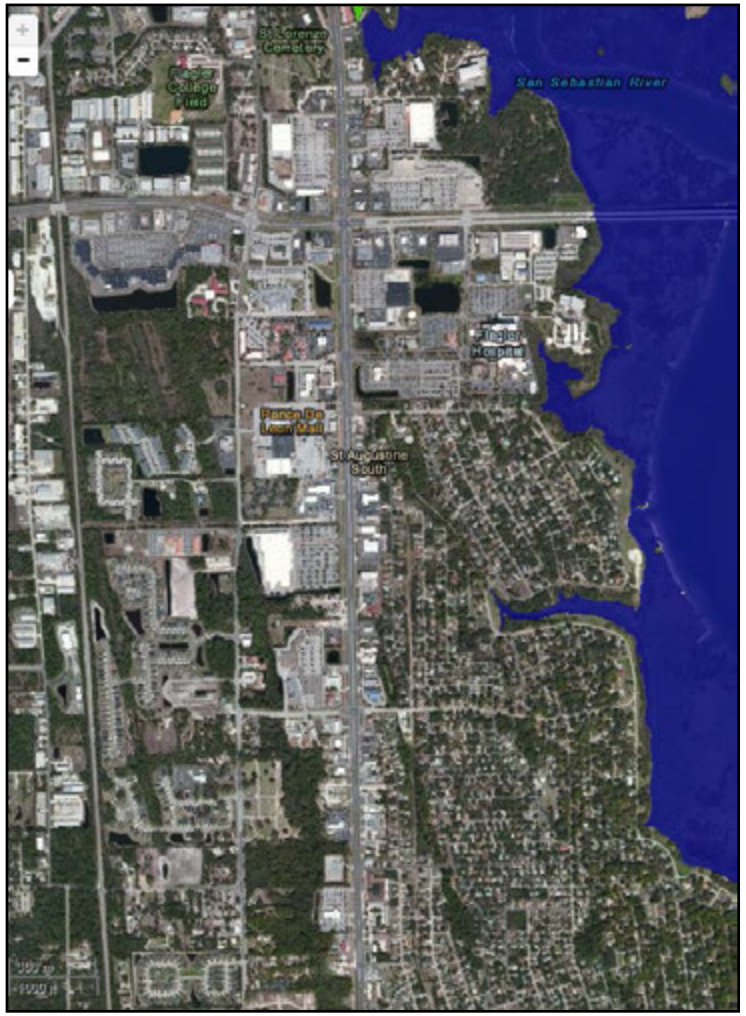
St. Augustine Beach

Water Depth

Low-lying Areas

Water level = Mean Higher High Water

300 m
1000 ft



Current



2 feet SLR



5 feet SLR

St. Augustine South

Water Depth

Low-lying Areas

Water level = Mean Higher High Water

300 m
1000 ft

Cultural & Historic Resources





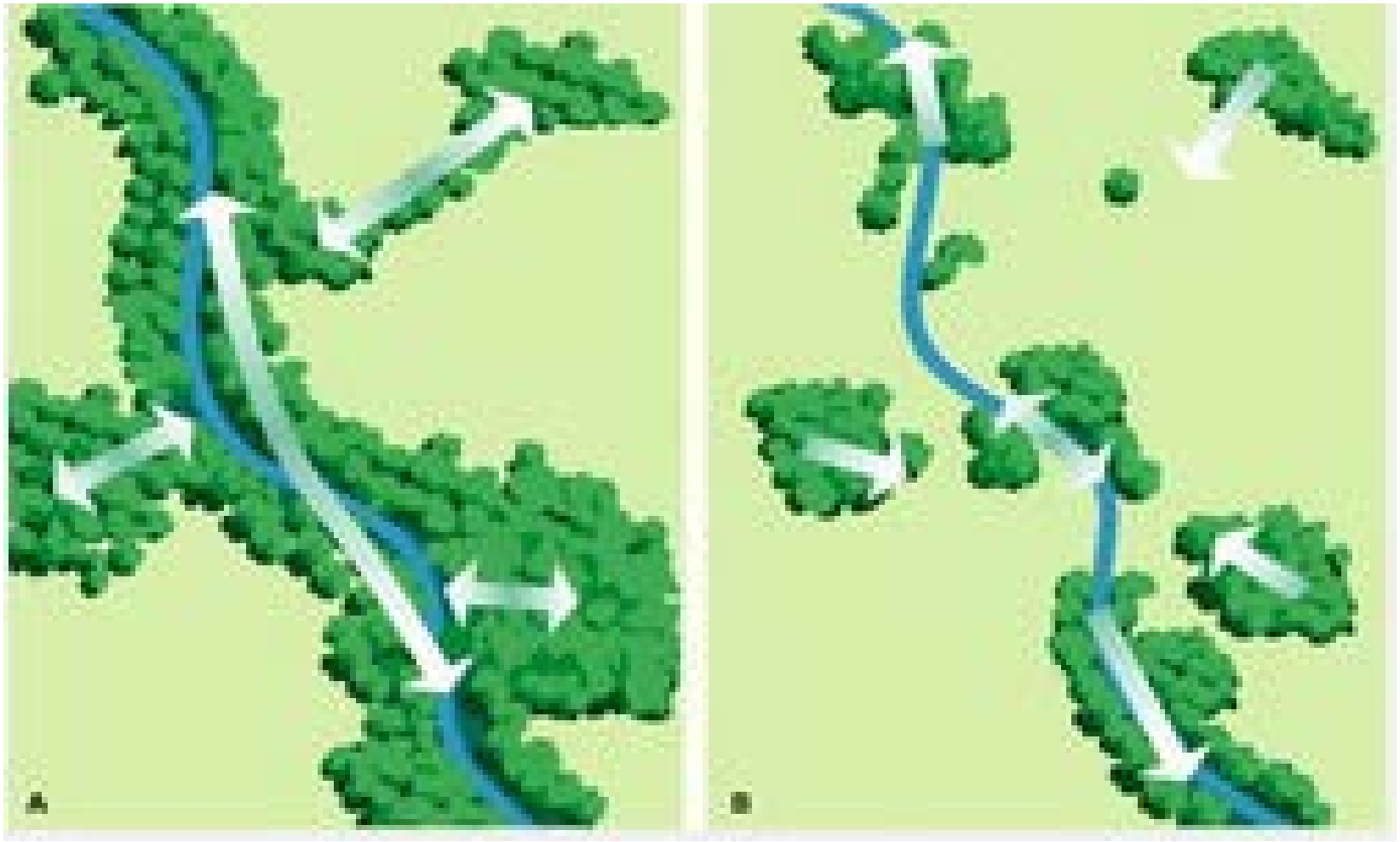


Infrastructure & Future Development





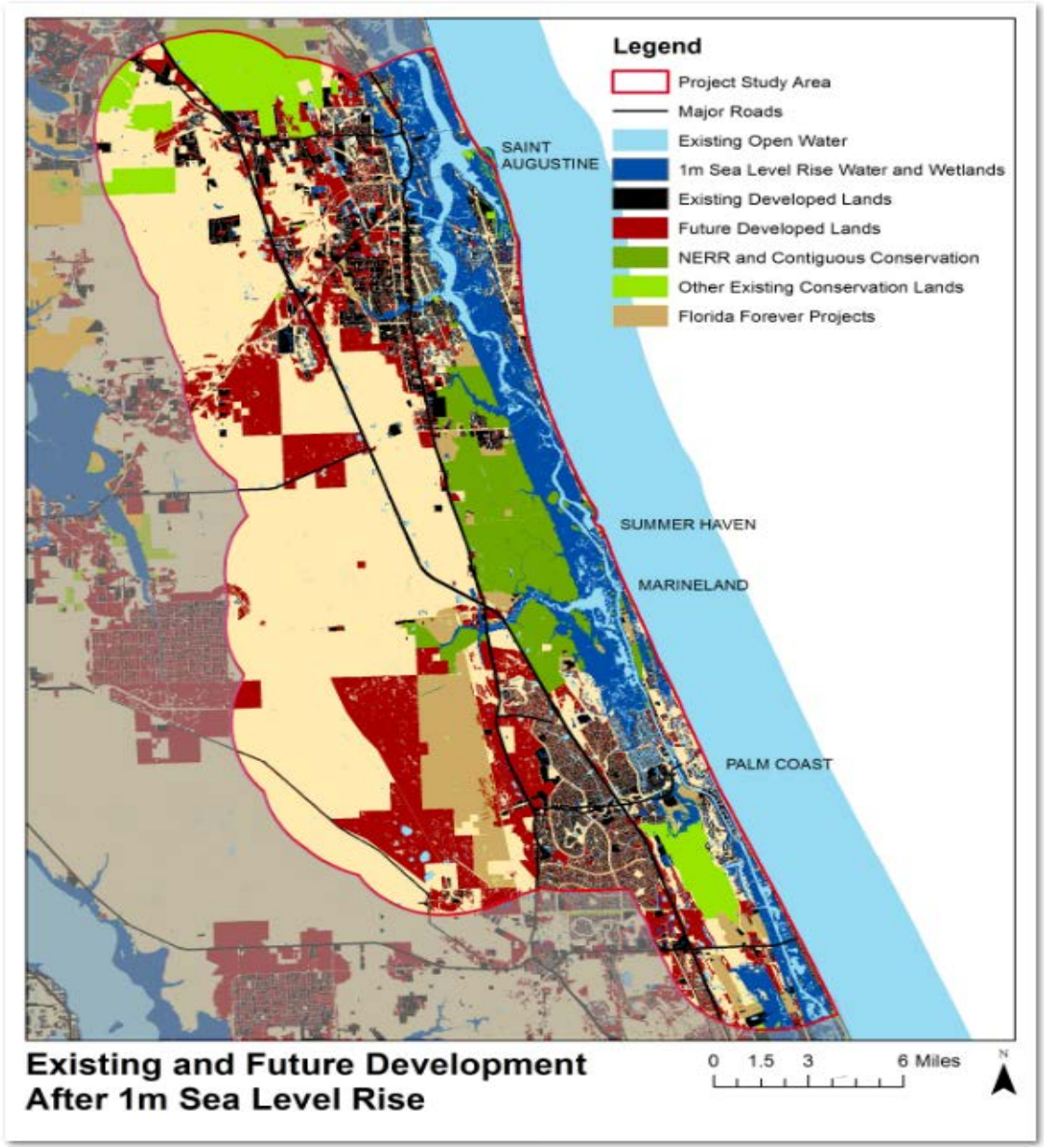
Infrastructure & Future Development



Ecological Systems

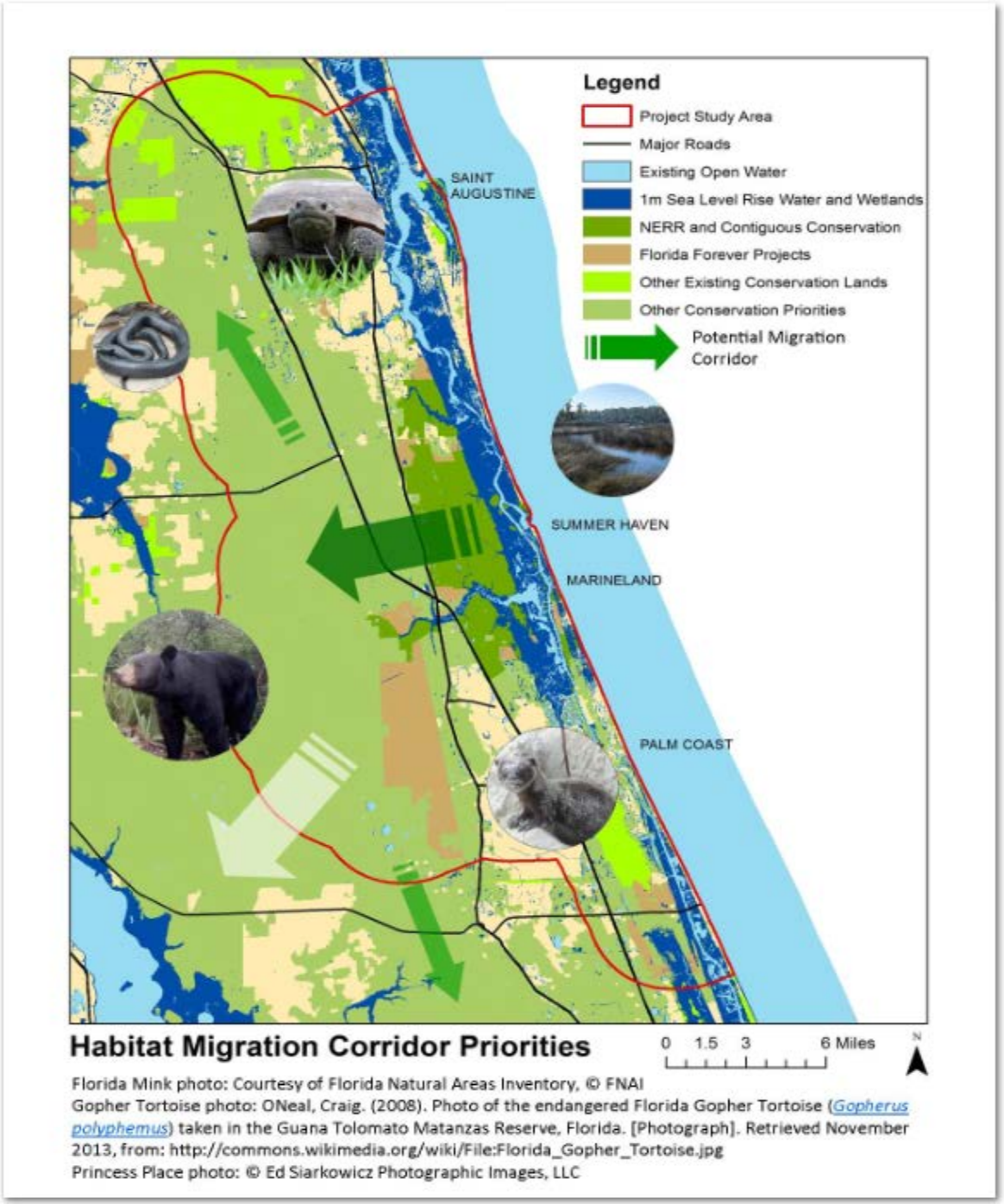






Existing and Future Development After 1m Sea Level Rise

Ecological Systems



Most important features…

- Habitats for wildlife
- Water filtration and quality
- Salt marshes
- The estuary
- Beaches, recreation, tourism
- Current development and infrastructure
- Historic and cultural resources



What was learned…

- Shoreline erosion and storm surge are impacting local residents directly
- Lack of freshwater resources
- Loss of wildlife habitat



What was learned…

- Policy reform
- Education and awareness
- Willingness to acknowledge SLR and adapt
- Insurance reform



www.planningmatanzas.org

- Final project report
- Report appendices
- News articles
- Video of public workshop
- Posters
- Presentations
- Simulation videos
- SLR Adaptation Role Play Games
- Progress Reports
- Tools



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