

Resilient Apalachee

Final Sea-Level Rise Compendium for City of Carrabelle

Prepared by Apalachee Regional Planning Council



This final compendium was prepared as part of a grant awarded by the National Oceanic and Atmospheric Administration (NOAA) and overseen by Florida Department of Environmental Protection (DEP). The grant seeks to enable Florida communities to better assess and respond to the impacts of coastal flooding, including those exacerbated by sea level rise and climate change.

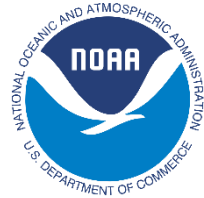


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Context and Purpose

City of Carrabelle, home to 2,776 residents (2016 ACS), hugs the St. George Sound and Carrabelle River. As such, it is both highly scenic and susceptible to coastal flooding. City of Carrabelle's Coastal Management Element, Objective 7.G.2 1.2 seeks to mitigate the impact of natural hazards by limiting residential density within the Coastal High Hazard Area, and commercial redevelopment within FEMA V-zones. A 2018 Vulnerability Analysis conducted for the City revealed numerous properties of various types to be at risk of an emerging flood hazard—sea level rise.

This project will fulfill Florida Resilient Coastlines Program (FRCP) Priority Area 4 by engaging individuals and entities to respond to site-level future effects of sea level rise. The City, assisted by the ARPC, will disseminate results of the Sea Level Rise Vulnerability Analysis produced with FY 17-18 FRCP assistance. Materials depicting sea level rise were mailed out to properties within the scope of the hazard. Property owners and businesses were engaged through public information seminars that delved into the hazard and addressed adaptation options. The intended outcome is that governmental entities, residents, and business will be more familiar with and prepared to adapt to sea level rise and coastal flooding hazards.

The purpose of this compendium is to provide the City of Carrabelle with a guidebook to assist in preparing for and dealing with the effects of sea level rise in the community. This document will review the Vulnerability Assessment completed in 2018, review the environmental effects of sea level rise, and introduce adaptation and implementation strategies. Additionally, there will be an extensive list of additional resources that the City of Carrabelle could utilize in the future.

Vulnerability Assessment

During Year 1 of City of Carrabelle's Florida Resilient Coastlines Program (FRCP) grant, a vulnerability assessment was conducted to determine the city's vulnerability to sea-level rise and flood-related events, such as storm surge as exacerbated by sea-level rise.

In order to conduct the vulnerability assessment, geospatial information systems (GIS) was utilized to map Carrabelle's exposure to flooding in certain simulated scenarios, namely Mean Higher High Water (MHHW), Stillwater Storm Surge, and Storm Surge. Maps of Carrabelle's exposure to flooding with one, two, and three feet of sea-level rise was also simulated. The mapped results of these simulations are provided on the following pages.

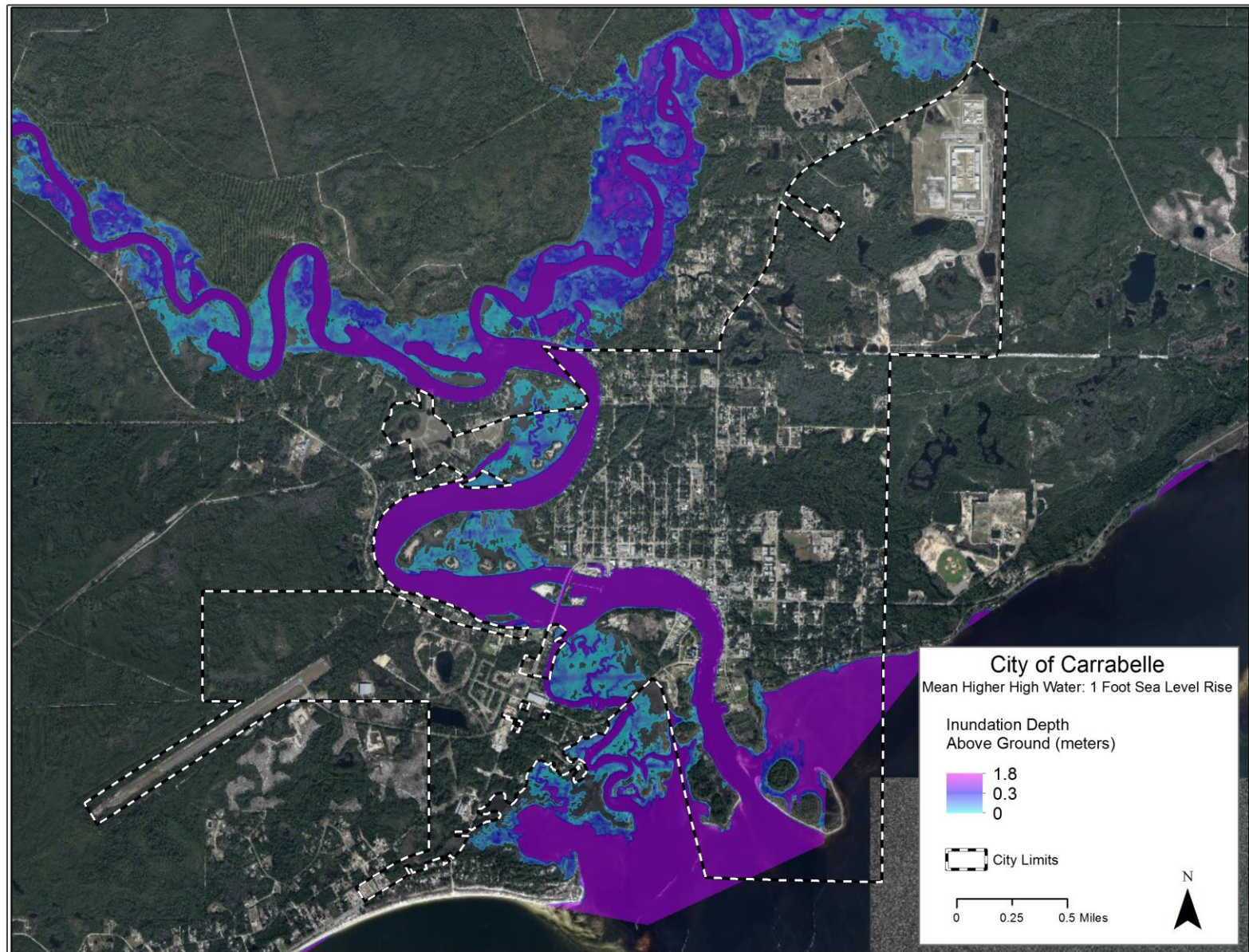


Figure 1. Mean Higher High Water

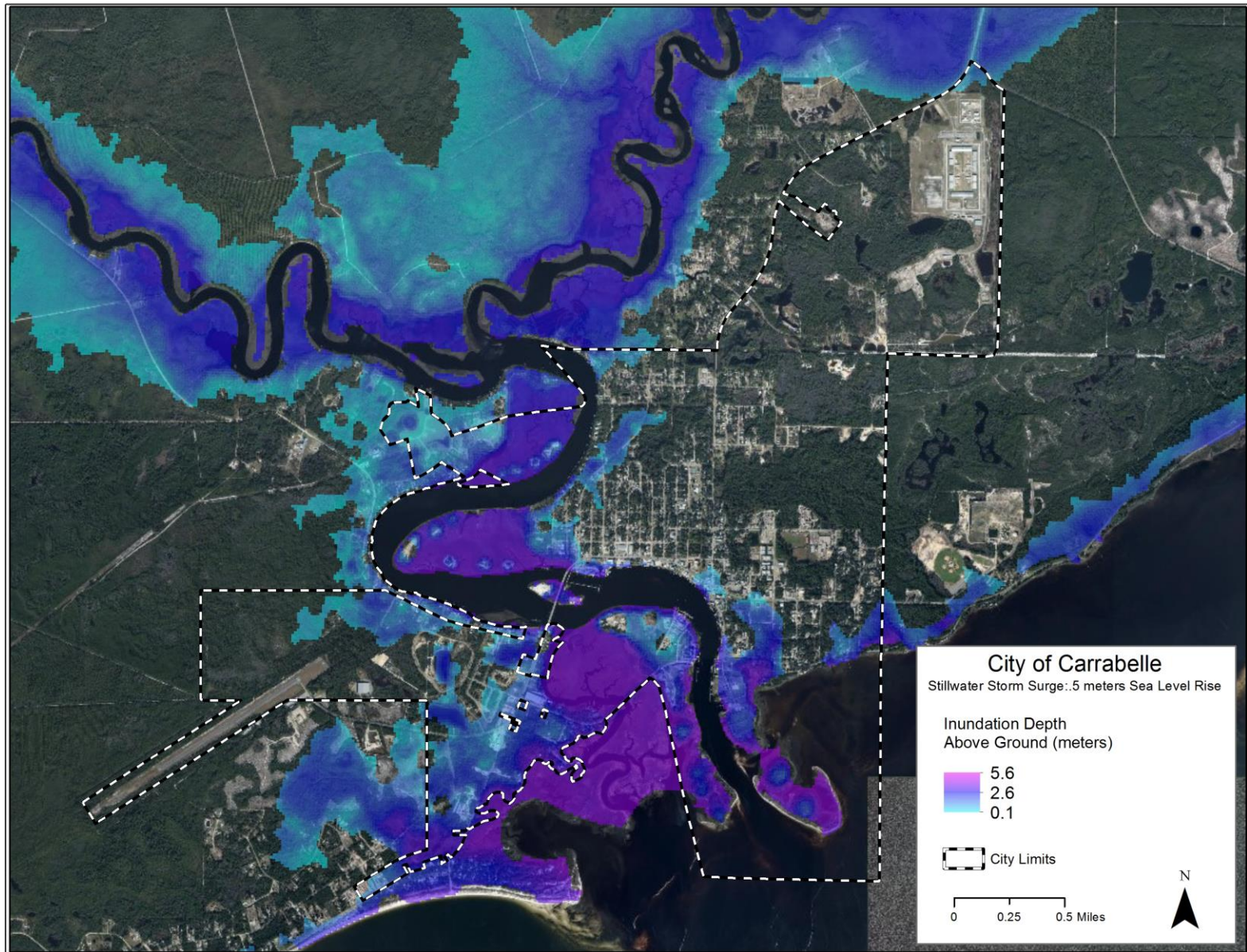


Figure 2. Stillwater Storm Surge

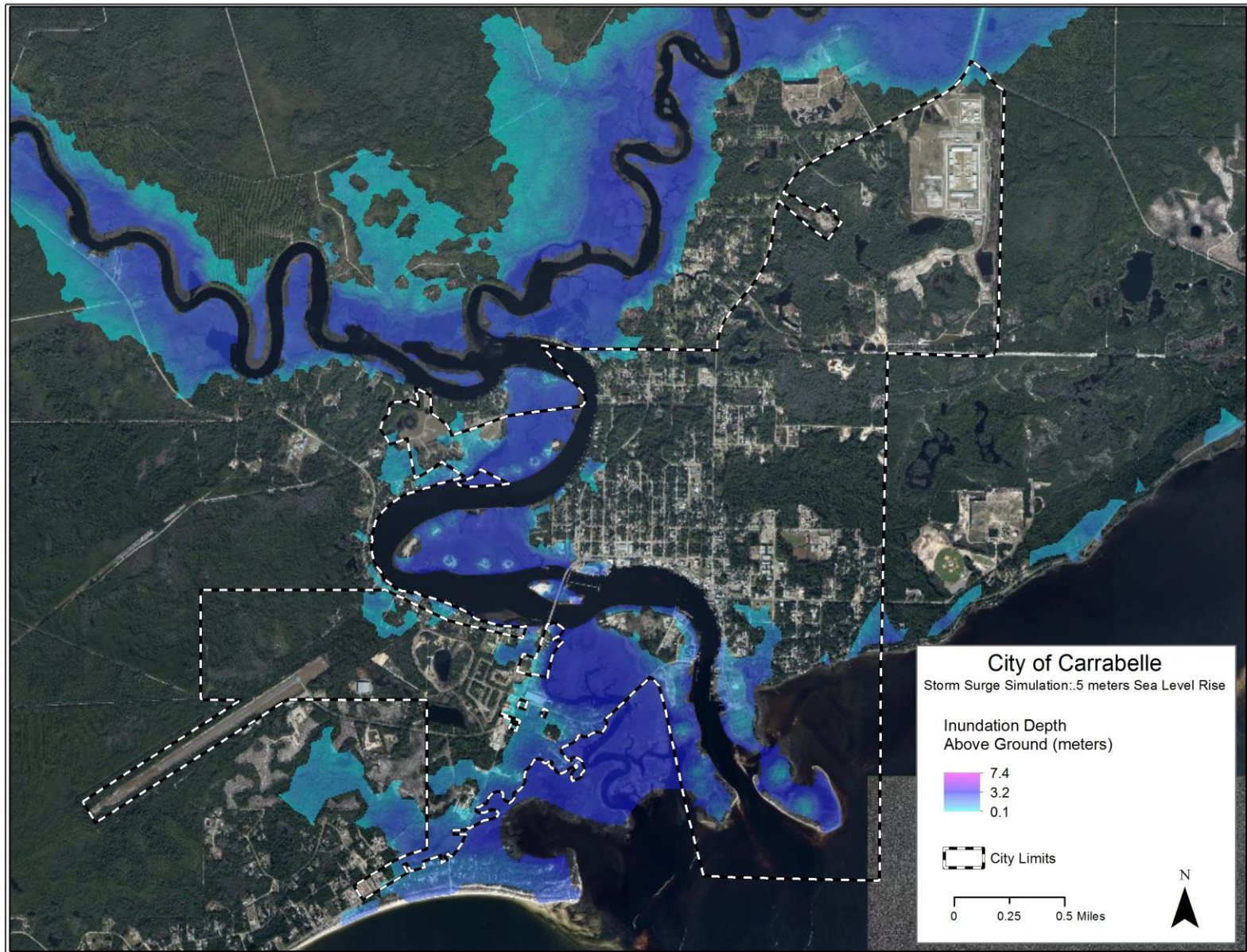


Figure 3. Storm Surge

Sea Level Rise along the Gulf coast is currently projected to occur in numerous ways: flooding formerly dry man-made environments, converting near shore estuarine systems to open water, causing a recession and possible disappearance of near shore wetlands, and worsening damages to natural and manmade systems that result from tropical storms and hurricanes. To complete the vulnerability assessment of projected sea level changes in year 1, ARPC obtained data from the following data sets from NOAA:

- Sea Level Rise, Inundation above Mean Higher High Water (ST_WFO_slr_depth_nft)
 - From the metadata for NOAA Sea Level Rise: “These data illustrate the scale of potential flooding, not the exact location, and do not account for erosion, subsidence, or future construction. Inundation is shown as it would appear during the highest high tides (excludes wind driven tides) with the sea level rise amount.”
- Storm Surge Maximum of Maximums (StormSurge_MOM_2100_Intlow_IDAG) and Stillwater Storm Surge (Stillwater_Reg2_Intlow_1pct_IDAG)
 - The stillwater and storm surge and storm surge simulation inundation predictions came from the results of the Ecological Effects of Sea Level Rise (EESLR) in the Northern Gulf of Mexico Project performed by Bilskie et. al. led by Louisiana State University. They worked with 5 different projections based on Carbon emission scenarios.
 - Their sea level rise prediction models incorporated: salt marsh evolution, shoreline and dune height change, and use and land cover, and sea level rise for the year 2100.
 - For the vulnerability assessment, the intermediate-low scenario was used. This scenario was used based on current emission trends. The intermediate-low scenario is defined by a half a meter rise in sea level (1.6 feet).
 - The storm surge simulation dataset was built by modeling the storm surge of ten historic storms.
 - The stillwater storm surge is the 1% chance flood scenario with half a meter of sea level rise.

The analysis looked at impacts to parcels, wells, wastewater facilities, solid water facilities, septic systems, schools, and land cover. Overall, the assessment showed that billions of dollars of assets may experience, or be impacted by, flooding.

Based on the results of the vulnerability assessment and the recent impact of Hurricane Michael, City of Carrabelle stakeholders outlined some potential adaptation action areas. Adaptation action areas are designated in the coastal management element of a comprehensive plan as areas that experience coastal flooding due to storm surge and/or high tide flooding, in addition to sea-level rise exposure, and targets these areas for the implementation of future adaptation strategies.

According to stakeholder input, proposed Adaptation Action Areas for the City of Carrabelle include:

- U.S. 98 along the coast
- Bridges that connect Timber Island to the rest of Carrabelle
- Gulf Avenue
- The bridge that crosses the Carrabelle River over Davis Island
- An area of frequent flooding around Ryan Drive

These Adaptation Action Areas are displayed in Figure 4 on the following page.

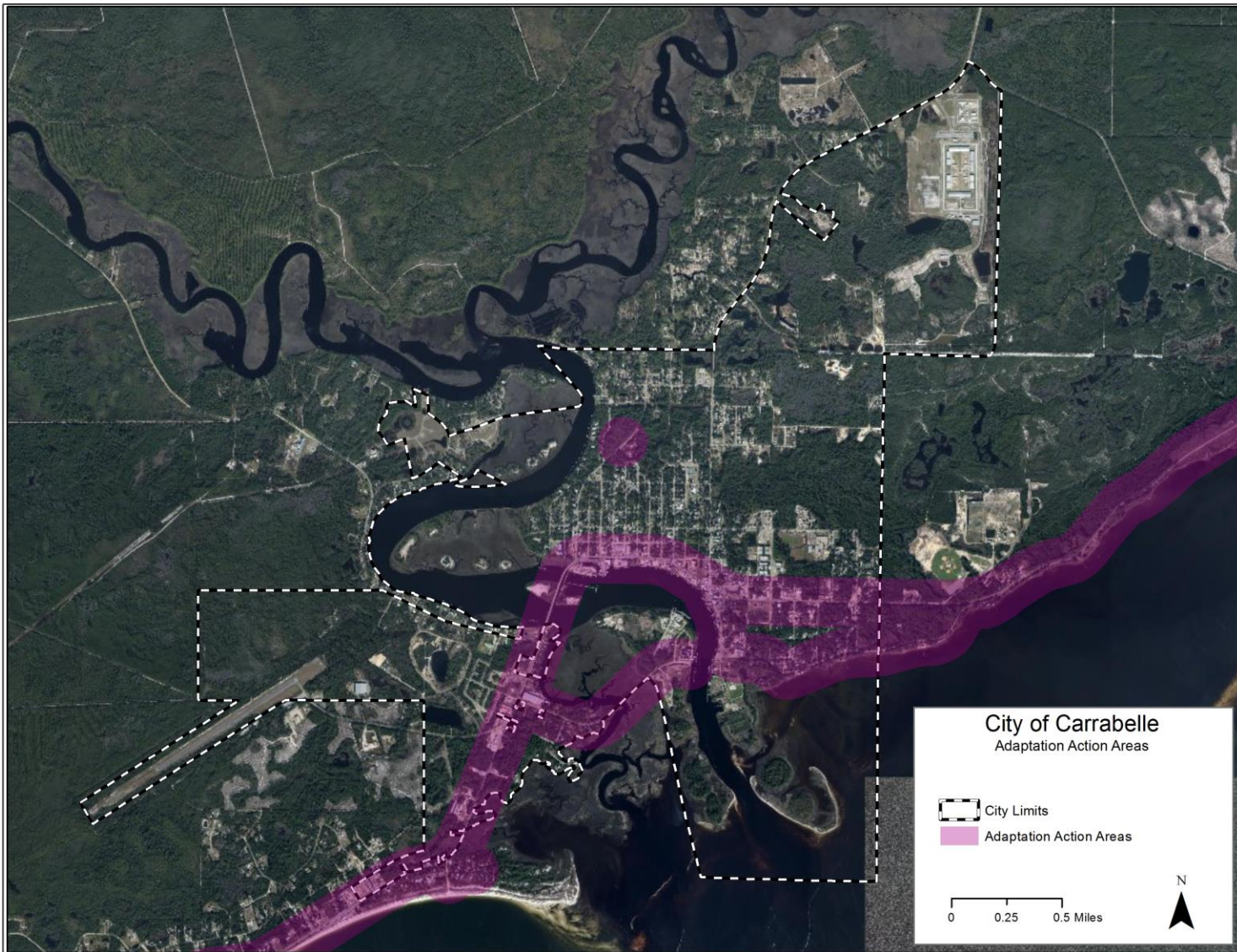


Figure 4. Adaptation Action Areas for City of Carrabelle

Environmental Effects of Sea Level Rise

Tidal Gauge Measurements

Since 1967, NOAA has been measuring localized sea level rise in the Apalachicola area via a tidal gauge. These measurements have shown that the local sea level has been rising about 2.38 mm a year. Figure 4 shows the sea level data collected by the Apalachicola tidal gauge since 1967. The rate at which the sea level rises in different areas depends on several factors, including the rate of coastal erosion, land use patterns, and subsidence. The rising sea level with respect to climate change is caused by two mechanisms: the melting of ice over land adding water to the oceans and the expansion of seawater due to warmer temperatures.

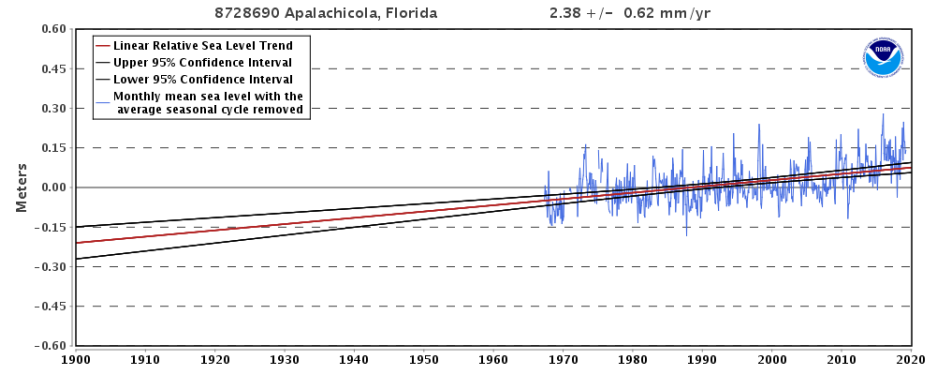


Figure 5: Data from NOAA's Apalachicola Tidal Gauge.

Sea Ice and Rising Sea Levels

Even though sea ice is concentrated in the Polar Regions it still has influence on the global climate. Sea ice is responsible for reflecting a lot of sunlight back into space which helps regulate global temperature. As the sea ice melts due to climate change, it reflects less sunlight back into space, which increases global temperatures even more. Sea ice also affects movement of ocean water. When ocean water freezes the salt gets pushed into the water below the ice. The increased salinity makes this water denser than surrounding ocean water, causing it to sink. This movement contributes to the circulation of the global ocean conveyor belt. Changes in sea ice formation disrupt the global ocean conveyor belt and contribute to greater atmospheric warming.

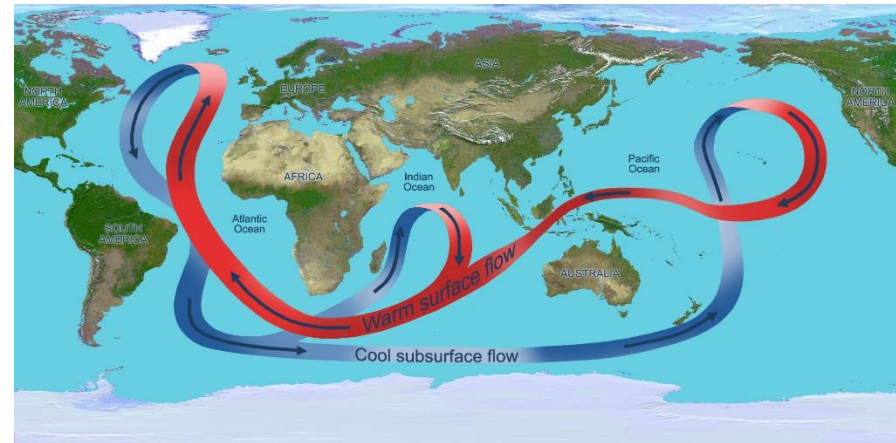


Figure 6: The Global Ocean Conveyor Belt.

High Tide Flooding

As sea levels rise, the frequency of flooding due to high tides increases. In the U.S. high tide flooding has increased by about 50 percent since 20 years ago and 100 percent since 30 years ago. These frequent floods often deteriorate infrastructure, overwhelm storm drains, and cause road closures. While high tide flooding has increased in all of the coastal areas in the continental U.S., the Eastern and Gulf Coasts are experiencing more rapid acceleration. Frequency of high tide flooding is also influenced by coastal elevation. The closer the coastal elevation is to the high tide line, the more frequently high tide flooding occurs.

Threat to Coastal Communities

In the United States, counties along the coast make up less than 10 percent of the the total land area but are home to 39 percent of the total population. The population of these counties increased by 40 percent from 1970 to 2010 and is expected to increase by 8 percent by 2020. The majority of our nation's fisheries depend on coastal marshes. The built up areas behind marshes will prevent wetlands from migrating when sea levels rise. The lost fisheries will affect the livelihoods and resiliency of coastal communities.



Fishing Boats in the City of Carrabelle; photo credit anoldent from Flickr

Adaptation Strategies

Adaptation strategies provide a framework to respond to the findings in the Vulnerability Assessment. By embracing adaptation strategies that are suitable for the City of Carrabelle, the community can transform its ability to mitigate impacts of sea level rise, consciously adapt to the changing coastline, and, in some instances, even find co-benefits from certain adaptation strategies. For the City of Carrabelle, context-appropriate adaptation strategies, categorized as either protection, accommodation, or retreat measures, are outlined in detail below.

Protection-Accommodation-Retreat Measures

Protection measures are defined as strategies that harden or shield existing infrastructure from sea level rise, such as flood-proofing a ground level building. **Accommodation measures** include strategies that modify infrastructure or other built improvements in order to allow for flooding without relocation, such as raising an air conditioning unit or entire house to accommodate flooding beneath the structure. **Retreat measures**, on the other hand, entail relocation, such as an individual moving out of a residence that experiences repetitive flooding and into a new residence that is not affected by flooding.

Depending on the location and characteristics of a parcel, it is forecasted to experience certain levels of flooding at specific time horizons, such as one foot of flooding in the year 2040 (Zone 1) and two feet in 2060 (Zone 2). Using the vulnerability assessment performed for City of Carrabelle, properties within the city limits have been divided into three zones. Protection, accommodation, and retreat measures that are appropriate for each zone are detailed on the following pages.

Protective Measures	Zone 1	Zone 2	Zone 3	Tools	Funding Opportunities	Timeline <i>(TBD by City of Carrabelle)</i>
Harden Roads	X	X	X	Capital Improvement Program	FEMA Community Disaster Loan Program, FEMA Hazard Mitigation Grant Program, Transportation Enhancement Program by Federal Highway Administration	
Lift Docks	X	X	X	Capital Improvement Program	FEMA Hazard Mitigation Grant Program	
Harden Sewer Lift Stations	X	X	X	Capital Improvement Program	FEMA Community Disaster Loan Program, FEMA Hazard Mitigation Grant Program	
Designate Coastal High Hazard Areas	X				EPA Smart Growth Implementation Assistance Program	
Create Coastal Construction Control Lines	X				EPA Smart Growth Implementation Assistance Program	
Restore Coastlines	X				EPA Aquatic Ecosystem Restoration (CAP Section 206), EPA BEACH Grants, EPA Coastal Program, USACE – Aquatic Ecosystem Restoration	

Accommodation Measures	Zone 1	Zone 2	Zone 3	Tools	Funding Opportunities	Timeline <i>(TBD by City of Carrabelle)</i>
Raise Roads/Evacuation Routes	X	X	X	Capital Improvement Program	FEMA Hazard Mitigation Grant Program, Transportation Enhancement Program by Federal Highway Administration	

Transition to Floating Docks	X	X	X	Capital Improvement Program		
Raise the Expensive Stuff (AC, electrical, etc)	X	X	X	Capital Improvement Program	FEMA Hazard Mitigation Grant Program	
Turn at-risk properties into open space, land, or resource land	X	X	X	Acquisitions and Buyout Program	FEMA Flood Mitigation Assistance Program	
Implement Smart Growth	X	X	X		EPA Smart Growth Implementation Assistance Program	

Retreat Measures	Zone 1	Zone 2	Zone 3	Tools	Funding Opportunities	Timeline <i>(TBD by City of Carrabelle)</i>
Relocate Major Thoroughfares	X	X	X	Capital Improvement Program	FEMA Community Disaster Loan Program, FEMA Hazard Mitigation Grant Program	
Relocate critical infrastructure	X	X	X	Capital Improvement Program	FEMA Community Disaster Loan Program, FEMA Hazard Mitigation Grant Program	
Incentivize relocation from VE zones, SLR zones, and CHHA	X			Tax Incentives, Real Estate Disclosures		

Public Outreach

The City of Carrabelle acknowledges that further community outreach and public education on sea-level rise vulnerabilities and adaptation measures are appropriate next steps for increasing community resilience to sea-level rise. Public education activities could familiarize community members, especially population groups not yet targeted through community outreach, with major policy-based adaptation measures, such as:

- Adaptation Action Area (AAA)
- Coastal High Hazard Area (CHHA)
- Coastal Construction Control Line
- Hurricane evacuation routes
- Removal of repetitive loss properties
- Incentivized relocation
- Transfer of Development Rights (TDR) Program
- Coastal development impact fee

Additionally, the City discussed the benefits of creating informational pamphlets that could be collected by the public. These brochures could include information on flood insurance, mitigation measures, efforts made by the City, ways to get involved and more. This information could better inform the public and lead to more involvement.

Implementation Strategies

The implementation of any adaptation strategy is unique to the specific asset that would be adapted and its overall context. This section provides tools that could be utilized, independently or in tandem, in order to support the implementation of Carrabelle's adaptation strategies.

Spending, Tax, and Market-Based Tools

- **Capital Improvement Program** - Guides future investments in public infrastructure based on sea-level rise projections and associated impacts.
- **Tax incentives** - Provides tax abatement to development that clusters, voluntarily participates in a Transfer of Development Rights (TDR) Program, or otherwise accommodates or avoids coastal flood hazard.
- **Real Estate Disclosure** - Requires sellers to provide information about vulnerability to sea-level rise or other flooding events as part of a homebuyer's packet and/or home inspection.

Land Development Tools

- **Rolling Conservation Easement** - Reserves the right to purchase land that inhabits a space within a certain distance of the tide (MSL) in conjunction with sea-level rise.
- **Acquisitions and Buyout Program** – City acquires at-risk property and conserves property as natural open space, a public park (such as a stormwater management park), or resource land.
- **Transfer of Development Rights (TDR) Program** – This program allows owners of vulnerable properties to voluntarily transfer their property development rights to another, less vulnerable location. TDR programs can also compensate land owners for choosing not to develop some or all of their land. TDR programs establish sending and receiving zones to determine where the transfer of development rights happen. As a part of the vulnerability assessment, potential sending and receiving zones were established for City of Carrabelle based on the sea-level rise inundation zones, FEMA flood zones, and presence of wetlands (Figure 7). A TDR Program can use sending zones to encourage higher-density development in areas that have relatively low vulnerability to sea-level rise and other flooding hazards. Receiving zones can encourage preservation of wildlife habitats, farmland, historical sites, or help to eliminate repetitive loss properties.

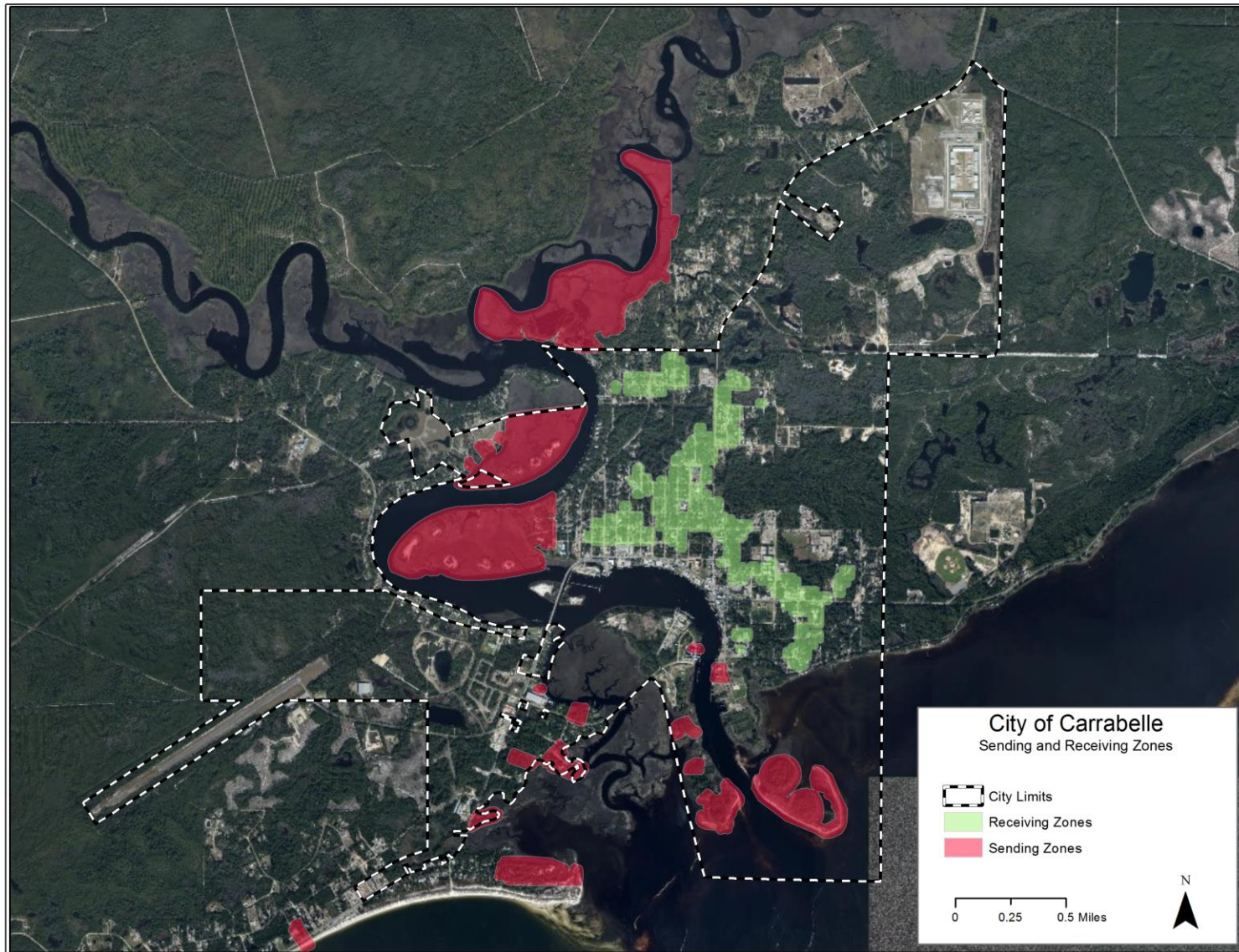


Figure 7. Map of Sending and Receiving Zones for City of Carrabelle

Homeowners' Tools for Residential Properties

Know your risk: Homeowners can use flood maps published by FEMA to determine whether or not their property is at risk of flooding. Any house within a 100 year floodplain is considered at risk. For those looking for a new home, FEMA maps should not be the end of risk assessment. Find out if the home has experienced flooding in the past even if it isn't in the floodplain. It is also a good idea to ask long term residents if they have seen a lot of flooding in the area.

Preventative landscaping: Property owners can dig swales or depressions to direct storm water away from their house. Using materials like gravel or brick instead of concrete or asphalt for driveways and using absorbent mulch can help mitigate flood damage.

Get involved: Participate in your community's public workshops, meeting and forums to support sustainable development, public landscaping with water-permeable surfaces and better storm infrastructure.



Buying flood insurance: Typical homeowner insurance does not cover damage from flooding. Flood insurance premiums can be reduced if a community takes collective action to decrease overall flood risk and if individuals take steps to make their homes safer.



Raising the expensive stuff: Homeowners that experience frequent flooding can elevate HVAC systems, plumbing and electric meters from the ground or basement floor to a height above flood levels. This can help mitigate the cost of replacing those systems every time it floods as well as reduce flood insurance premiums.



Houston, TX home elevated after Hurricane Harvey

Elevating houses: houses can be raised above flood levels by using tall wooden stilts or concrete blocks. This process is easier for newer homes but existing homes can be raised. After a disaster, grants from FEMA can help cover the cost of elevating a house.



Relocating: In areas of extreme flooding, homeowners can relocate their home to higher ground. During the relocating process, the house is lifted off its foundation, brought to a new site and lowered onto a new foundation.

Limitations

Stakeholder Involvement

Most of the City's full-time residents live further inland; therefore, the coastal and riverside property is largely owned by part-time, seasonal residents. This makes it difficult to receive buy in and interact with property owners. This also made it difficult to engage with residents on this project. When sending out the mail-out packets, the number of out of city, county, and state addresses were noticed and it was anticipated that there would be a low turnout to the public information seminars held in April and that feedback would be limited. While several seminar participants acknowledged the effects of sea-level rise and demonstrated interest in community-based adaptation strategies, there was predominantly low interest in getting more involved in the City's initiatives; many attendees were skeptical of sea-level rise and its projected impact on City of Carrabelle. Additionally, a survey was sent to participants after the seminars for feedback and no responses were received.

Project Funding

The City of Carrabelle is interested in applying for grant funding to finance the implementation of adaptation strategies. However, funding for larger, infrastructure-based projects is often difficult to find. Unless the City can access larger sources of funding, the implementation of adaptation strategies may take place by slowly piecing together various grants.

Summary

This compendium provides a guidebook for the City of Carrabelle to adapt to sea-level rise using protection, accommodation, and/or retreat measures. The included adaptation strategies can be implemented at the household, neighborhood, or city level, depending on the extent of stakeholder involvement and funding availability. Grant resources available to City of Carrabelle as well as a brief glossary of terminology used are outlined on the following pages.

Moving Forward

Using these resources, the appropriate next steps for City of Carrabelle include:

- Establish a Climate Adaptation Advisory Board to oversee the implementation of sea-level rise adaptation strategies.
- Host a sea-level rise seminar and workshop series geared towards long-term residents to engage more residents in dialogue on climate adaptation and generate momentum for grant applications.
- The Climate Adaptation Advisory Board, once active, should consider creation of a Climate Action Plan to guide community engagement and grant application efforts.

Resources

Web-Based Resources

- Final Report: What Will Adaptation Cost? An Economic Framework for Coastal Community Infrastructure <https://coast.noaa.gov/data/digitalcoast/pdf/adaptation-report.pdf>
- Adaptation Action Areas: Policy Options for Adaptive Planning for Rising Sea Levels <http://southeastfloridaclimatecompact.org/wp-content/uploads/2014/09/final-report-aaa.pdf>
- Florida Department of Environmental Protection, Office of Resilience and Coastal Protection: <https://floridadep.gov/rcp>
- Adaptation Clearinghouse (An online database and networking site that serves policymakers and others who are working to help communities adapt to climate change: <https://www.adaptationclearinghouse.org/>
- Municipal adaptation to sea-level rise: City of Satellite Beach, Florida: <http://www.satellitebeach.org/Residents-Visitors/Sustainable%20Satellite/Sea%20Level%20Rise%20-%20CRE%20Report%2007-18-10.pdf>
- City of Punta Gorda Adaptation Plan: <https://www.cakex.org/sites/default/files/Punta%20Gorda.pdf>
- Hampton Roads Sea Level Rise Preparedness and Resilience Intergovernmental Pilot Project. Phase 2 Report: Recommendations, Accomplishments and Lessons Learned <http://resilientvirginia.org/wp-content/uploads/2016/12/20161006-hampton-roads-phase-2-report.pdf>
- Transfer of Development Rights Program. Planning Implementation Tools Transfer of Development Rights (TDR) https://www.uwsp.edu/cnr-ap/clue/Documents/PlanImplementation/Transfer_of_Development_Rights.pdf ; Conservation Tools: <https://conservationtools.org/guides/12-transfer-of-development-rights>
- Ecological Effects of Sea Level Rise in the Northern Gulf of Mexico: Bilskie, M. V., Hagen, S. C., Alizad, K., Medeiros, S. C., Passeri, D. L., Needham, H. F. and Cox, A. (2016), Dynamic simulation and numerical analysis of hurricane storm surge under sea level rise with geomorphologic changes along the northern Gulf of Mexico. *Earth's Future*, 4(5), 177–193. doi:10.1002/2015EF000347
- Environmental Impacts of Sea level rise: <https://oceanservice.noaa.gov/facts/>
- Flood proof your house: <https://www.nrdc.org/stories/7-ways-flood-proof-your-house>
- Find your flood risk: Floodiq.com

Case Studies

- Isle de Jean Charles Resettlement Project: <http://isledejeancharles.la.gov/>
- Hampton Roads Sea Level Rise Preparedness and Resilience Intergovernmental Planning Pilot Project: <https://pdfs.semanticscholar.org/presentation/97a3/ad66fdd43242d4d47f15c983e727bd7db937.pdf>

- Houston Home Elevation Grants: <https://www.houstonpress.com/news/42-flood-prone-homeowners-to-receive-long-sought-home-elevation-grants-9188864>

Federal Funding Opportunities

- USDA Community Facility Grant & Loan Program
- USDA/RD Business and Industry Loan Program
- Rural Development Water and Waste Disposal Loan and Grant Program
- National Association of Counties Strengthening Coastal Communities Challenge
- National Oceanic and Atmospheric Administration Office for Coastal Management Coastal Resilience Grant
- Gulf of Mexico Alliance Gulf Star Funding
- EDA Disaster Supplemental

State Funding Opportunities

- Florida Department of Environmental Protection – Coastal Partnership Initiative
- DEP Florida Beach Erosion Control Program
- Florida Inland Navigation District (FIND) – Cooperative Assistance Program
- FIND Waterways Assistance Program
- FWC State Wildlife Grants
- DEM Residential Construction Mitigation Program
- [NOAA Sea Grant Funding](#)

Non-Profit Funding Opportunities:

- Southeast RCAP Financial Service
- The Wildlife Conservation Society's Climate Adaptation Fund
- The Doris Duke Charitable Foundation (DDCF)
- The Rockefeller Family Foundation (RFF)
- The Kresge Foundation
- Surdna Foundation
- Alfred P. Sloan Foundation

Glossary

Adaptation Action Area (AAA) – Used to extend building requirements to new areas affected by projected sea-level rise. Can limit expansion or major renovation therein.

Coastal High Hazard Area (CHHA) – limits public infrastructure therein; Directs mitigation policies be added to the CME

Coastal Construction Control Line – prohibits construction seaward of the line (with exceptions)

Coastal Development Impact Fee – Assessed on new structures to assist with engineering / adaptation measures that serve the property.

Hurricane Evacuation Zones – Evacuation zones are designated by letter. Vulnerability may be assumed to increase as the designations go from Tropical Storm Zone to Zone F. (<https://www.floridadisaster.org/knowyourzone/>)

Relocation – For houses that are in areas of extreme flooding, one adaptation option is to relocate to higher ground. To relocate, a house is lifted off its foundation, moved to a new site, and lowered onto a new foundation.

Repetitive Loss Properties – Insurable buildings for which two or more claims of more than 1,000 dollars were paid by the National Flood Insurance Program (NFIP) within a ten year period.

Sea-Level Rise (SLR) – An increase in the level of the world's oceans due to four main causes: ice melting from land into the ocean, warming waters that expand, a slowing Gulf Stream, and sinking land. Although a global phenomenon, the amount and speed of sea level rise varies by location.

Setbacks and Buffers – Requirement for short-adjacent structures; smaller structures with shorter setbacks; acknowledges future coastline inward migration at time of new build.

Transfer of Development Rights (TDR) Program – Process of transferring land development rights from damaged or vulnerable properties in the “sending zone” to less vulnerable properties in the “receiving zone.”

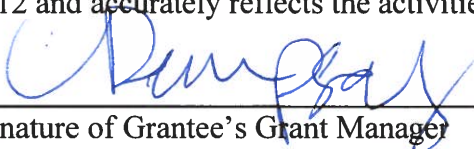
VE Zone – Also known as the coastal high hazard area. These areas are subject to high velocity water including waves; defined by the 1 % annual chance flood limits and wave effects of 3 feet or greater.

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Progress Report Form

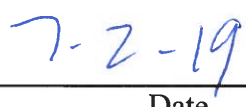
Exhibit A

DEP Agreement No.:	R1812		
Grantee Name:	1001 Gray Avenue		
Grantee Address:	Carrabelle, FL 32322		
Grantee's Grant Manager:	Courtney Dempsey	Telephone No.:	850-697-2727
Reporting Period: April 1, 2019-June 30, 2019			
Project Number and Title: R1812 Carrabelle Targeted Resilience Assistance (TRA)			
Provide the following information for all tasks and deliverables identified in the Grant Work Plan: a summary of project accomplishments for the reporting period; a comparison of actual accomplishments to goals for the period; if goals were not met, provide reasons why; provide an update on the estimated time for completion of the task and an explanation for any anticipated delays and identify by task. NOTE: Use as many pages as necessary to cover all tasks in the Grant Work Plan. <u>The following format should be followed:</u> Task 2: Targeted Resilience Strategy Organization, Composition, and Compilation Progress for this reporting period: Apalachee Regional Planning Council (ARPC) staff met with the City of Carrabelle staff on May 31, 2019 to discuss the compendium and adaptation strategies the City would like to pursue. The goal was to create a document that the City could utilize for future planning. ARPC staff then created a document containing adaptation strategies, implementation strategies, limitations, and resources discussed during the public information seminars. Task 2 was completed and submitted on Friday, June 14. Additionally, a hardcopy of the compendium was mailed to the City. Identify any delays or problems encountered: A survey was sent out to residents that attended the seminar on April 8 and no responses were received. Gathering stakeholder feedback and maintaining participation is a challenge for the City of Carrabelle, especially because many of the residents are seasonal.			

This report is submitted in accordance with the reporting requirements of DEP Agreement No. R1812 and accurately reflects the activities associated with the project.



Signature of Grantee's Grant Manager



Date