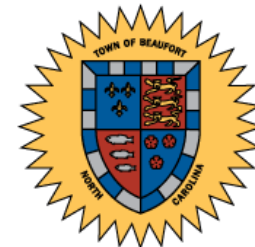


Comprehensive and CAMA Land Use Plan

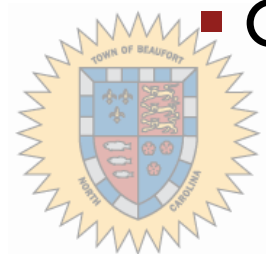
Steering Committee Meeting #2

2/18/2020



Agenda

- Welcome and Introductions
- Team, Schedule, and Process
- Word About Town
- Plan Assessments Update
- Review/Discussion
 - Socioeconomic Snapshot Chapter
 - Focus Group Summary Chapter
 - CAMA Issues and Assets Chapter
 - Mapping
- Next Steps
- Committee Discussion

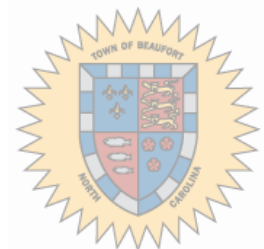
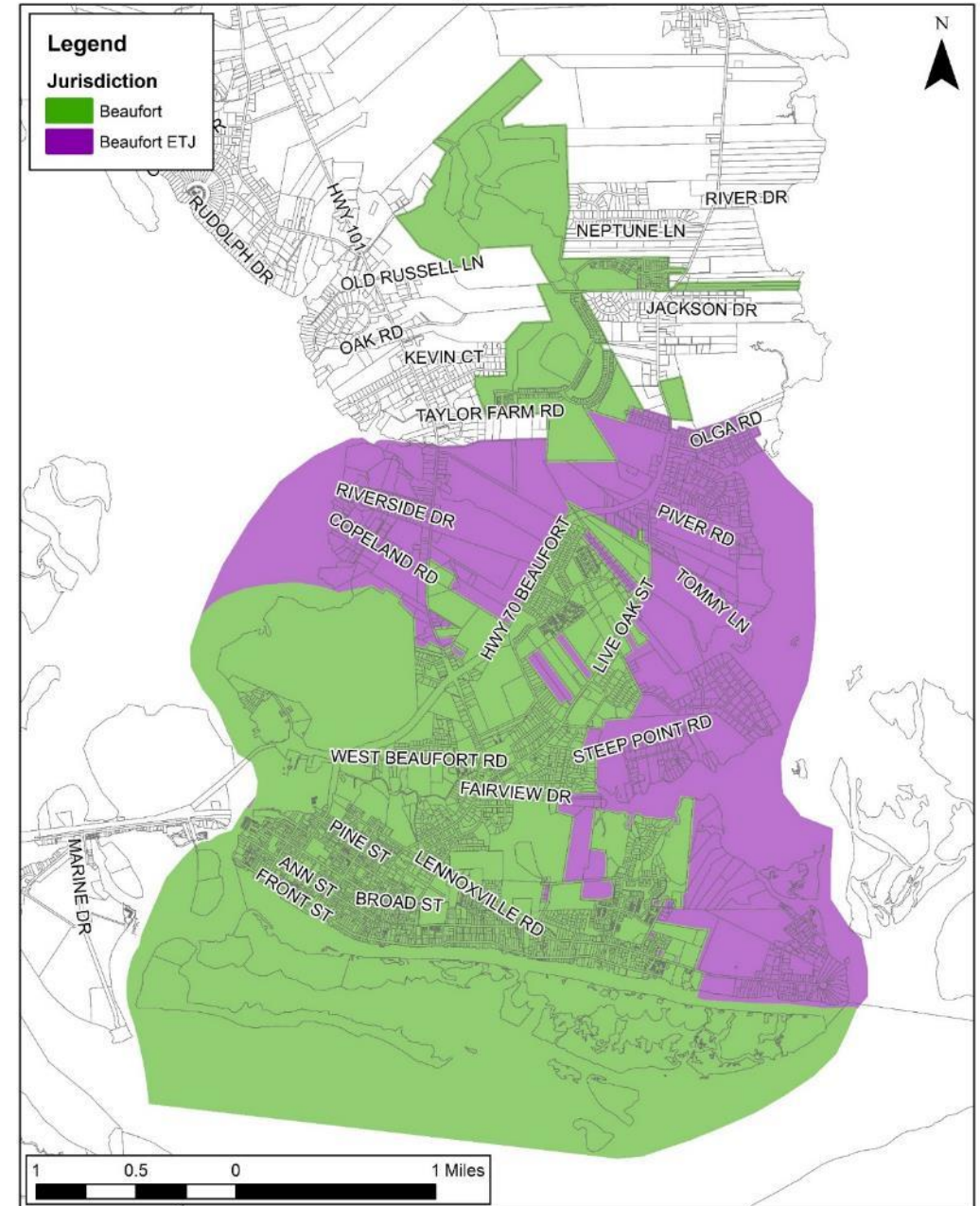




Project Schedule and Status

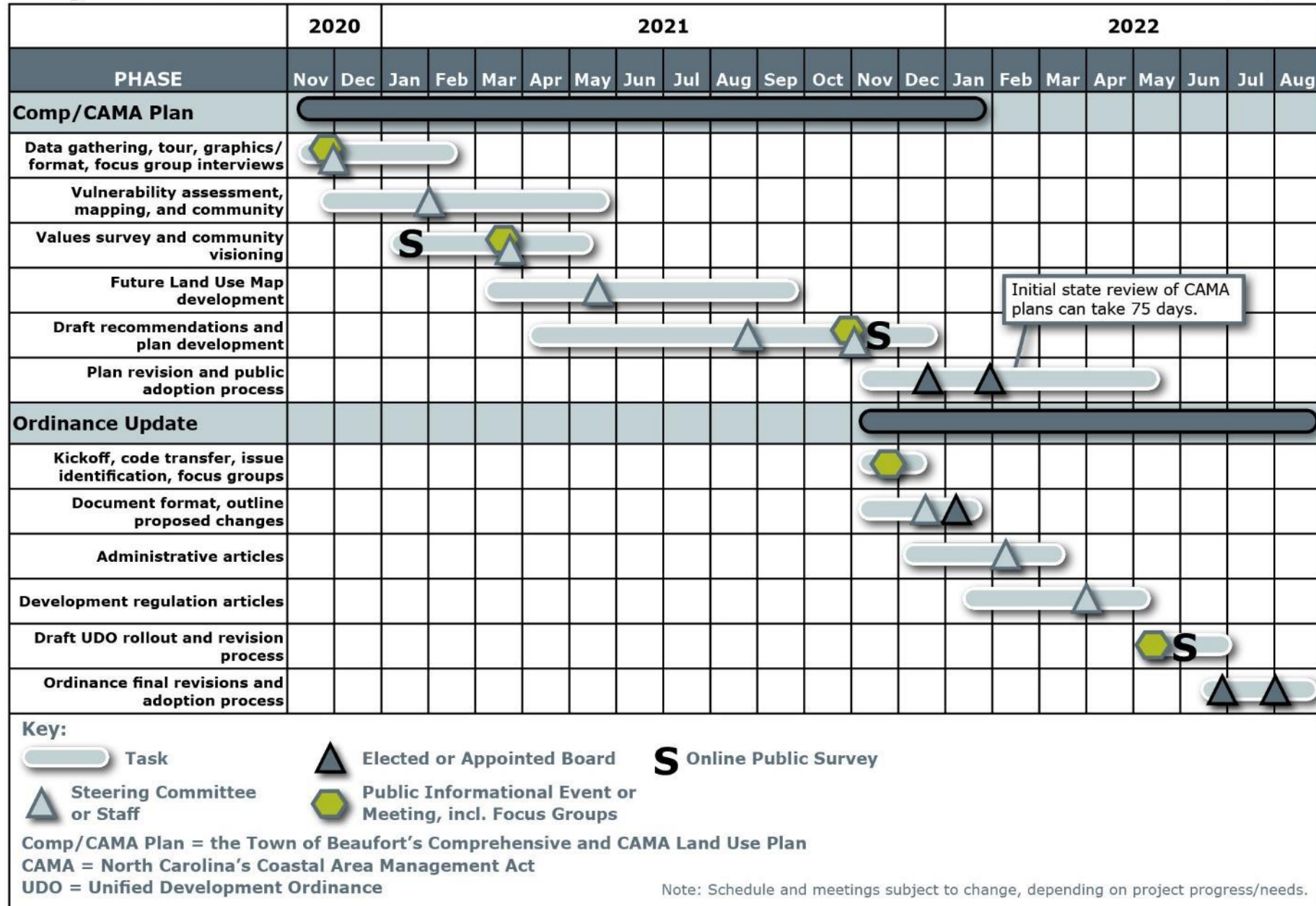
Study Area Map

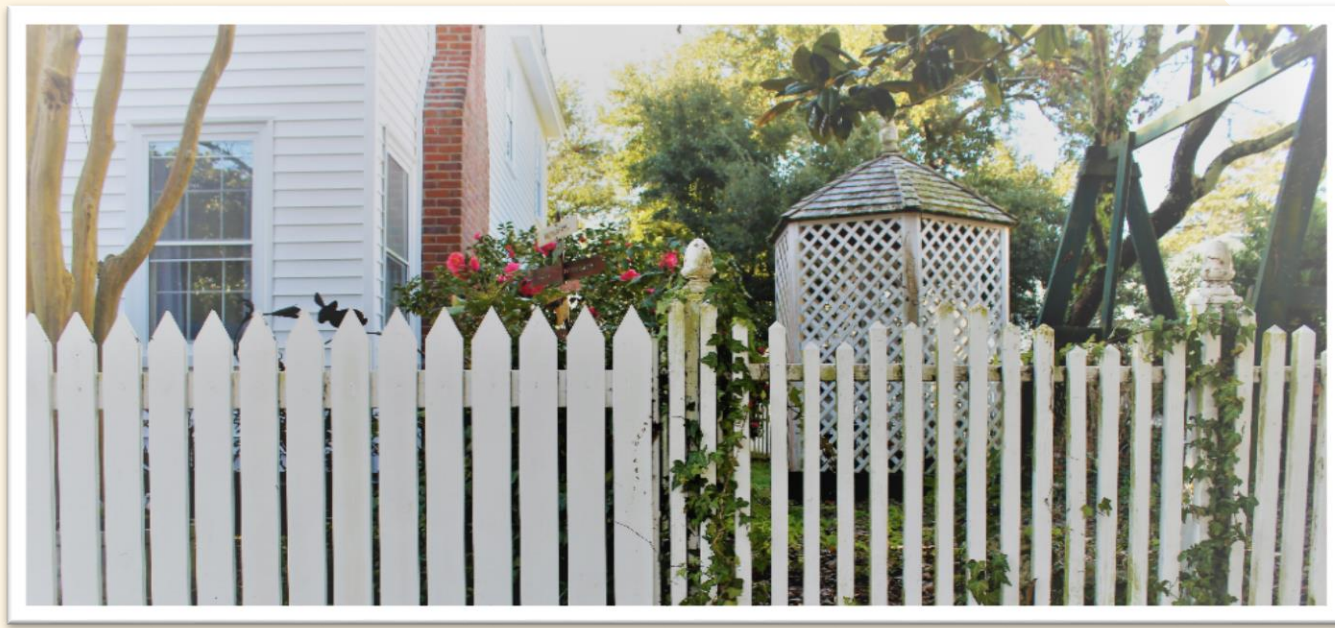
- The Comprehensive Plan covers the Town's planning jurisdiction – Corporate Town Limits and Extraterritorial Jurisdiction (ETJ)
- Consideration is also given to areas where the Town has extended public utilities outside of the limits and ETJ.



Project Schedule

Version: 10/15/2020





Word About Town

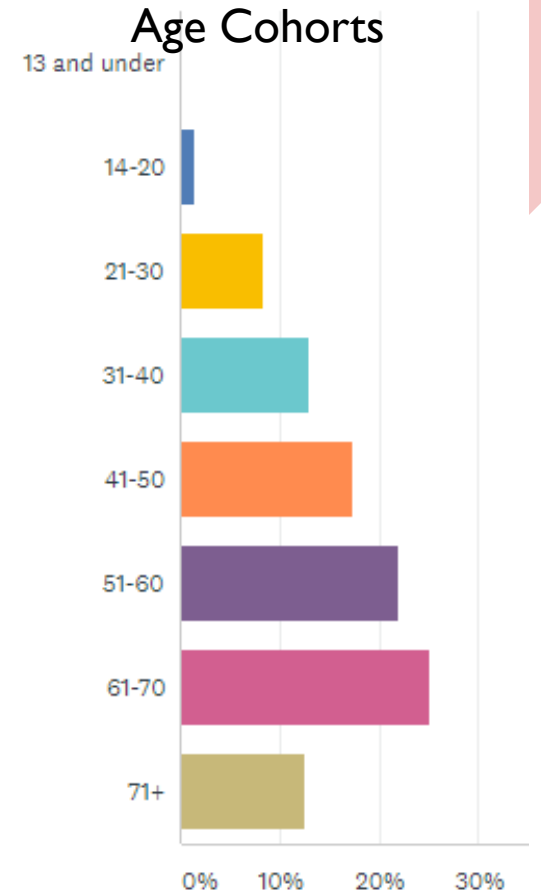
(Committee discussion)



Survey #1 Update

Survey #1 By-the-Numbers

- 846 Participants (2/18/21)
- 60% Full-time Residents
- 25% Age 61-70
- 90% White
- 62% Women
- 34% Men
- 301 Email Addresses Collected

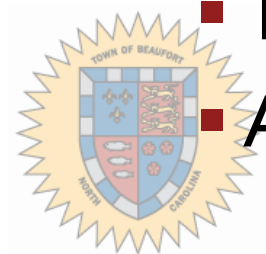
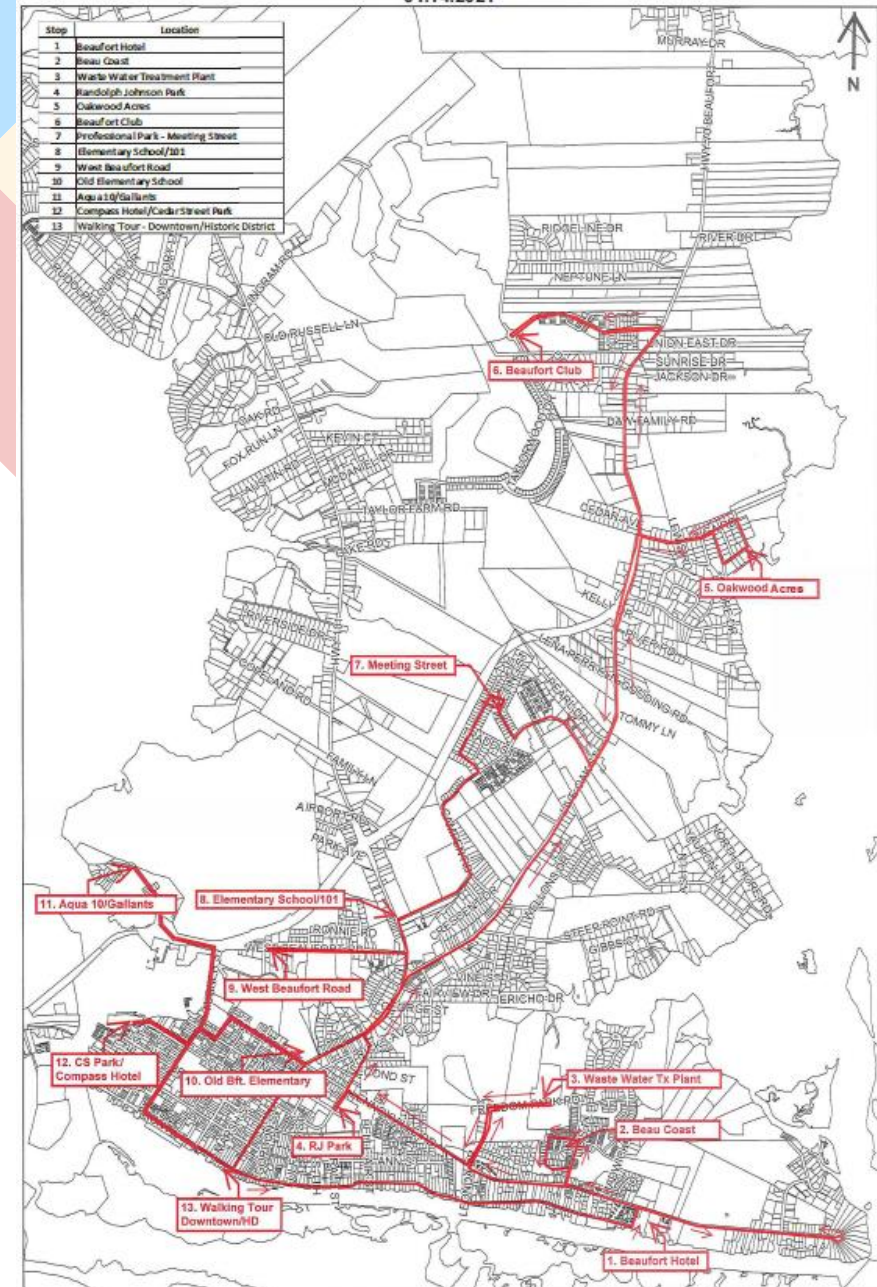




Community Tour Overview

Notable Sites and Topics

- Cedar Street Improvements
- Cedar Street Park
- Beau Coast and East Village
- Atlantic Veneer Property
- Old Elementary School Redevelopment
- Wastewater Treatment Plant Expansion
- Randolph Johnson Memorial Park Updates
- Transportation Improvements
- Active Recreation Updates



Residential Development



Beau Coast



Redevelopment Opportunities



Old Beaufort Elementary School



Former Atlantic Veneer Site



Parks and Recreation



Cedar Street Park



Randolph Johnson Memorial Park



Other Projects and Improvements



Wastewater Treatment Plant Expansion





Plan Assessments Update

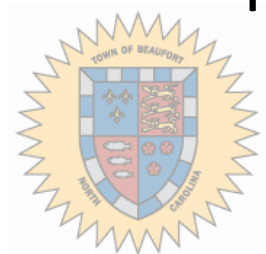
Small Area Plan, 2018

- Ann Street, Moore Street, Live Oak Street and Mulberry Street
- Concept Designs for Live Oak and Cedar Street Corridors
- Ripe/Firm Analysis – Opportunities for Redevelopment



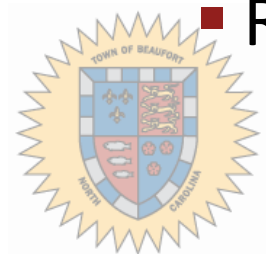
Small Area Plan - Implementation

- Turner/Pine Street Median
- Traffic calming on Pine
- Cedar Street Improvements
- Encourages Cluster Development – Live Oak/Loftin Lane
- Multiple ADA curb ramps
- Old Beaufort Elementary School
- Intersection Improvements*



Bicycle & Pedestrian Plan, 2018

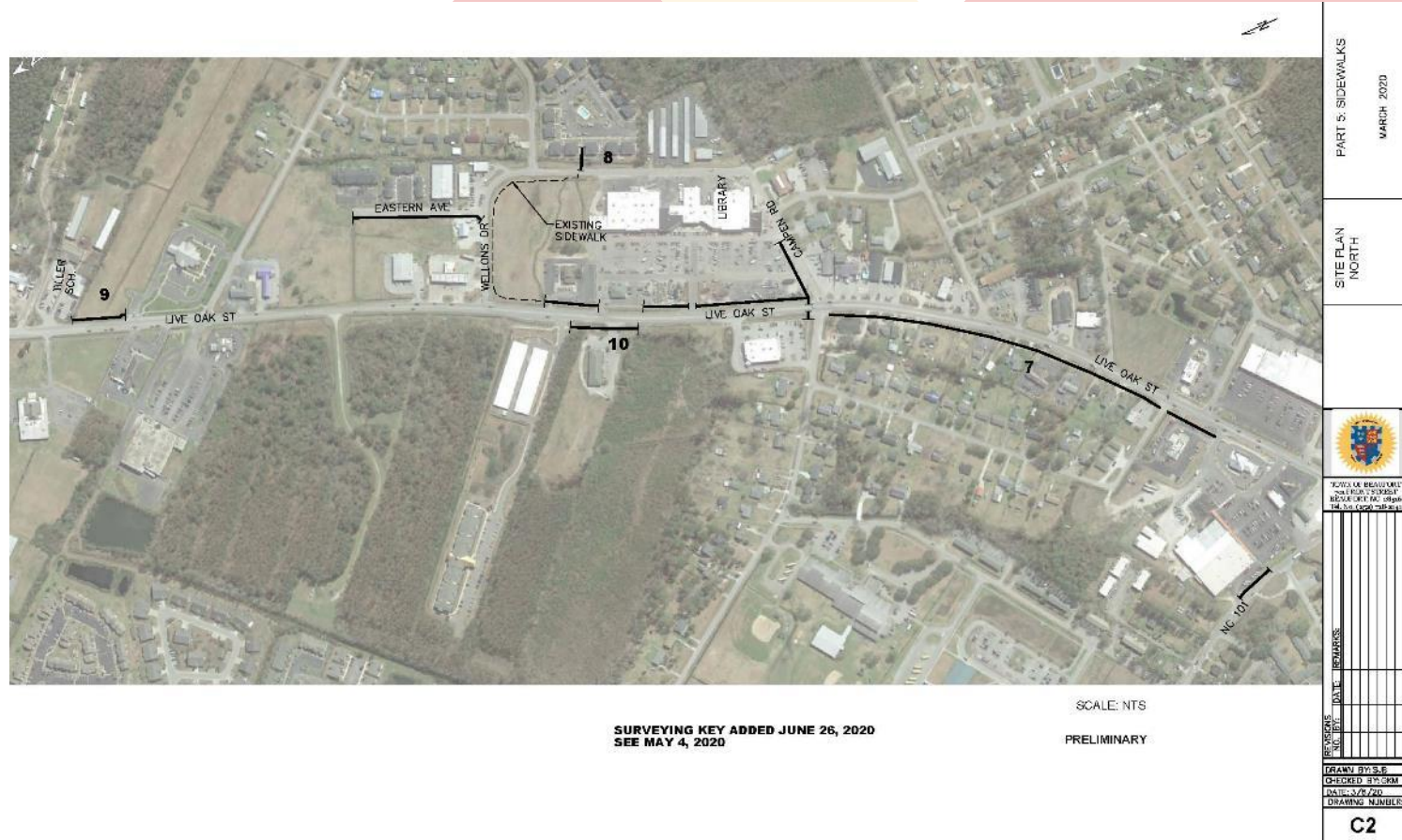
- Funded through NCDOT Planning Grant Initiative
- All of Beaufort Corporate Limits
- Five Focus Areas:
 - Lennoxville Road
 - Queen Street & Ann Street
 - Carraway Drive & NC-101
 - Cedar Street
 - Live Oak Street
- Recommends Complete Streets Policy



Bicycle & Pedestrian Plan - Implementation

- Randolph Johnson Park Access; Carteret Avenue Crosswalk
- Turner Street 100-Block Improvements
- Tiller School Pedestrian Crossing
- Town wide sidewalks*
- Live Oak/Campen Pedestrian Crossing*

*Planned/Funded or In Progress



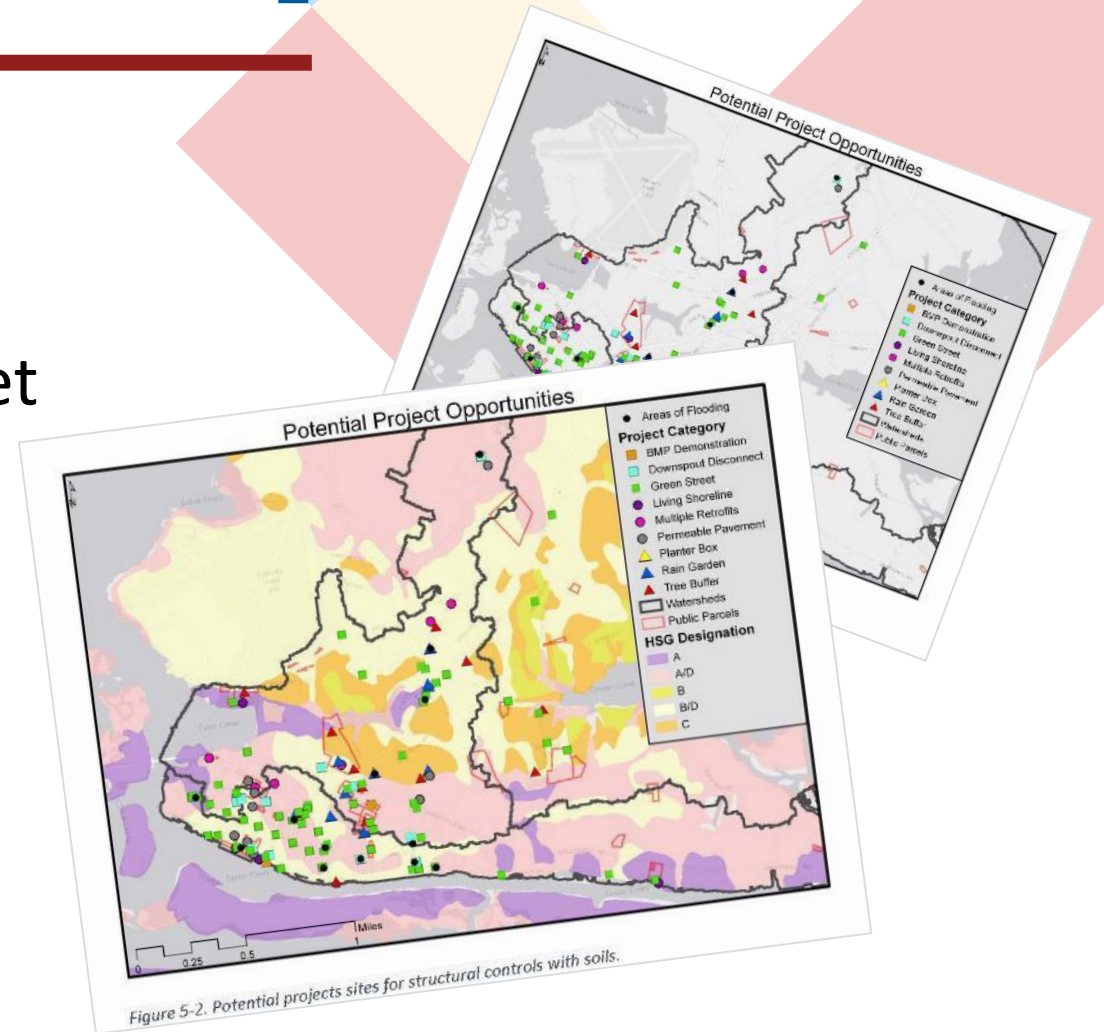
Watershed Restoration Plan, 2017

- Partnership with ECCOG & NC Coastal Federation
- Town Creek, Taylor Creek and Davis Bay watersheds
- Seeks to:
 - Restore and maintain water quality
 - Reduce instances of localized flooding
 - Prioritize cost effective stormwater retrofits



Watershed Restoration Plan - Implementation

- Lennoxville Road Boat Ramp
- Orange Street Improvements
- BMPs to be included in Cedar Street Project



Pamlico Sound Regional Hazard Mitigation Plan, 2020

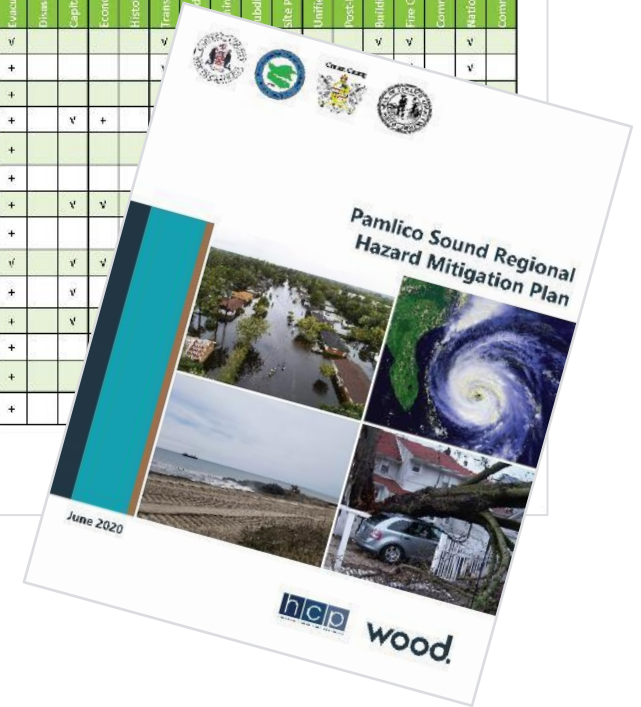
- Required for FEMA disaster assistance
- 5-year update cycle
- Closely tied to Community Rating System
- Identifies “Mitigation Actions” for implementation
 - BCEGS
 - HMGP Applications
 - RL Outreach Projects

SECTION 5: CAPABILITY ASSESSMENT

Table 5.1 – Relevant Plans, Ordinances, and Programs

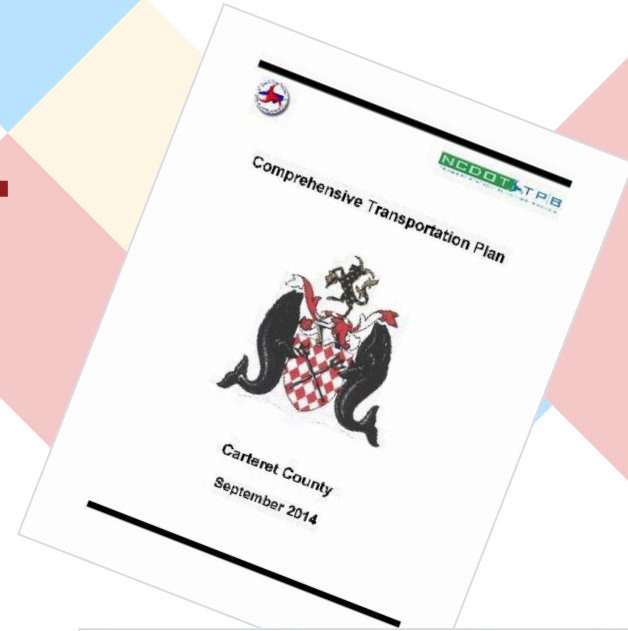
Jurisdiction	Hazard Mitigation Plan	Comprehensive Land Use Plan	Floodplain Management Plan	Open Space Management Plan	Stormwater Management Plan	Emergency Operations Plan	SARA Title III Plan	Biological Emergency Plan	Continuity of Operations Plan	Evacuation Plan	Disaster Recovery Plan	Capital Improvements Plan	Economic Development Plan	Historic Preservation Plan	Transportation Plan	Wild Damage Prevention Ordinance	Building Ordinance	Subdivision Ordinance	Site plan Review Requirements	Unified Development Ordinance	Post-Disaster Review Ordinance	Building Code	Fire Code	Community Wildfire Protection Plan	National Flood Insurance Program	Community Rating System
Beaufort County	✓	✓				✓	✓	✓	✓	✓					✓							✓	✓	✓		
Town of Aurora	✓	✓				+	+	+	+	+														✓		
Town of Bath	✓	✓				+	+	+	+	+																
Town of Belhaven	✓	✓	✓	✓		✓	+	+	+	+		✓	+													
Town of Chocowinity	✓	✓				+	+	+	+	+																
Town of Pantego	✓	✓				+	+	+	+	+																
City of Washington	✓	✓	✓	✓	✓	✓	+	+	+	+		✓	✓													
Town of Washington Park	✓	✓	✓	✓	✓	+	+	+	+	+																
Carteret County	✓	✓				✓	✓	✓	✓	✓		✓	✓													
Town of Atlantic Beach	✓	✓		✓	✓	+	+	+	+	+					✓											
Town of Beaufort	✓	✓		✓		+	+	+	+	+				✓												
Town of Bogus	✓	+				+	+	+	+	+																
Town of Cape Carteret	✓	✓				+	+	+	+	+																
Town of Cedar Point	✓	✓				+	+	+	+	+																

Pamlico Sound
Regional Hazard Mitigation Plan
2020



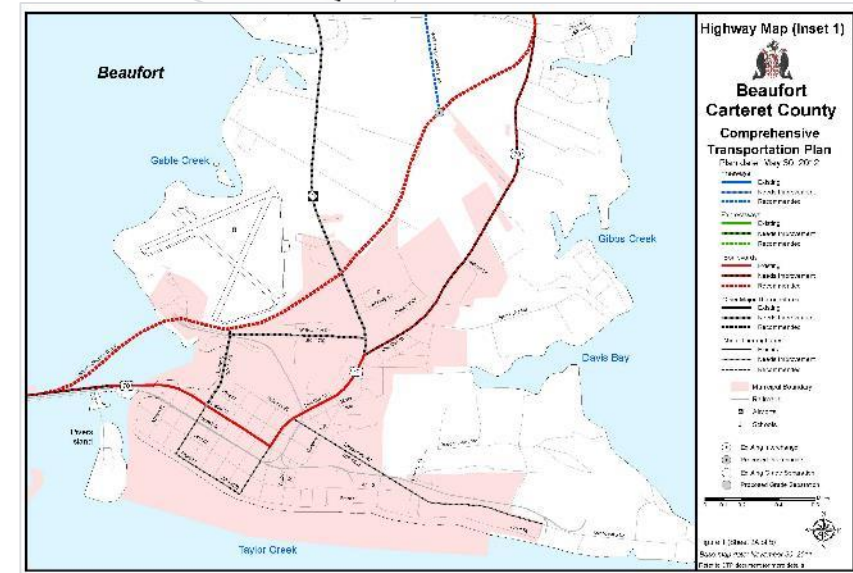
Carteret County CTP, 2014

- NCDOT – TPB
- Long-range transportation needs (2040)
- Emphasizes building a community more centered around alternative modes of transportation



Implementation

- Gallants Channel Bridge
- Turner Street Bridge
- New US-70 bypass



STIP 2020-2029

The Statewide Transportation Improvement Program identifies transportation projects that will receive funding between 2020 and 2029

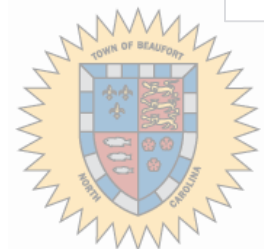


NCDOT 2020-2029 Current STIP

February 2021

- U-6058 – One Lane Roundabout
 - Live Oak Street/NC-101
 - ROW 2023
- R-5945 – Live Oak Street Access Management*
 - NC-101 to Olga Road
 - ROW 2029
- R-5946 – Upgrade Intersection
 - Live Oak Street/Lennoxville Road/Mulberry Street
 - ROW 2028
- R-5962 – Roundabout*
 - Cedar Street/Live Oak Street
 - ROW 2029
- U-5876 – Widen to Multi-lanes
 - 4th Street to Radio Island Road (Newport River Bridge)
 - ROW 2025

*Subject to reprioritization in SPOT 6.0



Entry Master Plan, 2012

- Catalyst - Gallants Channel Bridge/New US-70
- Developed to guide the creation of new gateways
- Recommendations
 - Beautification
 - Wayfinding



Entry Master Plan - Implementation

- Turner Street Bridge
- NC-101/Live Oak Street (Future) Roundabout
- Cedar Street/Live Oak (Future) Roundabout*

Entry Master Plan | recommended enhancements

Turner Street Bridge TOWN GATEWAY



Proposed view of Turner Street bridge looking south towards Cedar Street

The Turner Street Bridge and surrounding area will function as the Town Gateway. It is recommended that the bridge leading into Beaufort from Turner be modified from the proposed NCDOT Bridge to better reflect the character and history of Beaufort. Columns with the Beaufort crest have been proposed at the ends of the bridge to usher travelers into Beaufort. Decorative lighting with banner graphics will further reinforce the arrival into the town. Re-established native vegetation along the sides of the bridge will help integrate the road with the scenic views of Town's Creek.

- 1 historic pedestrian-scaled street light with banner
- 2 concrete railings to match old entry bridge
- 3 accent column with beaufort crest at ends of bridge
- 4 re-established native vegetation



Key Map

TURNER STREET

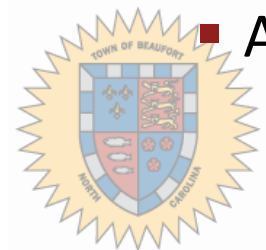
19



Core Land Use Plan, 2006

Summary of Land Use Issues

- Land Use Compatibility
 - Control of strip commercialization along US-70 & NC-101
- Infrastructure Capacity
 - Development/improvement of the Beaufort sewage treatment system
 - Construction of Gallants Channel Bridge to alleviate traffic disruptions
 - Need for stormwater ordinance and system improvements
- Natural Hazard Areas
 - Effects of Sea Level rise on the Town of Beaufort
- Water Quality
 - Improvements to stormwater system to protect water quality
 - Improvements to wastewater treatment facilities and increased capacity
- Areas of Environmental Concern
 - Protection of Rachel Carson Reserve
 - Impact of offshore drilling on the Town
 - Stormwater runoff



Core Land Use Plan, 2006

Summary of Land Use Issues

- Areas of Local Concern
 - Redevelopment/visual improvement of Cedar Street
 - Management of new US-70
 - Removal of substandard dwellings
 - Protection of the historic district and waterfront
 - Need for Growth Management Plan
 - Development of service sector to support tourism
 - Establishment of comprehensive annexation plan
 - Michael J Smith Airport expansion
 - Maritime Museum expansion
 - Maintain integrity and compatibility of land uses adjacent to BHA site



Core Land Use Plan – Implementation Actions & Status

- 5.4.1 Public Water Access
 - Fisherman's Park, Grayden Paul Park, Topsail Park
 - Harborside Park (Maritime Museum)
 - Future Cedar Street Park
- 5.4.2 Land Use Compatibility
 - LDO 2013
 - Marinas as a Special Use
 - Updated as necessary
- 5.4.3 Infrastructure Carrying Capacity
 - Developed Water System Improvements Plan in 2009
 - Wastewater Treatment System completed in 2009/2010
 - Several new water wells completed in 2011



Core Land Use Plan – Implementation Actions & Status

■ 5.4.4 Natural Hazard Areas

- Added freeboard requirement to FDPO in 2015

■ 5.4.5 Water Quality

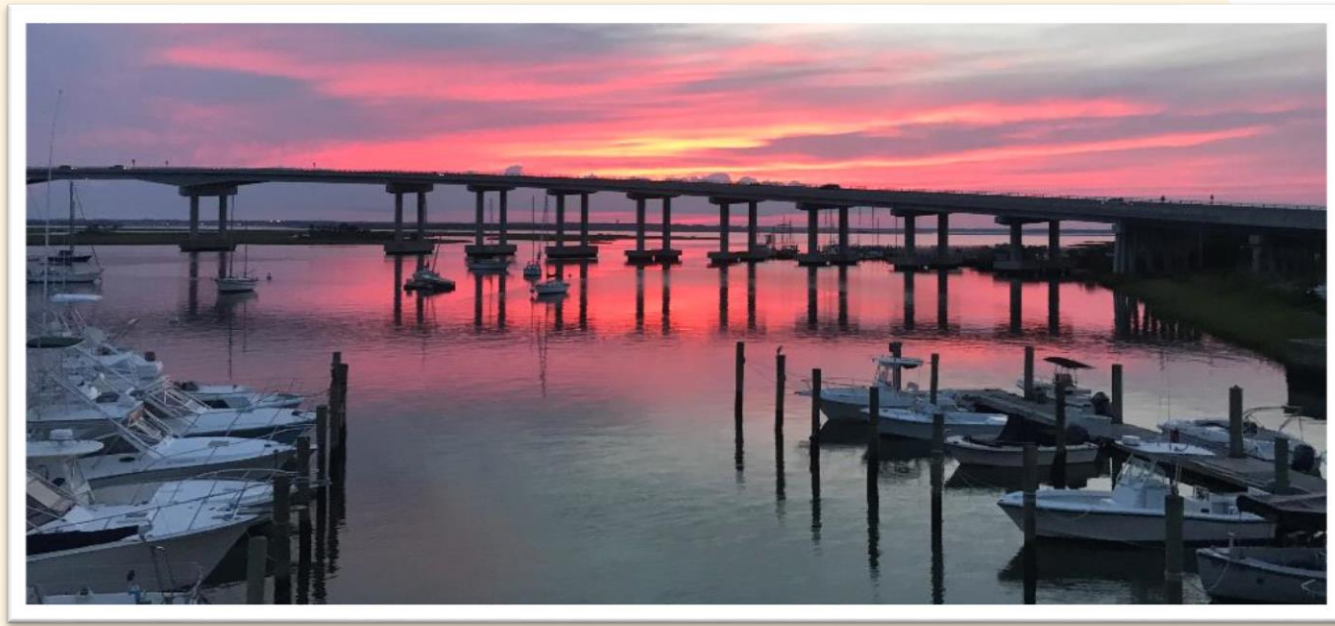
- Stormwater Plan 2009
- Town Stormwater Committee
- Wellhead Protection Program
- New Stormwater CIP 2019
- Stormwater Management Ordinance adopted 2008
- RS-5 Zoning District created 2010 – limits impervious surface coverage to 50%



Core Land Use Plan – Implementation Actions & Status

- 5.4.6 Areas of Environmental Concern
 - CAMA review of proposed development in AECs
- 5.4.7 Areas of Local Concern
 - Town Planner position created 2008; additional planner position in 2016
 - Creation of Capital Improvements Plan





Socioeconomic Snapshot

Population

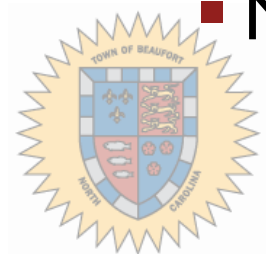
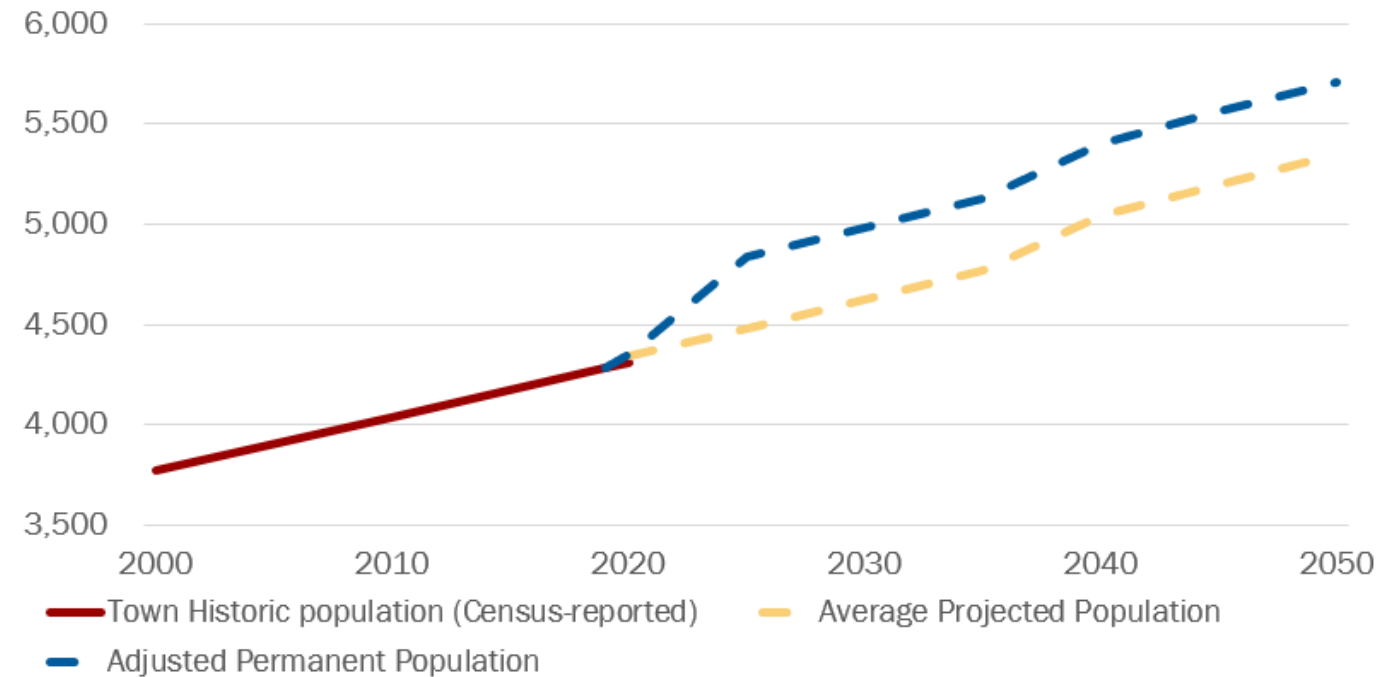
2019 Permanent Pop.

- **4,281** Town Limits
- **5,839** Town Limits and ETJ

Adjusted Permanent Pop.
Projection

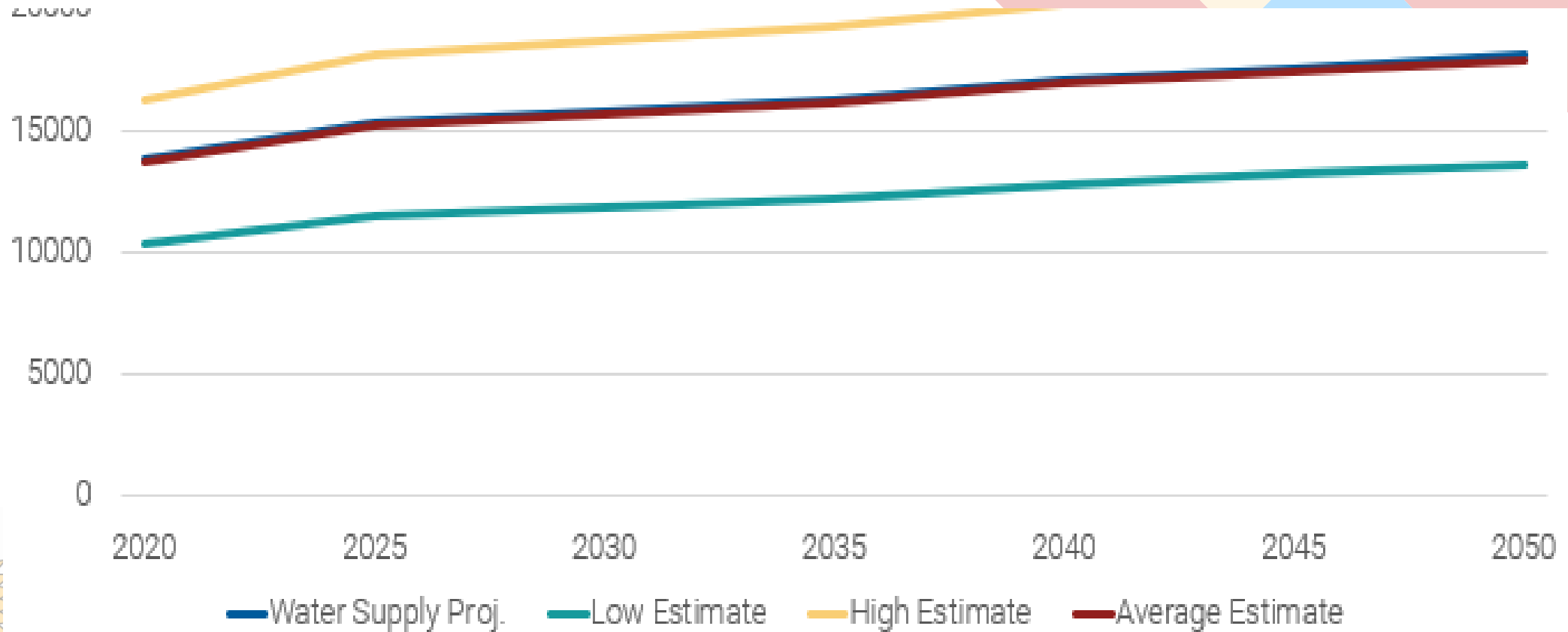
- Historical growth
- Government projections
- New developments

Adjusted Permanent Population Projection



Peak (Seasonal + Permanent) Population Projection

- **17,858** Peak Season (July) Population



Demographics 2019

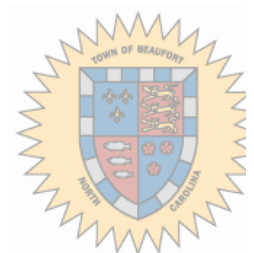
■ Age

- Largest cohort **55 to 64**
- **50.3** median age

■ Economy

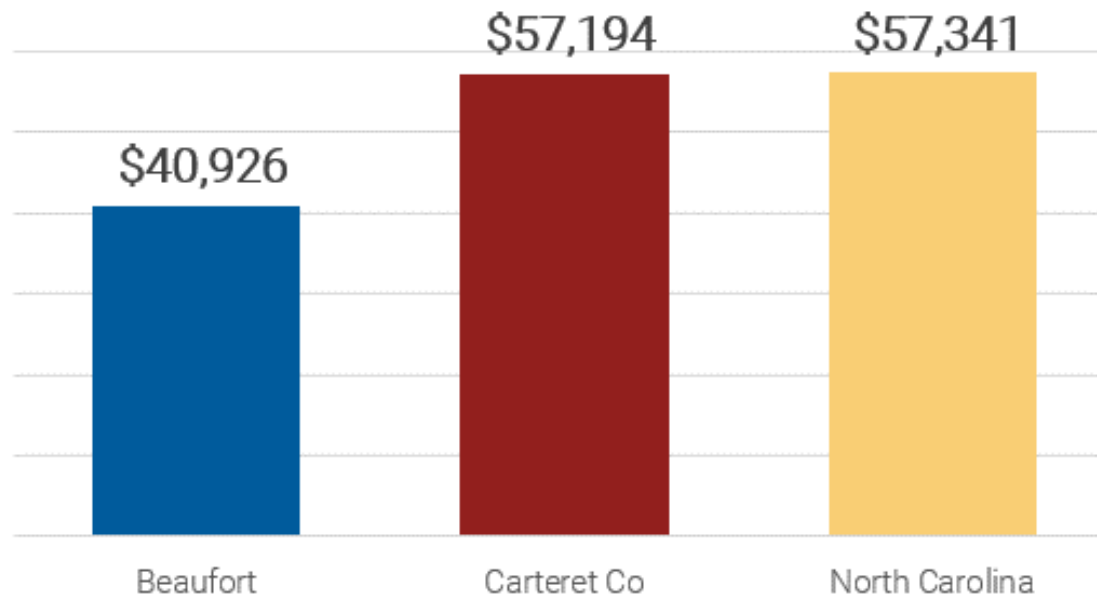
- **26.33%** Arts, entertainment and recreation, accommodations, and food services
 - Increased since 2010
- **18.32%** Education and health services

■ Commuting



Income and Housing

Median Household Income



2019 Housing Units

Municipal Limits	2,672
ETJ	1,159
Total	3,381

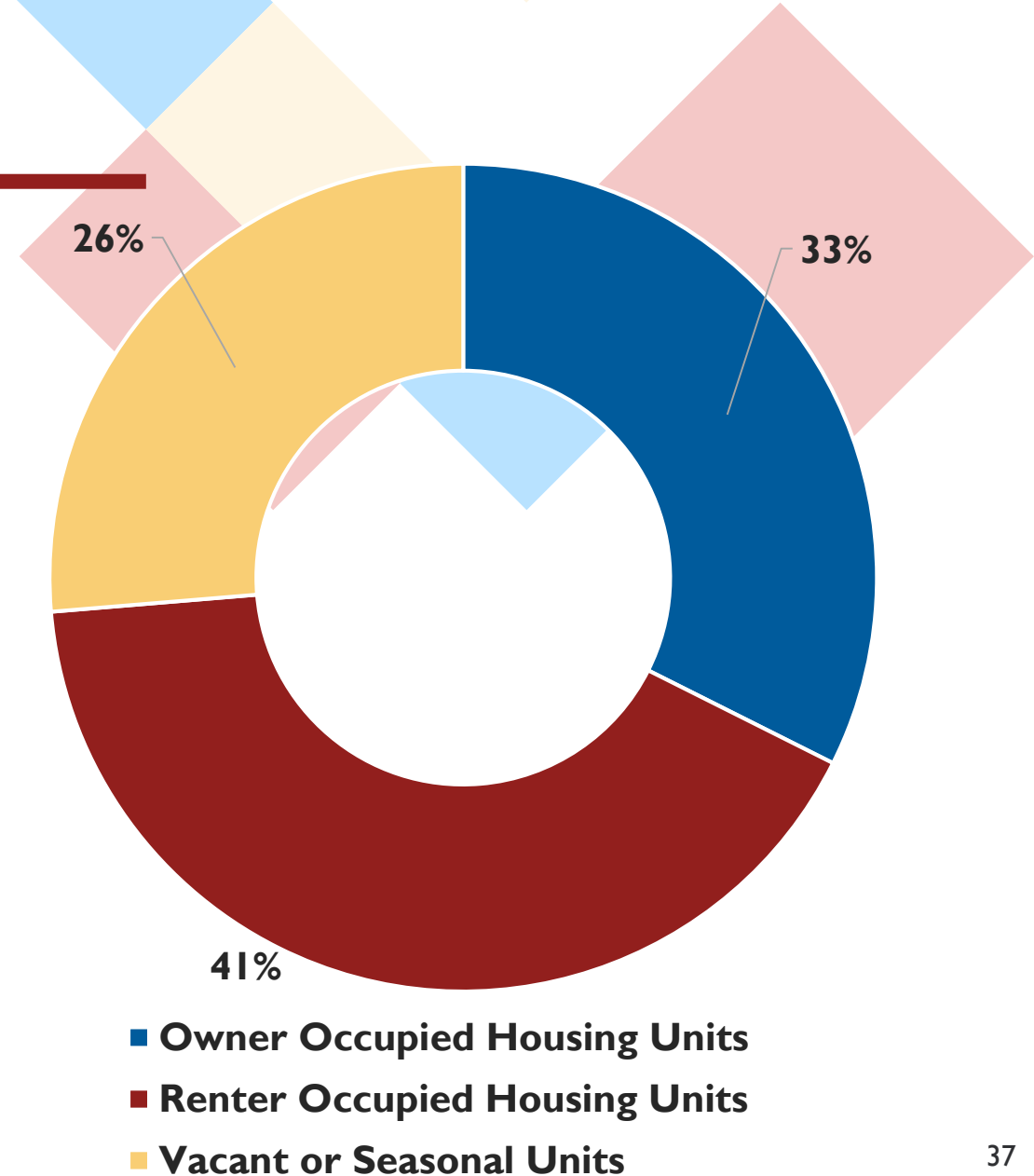
2018 Median Home Value

Municipal Limits	\$226,647
Municipal Limits and ETJ	\$241,061
North Carolina	\$180,600



Seasonal Housing

- 26% of housing units in Beaufort are not primary residences (shown in yellow)
 - Includes second homes and seasonal rental homes.



Seasonal Housing

- Share of housing used for second homes and rentals is growing
- 10% more of the overall housing stock is now being used for second homes
- This reduces housing options for permanent residents

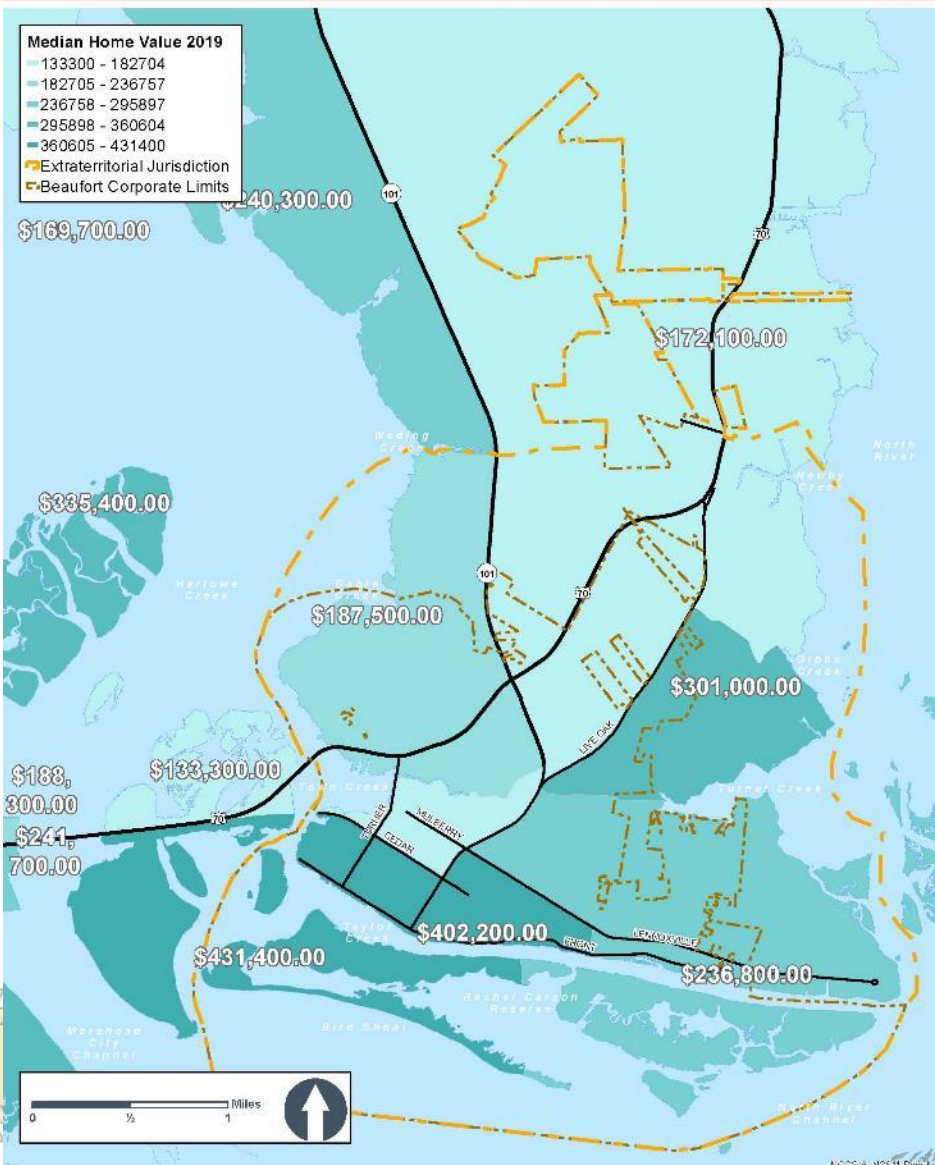
- Vacant homes as part of total housing stock

	2010	2019
Vacant	19%	27%
Vacant – for seasonal or occasional use	7%	17%

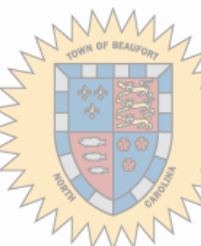
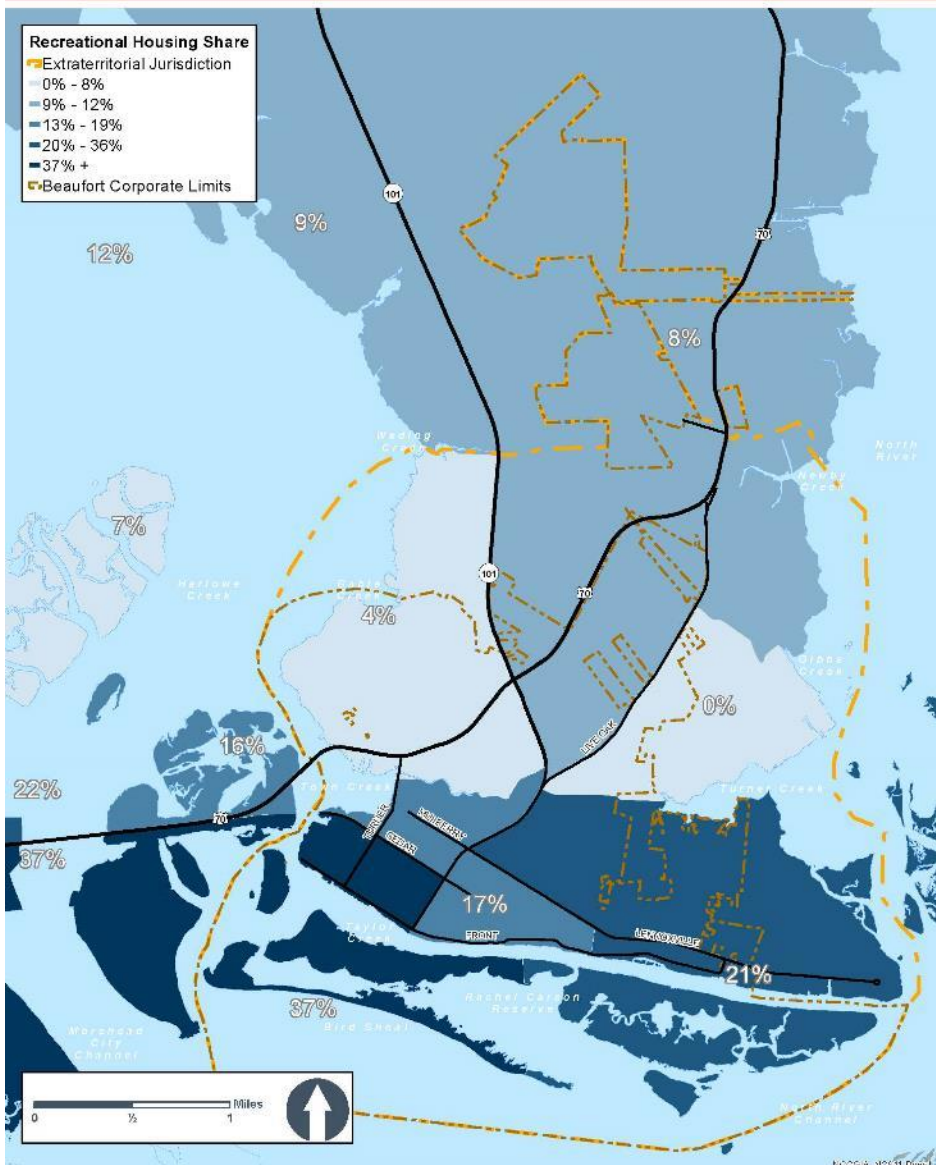


Socioeconomic Maps

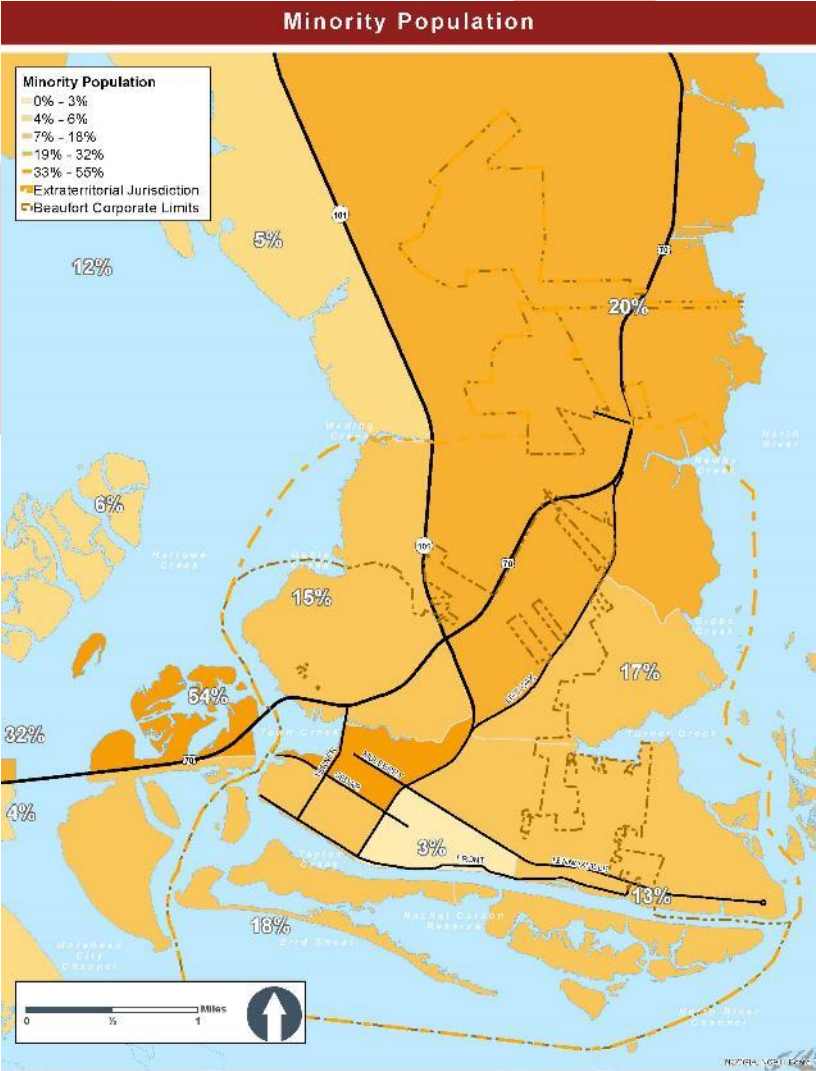
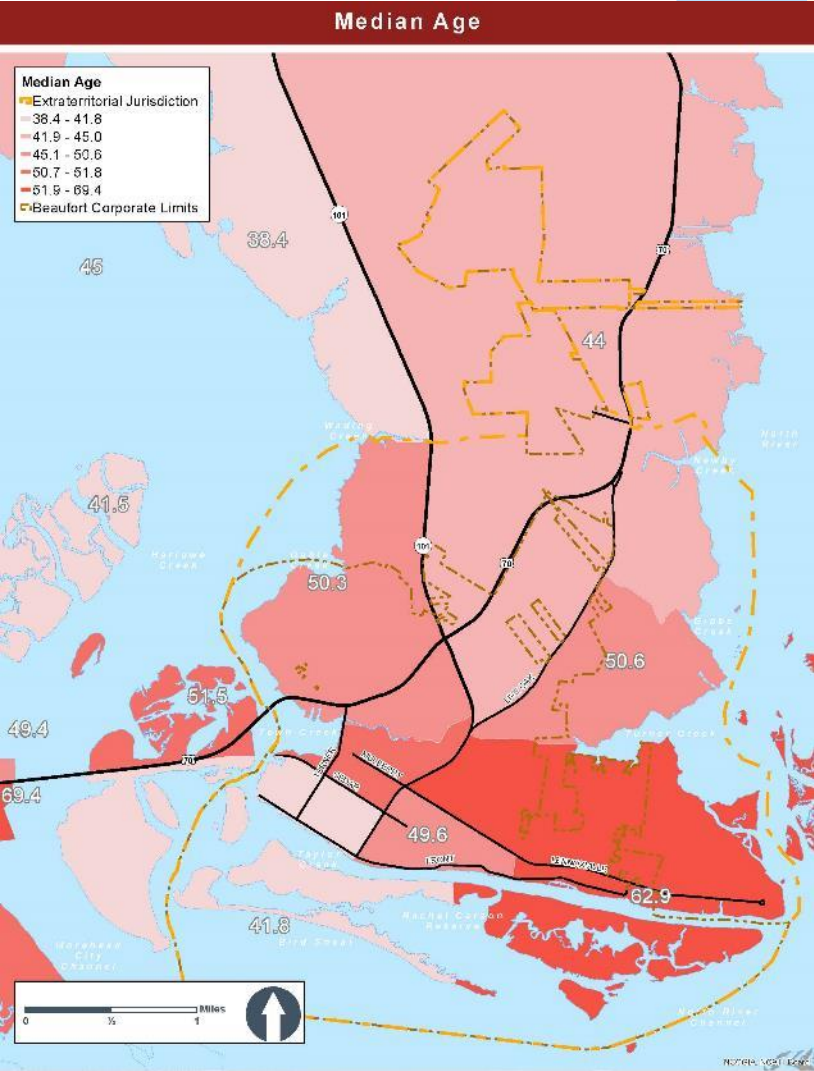
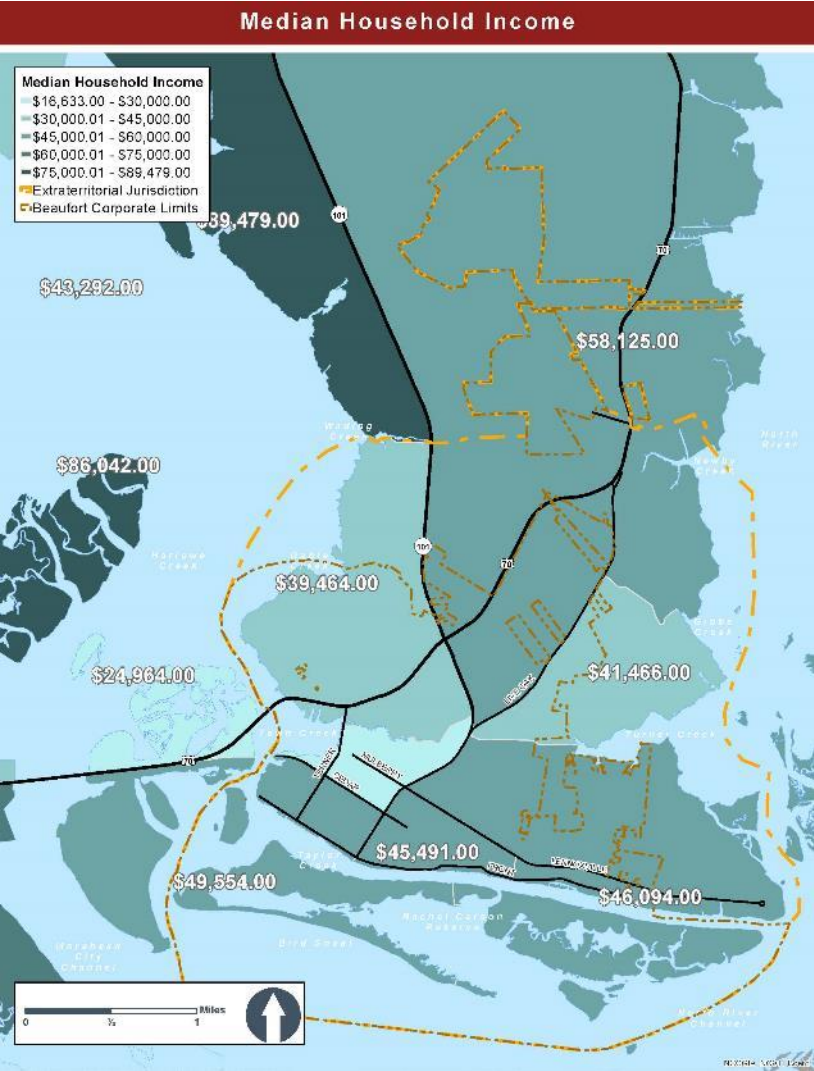
Median Home Value 2019



Recreational Housing Share



Socioeconomic Maps



Socioeconomic Takeaways

- Beaufort has a **lower household income**, but **higher home value**, than the state.
- Homes are increasingly being used for vacation homes in Town.
- Increase in tourism-focused employment sectors.





CAMA Issues and Assets

Significant Existing and Emerging Conditions

- Land Use
 - Existing Land Use
 - Future Land Use
- Development Trends
 - Residential Growth and Needs
 - Beau Coast and Beaufort East Village adding 800+ units
 - Uptown and Midtown
 - Areas of most anticipated growth
 - Historically have received less attention
 - Commercial revitalization efforts
- Infrastructure
 - Water and Sewer Services
 - Increasing demand with residential growth



Significant Existing and Emerging Conditions

- Transportation
 - Michael J. Smith Field Airport
 - Roadways
 - Future I-42
 - Active Transportation
 - 2018 Walk+Bike Plan recommendations
 - ADA Improvements
 - Signage and Wayfinding
 - Beaufort Entry Master Plan
 - Cart Culture



Significant Existing and Emerging Conditions

- Water Quality
 - Watershed Restoration Plan
 - Stormwater Advisory Committee
 - Stormwater Management
 - Reduce volume and pollution
 - 2017 goal to reduce stormwater runoff by 0.088 gallons per square foot
- Other Environmental Concerns
 - Sea Level Rise
 - Sea level rise expected to be 40% higher than the global average
 - Anticipated increase between 1.0 and 3.9 feet by 2060



CAMA Key Issues

- Public Access
- Land Use Compatibility
 - Limitations
 - Flood Risk
- Infrastructure Carrying Capacity
 - Water Treatment Plants
 - Wastewater Treatment Plant
- Natural Hazard Areas
 - Rachel Carson Reserve
- Water Quality
 - Davis Bay Watershed
 - Taylor Creek Watershed
 - Town Creek Watershed





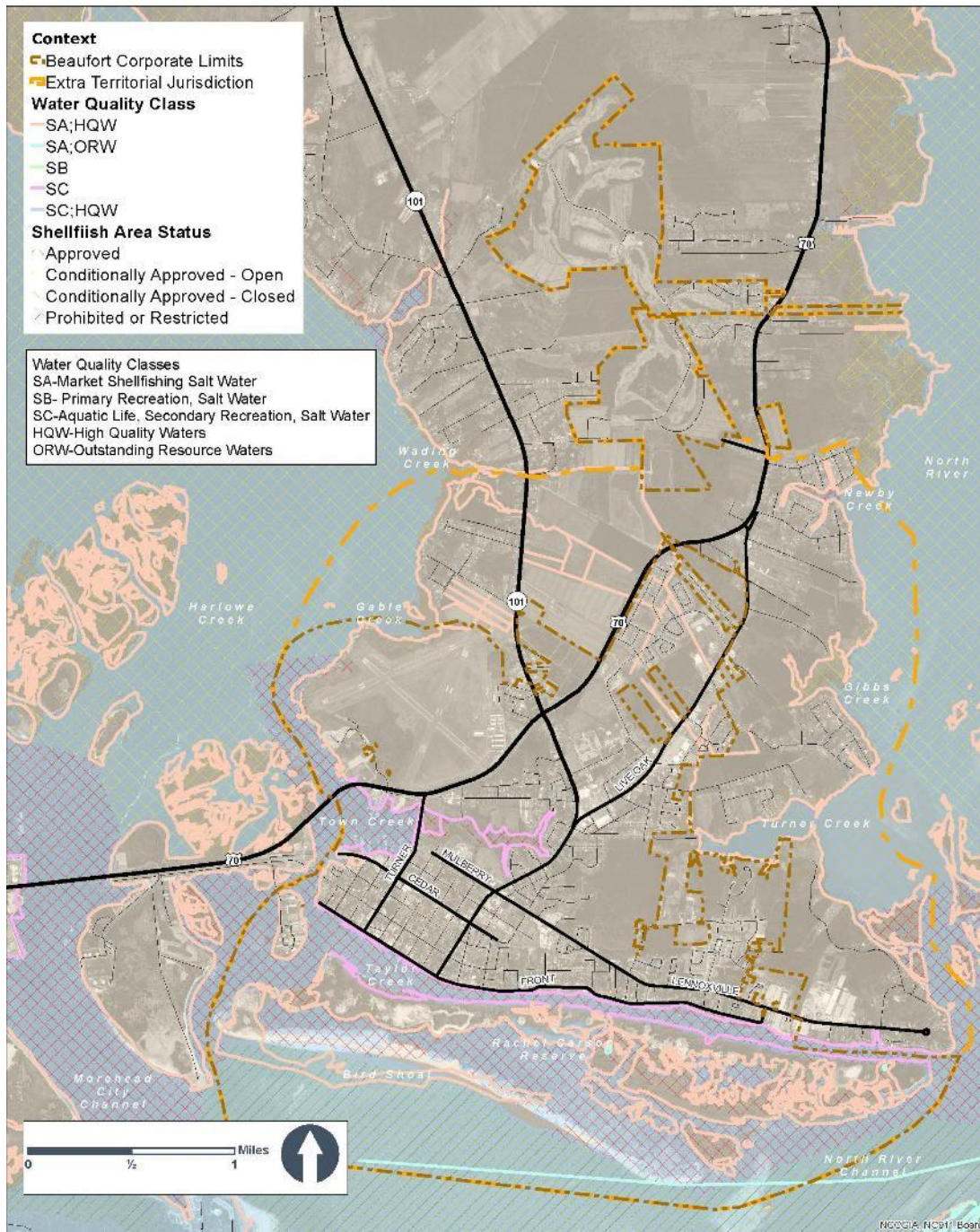
Mapping

Future Roads and Improvements



Average Annual Daily Traffic

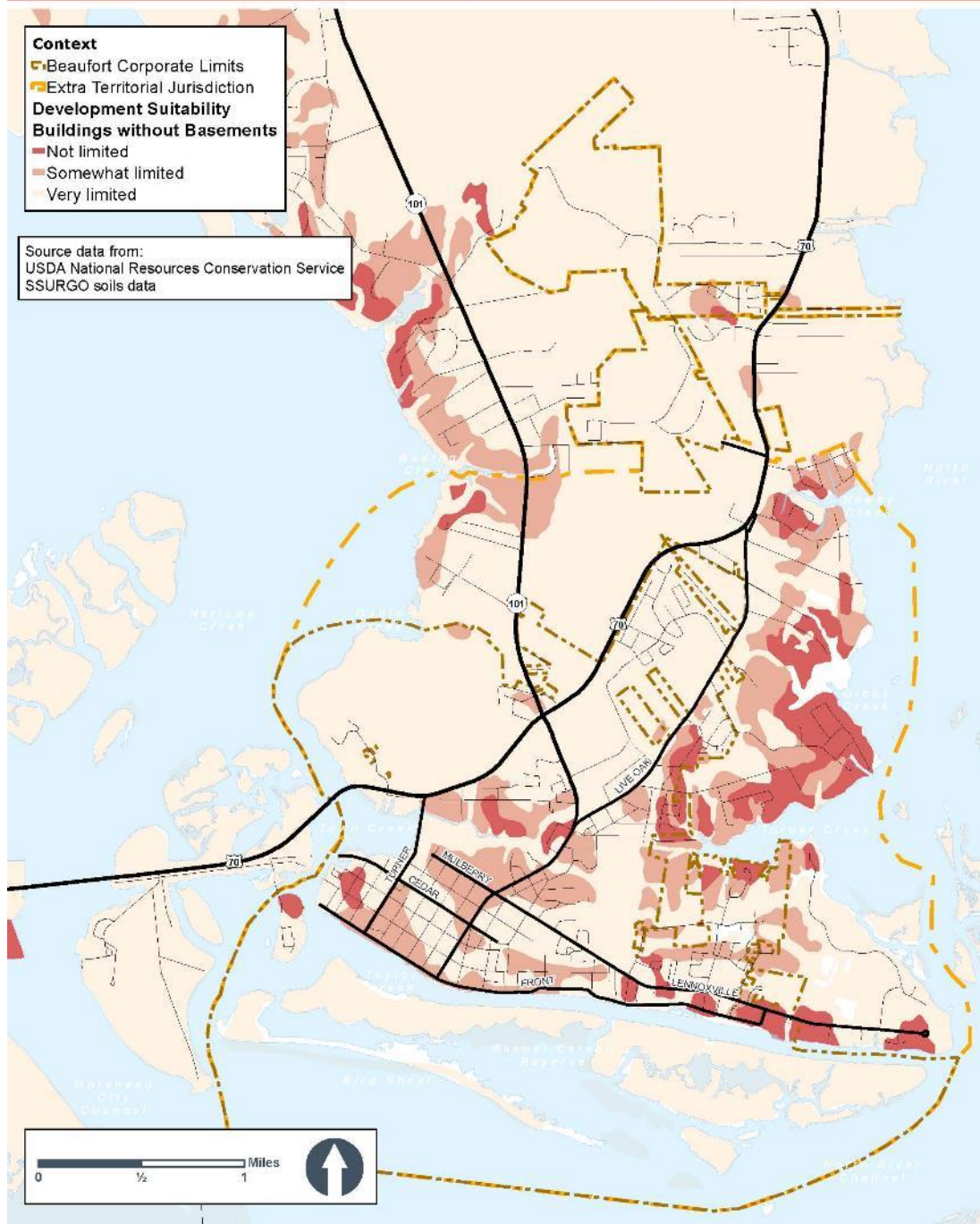




Soil Suitability for Development

- Context**
- Beaufort Corporate Limits
 - Extra Territorial Jurisdiction
- Development Suitability**
- Buildings without Basements**
- Not limited
 - Somewhat limited
 - Very limited

Source data from:
USDA National Resources Conservation Service
SSURGO soils data

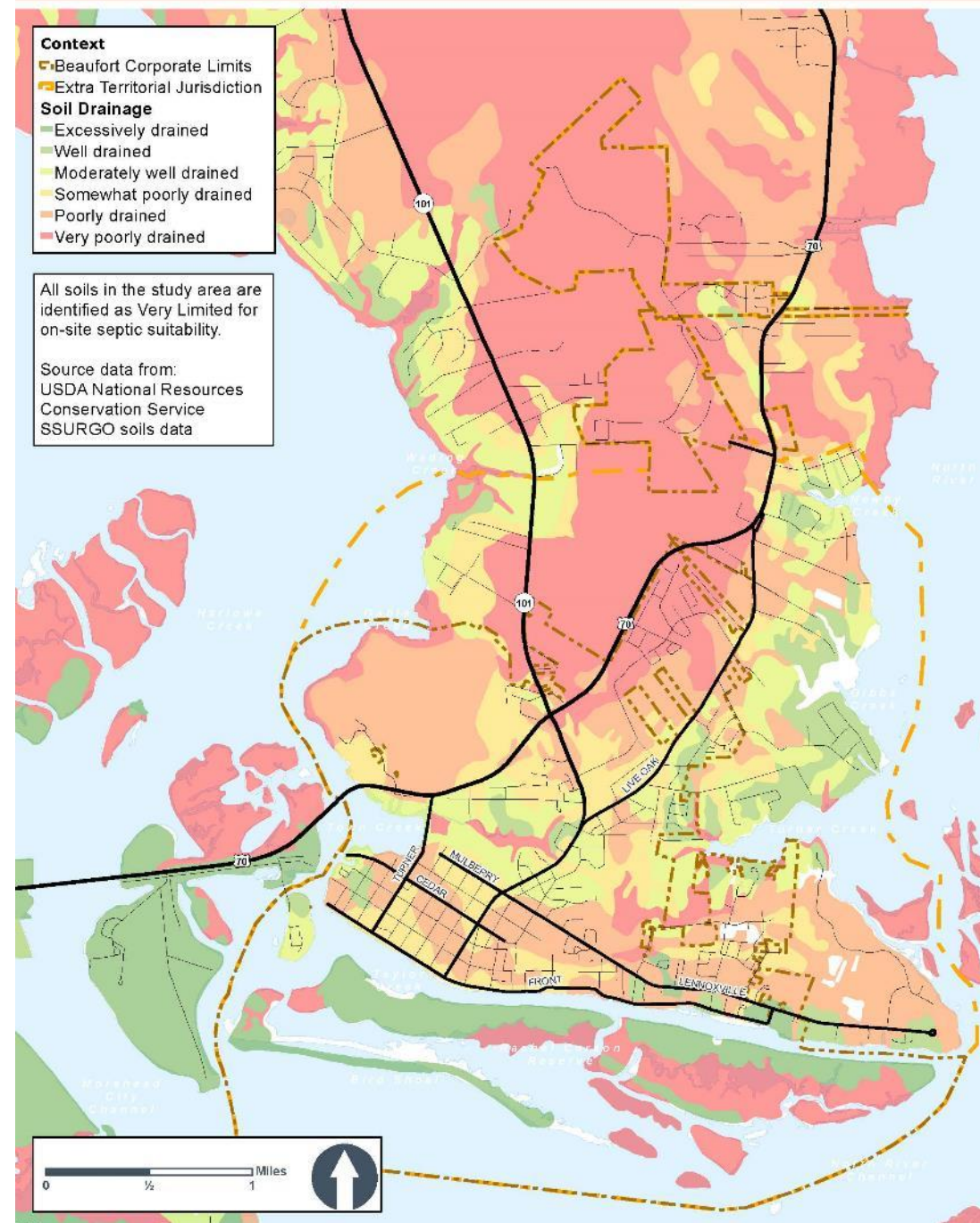


Soils

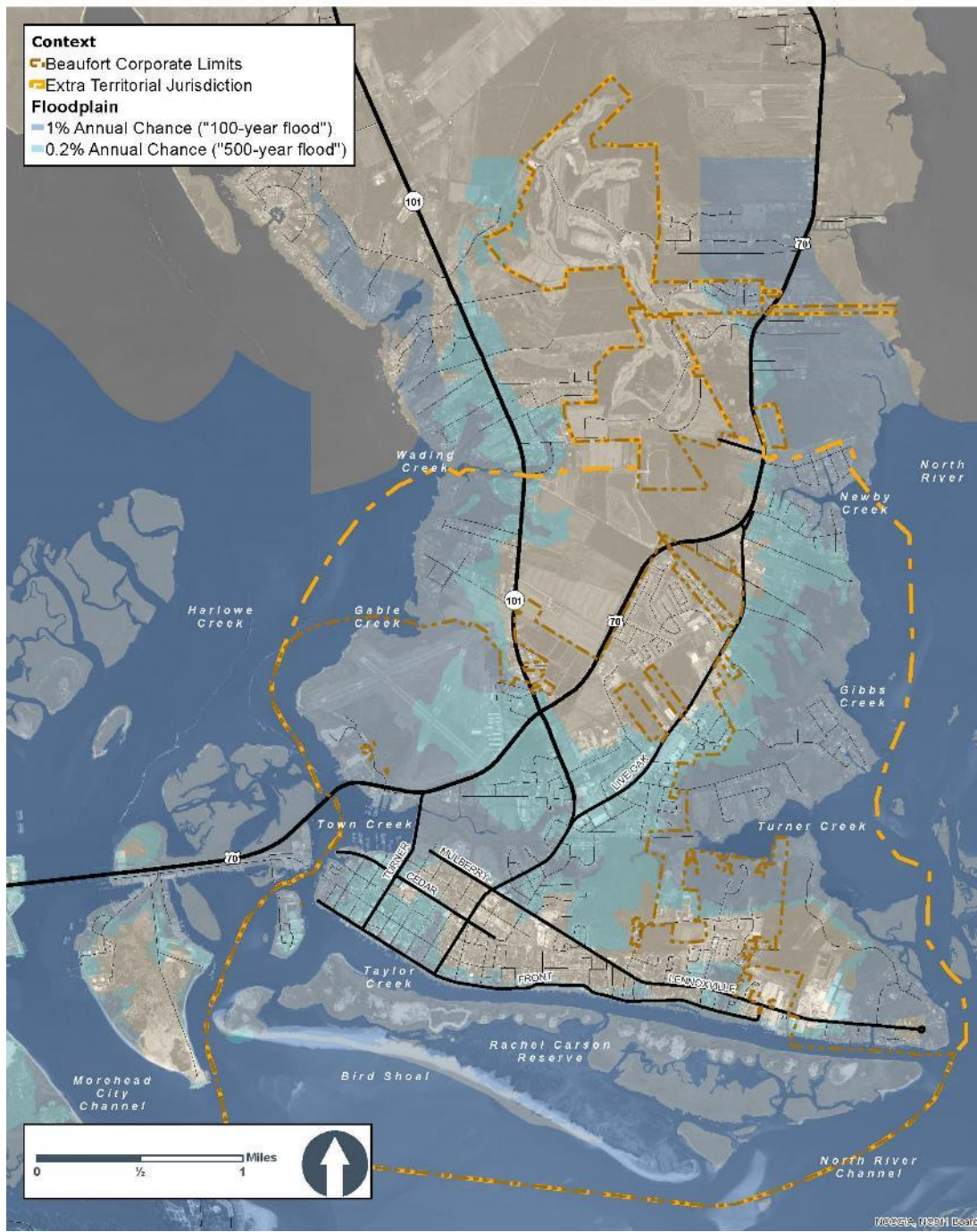
- Context**
- Beaufort Corporate Limits
 - Extra Territorial Jurisdiction
- Soil Drainage**
- Excessively drained
 - Well drained
 - Moderately well drained
 - Somewhat poorly drained
 - Poorly drained
 - Very poorly drained

All soils in the study area are identified as Very Limited for on-site septic suitability.

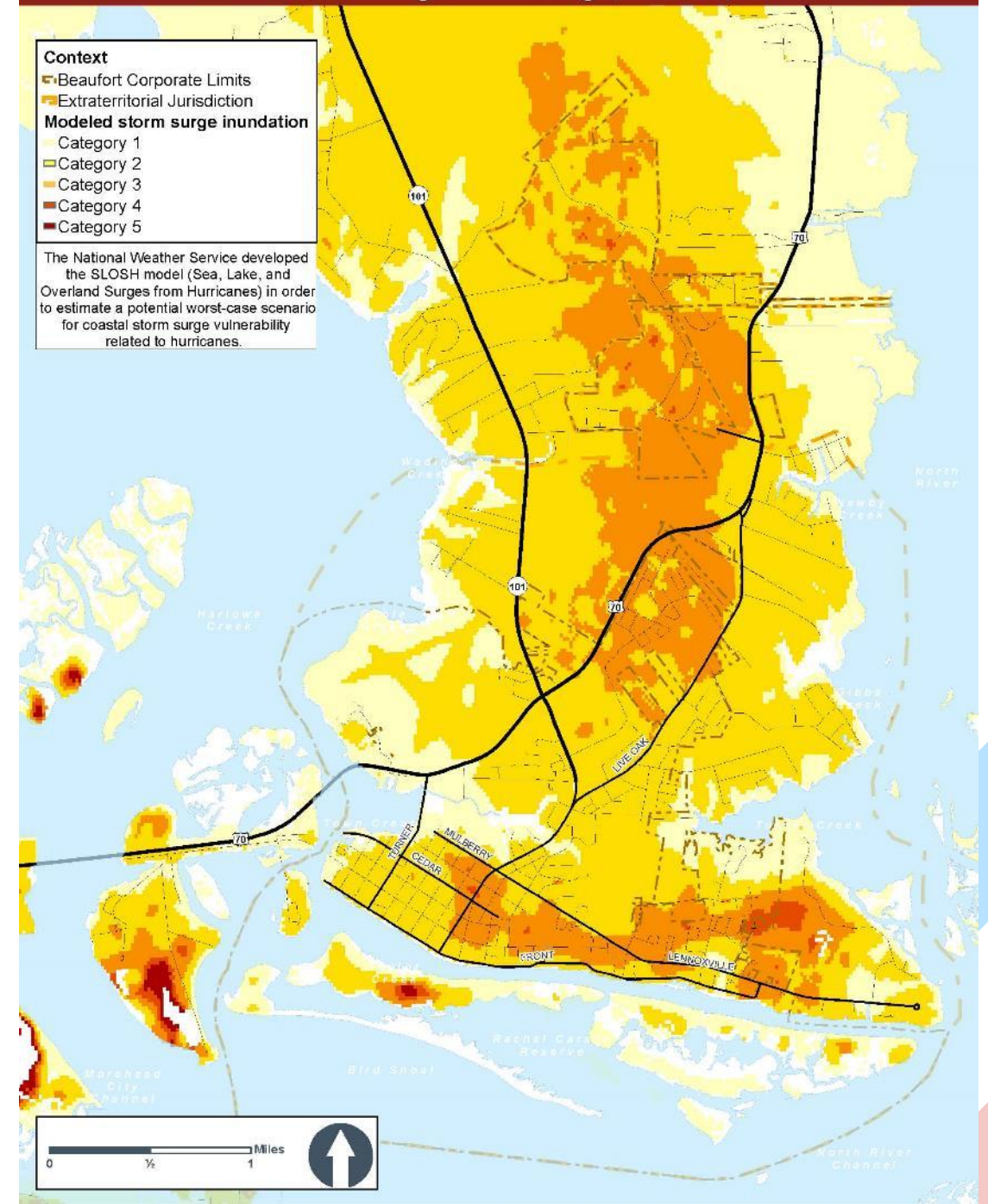
Source data from:
USDA National Resources Conservation Service
SSURGO soils data

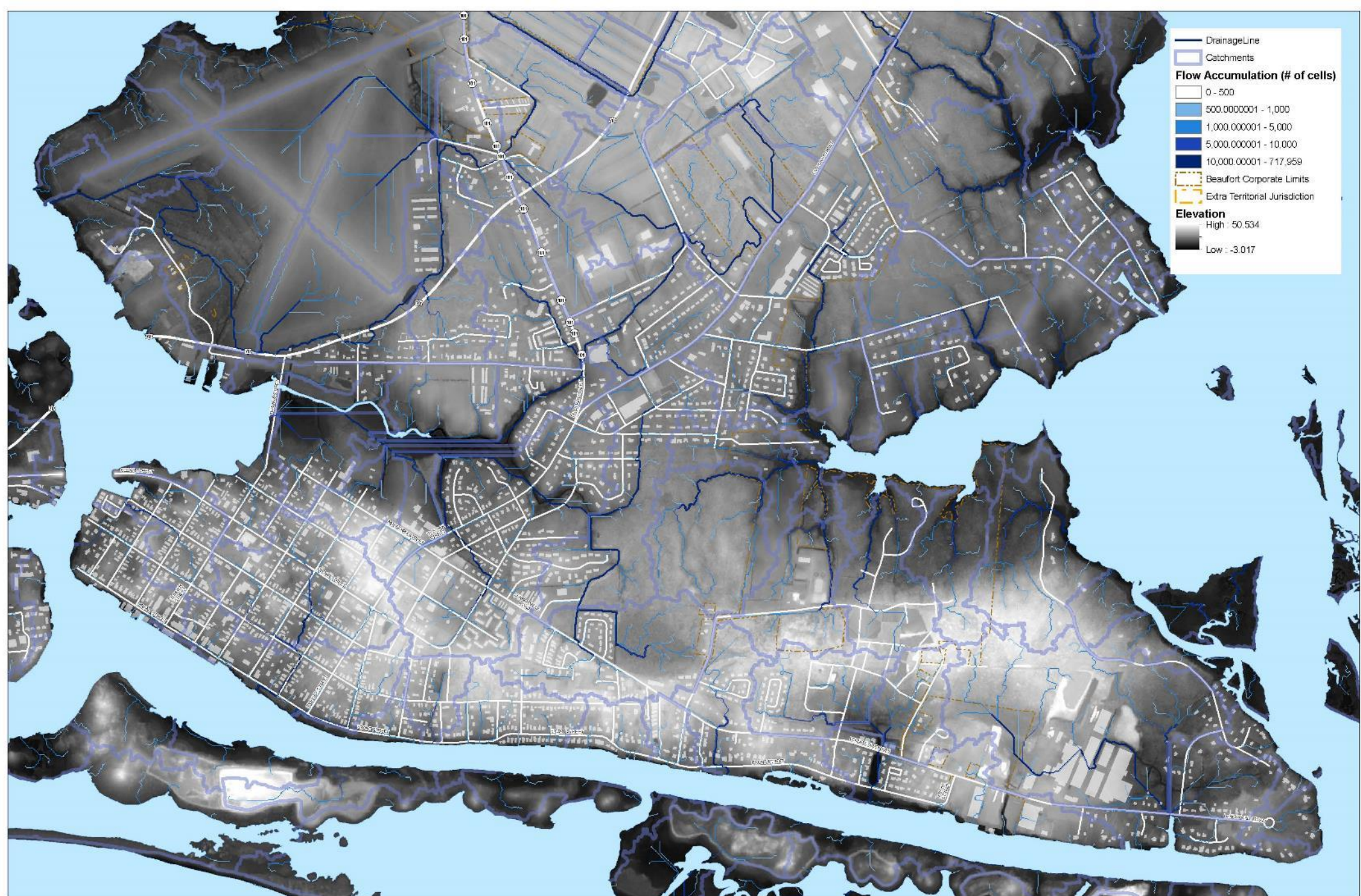


Floodplains



Storm Surge Modeling (SLOSH)





Environmental Vulnerability

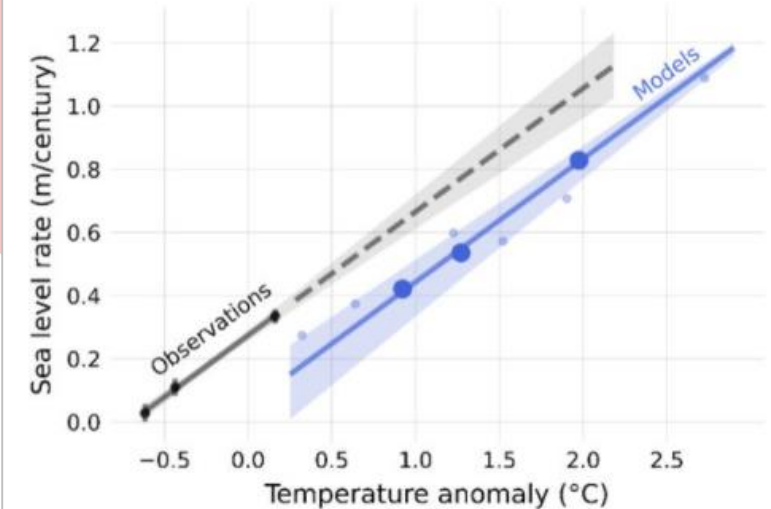
Changing Climate

Sea Levels Are Rising Faster Than Most Pessimistic Forecasts

New research indicates economies have to emit even less carbon than budgeted to keep oceans from rising.

By Jonathan Tirone

February 2, 2021, 12:00 AM EST



The warmer it gets, the faster the sea level rises. The sensitivity models of the future appear to be inconsistent with historical data. Credit: Aslak Grinsted

Greenland's glaciers could lose more ice than previously thought, raising concerns for sea level rise



By **Helen Regan** and **Drew Kann**, CNN

Updated 12:27 PM ET, Tue November 17, 2020



FEBRUARY 9, 2021

Arctic permafrost releases more carbon dioxide than once believed

by University of Copenhagen



Credit: Pixabay/CC0 Public Domain

How climate change is threatening Greenland 02:30



Responses to Changing Conditions

Risk Rating 2.0



FEMA

The National Flood Insurance Program (NFIP) is redesigning its risk rating by leveraging industry best practices and current technology, FEMA will deliver rates that are fair, make sense, are easier to understand and better reflect a property's unique flood risk. FEMA calls this effort Risk Rating 2.0.



Risk Rating 2.0 implementation has been deferred To October 1, 2021.

While the agency initially announced that new rates for all single-family homes would go into effect nationwide on October 1, 2020, some of the agency's analyses of the proposed rating structure include its relationship to communities behind implementation of Risk Rating 2.0 by one year to

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Business

City Bonds May Be Hit by Climate Change. Moody's Can Now See How

By Romy Varghese

October 15, 2019, 8:56 AM EDT

- ▶ Rating company to gauge how cities tackle environmental risks
- ▶ Cities may see downgrades if plans fall too far from average



ULI Urban Land Institute

HEITMAN
A REAL ESTATE INVESTMENT MANAGEMENT FIRM

CLIMATE RISK
AND REAL ESTATE
INVESTMENT
DECISION-MAKING

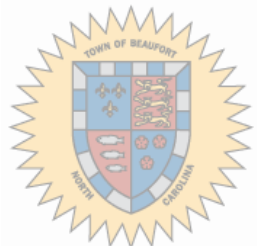


FIRST STREET
FOUNDATION



Rising Seas Erode \$15.8 Billion in Home Value from Maine to Mississippi
Researchers add Maryland, Delaware, Pennsylvania to ongoing analysis
For Immediate Release: Wednesday, February 27, 2019

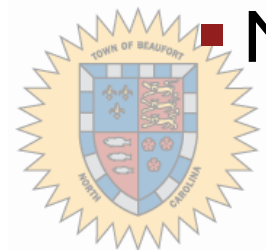
Data scientists from First Street Foundation and Columbia University have expanded their peer-reviewed housing market research to include approximately 3.7 million coastal properties in Maryland, Delaware, and Pennsylvania, finding increased tidal flooding caused by sea level rise has eroded \$862.1 million in relative property values between 2005 and 2017. This section of the Mid-Atlantic completes the researchers' analysis of the Eastern Seaboard, bringing the total loss among all 15 East Coast states, Alabama, and Mississippi to \$15.8 billion. The Foundation's previous research has been reported by [The Boston Globe](#), [CBS Moneywatch](#), [The Wall Street Journal](#), [Bloomberg](#), [Axios](#), [The Washington Post](#), and [The Christian Science Monitor](#).



Changing Climate

- Temperature increases: *very likely*
- Precipitation increase: *likely*
- Extreme precipitation events, frequency and intensity: *very likely*
- 2100 sea level rise between 1.5 to 3.5 feet
- High tide flooding a *daily occurrence* by 2100
- Increase in heavy precipitation accompanying hurricanes : *very likely*
- Severe thunderstorm events: *likely*
- Increasing coastal storm surge flooding: *virtually certain*
- More intense droughts: *likely*

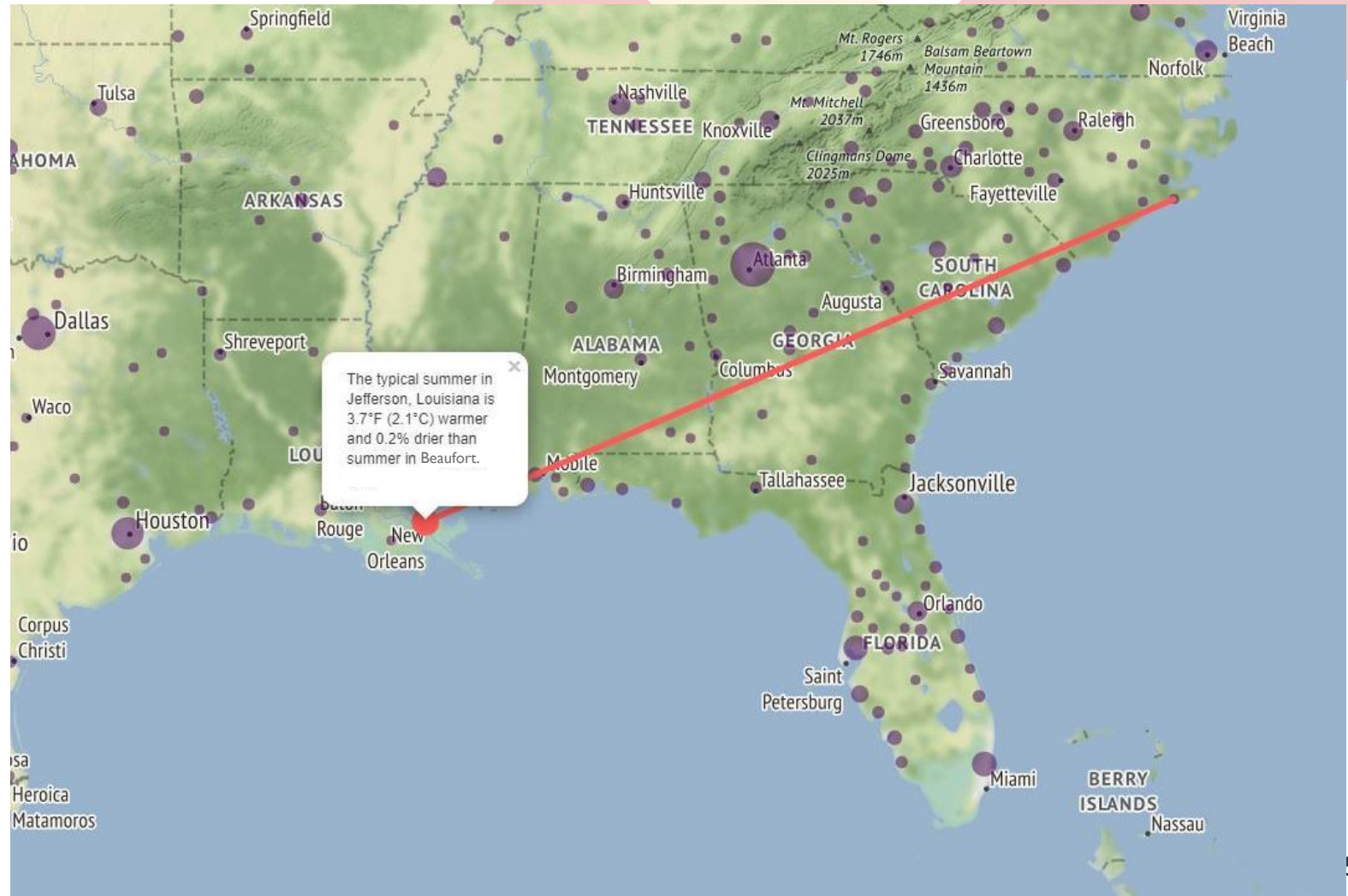
Likelihood Term	Probability of Outcome
<i>Virtually certain</i>	99–100%
<i>Very likely</i>	90–100%
<i>Likely</i>	66–100%
<i>About as likely as not</i>	33–66%
<i>Unlikely</i>	0–33%
<i>Very unlikely</i>	0–10%
<i>Exceptionally unlikely</i>	0–1%



Climate

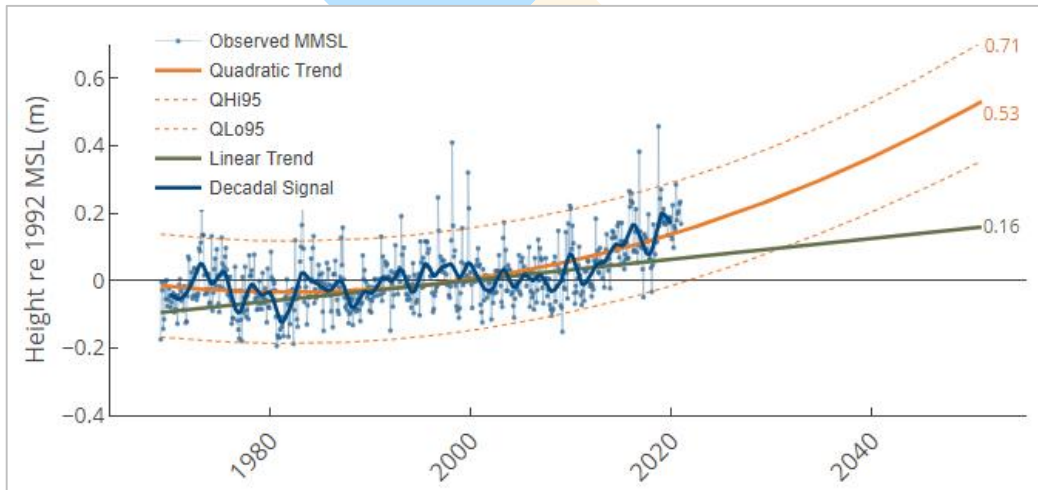
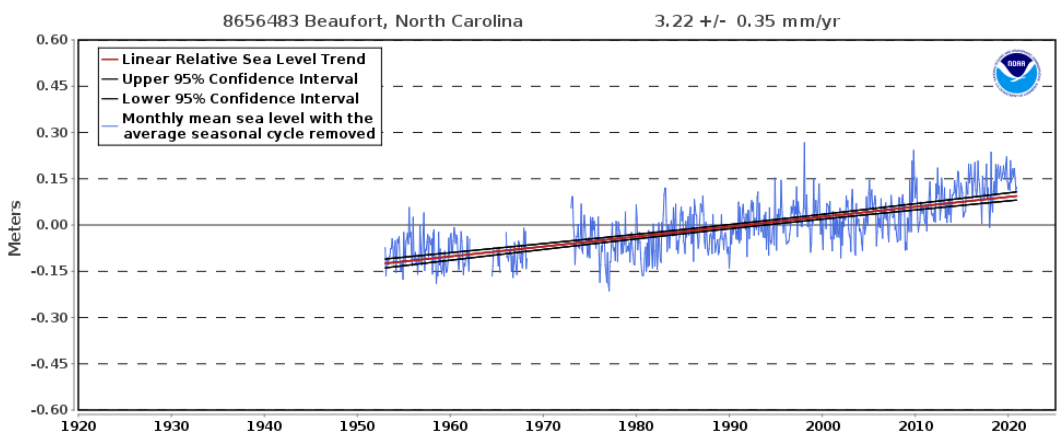
- 2080 climate projected to be 3.7°F warmer and about as humid as currently

(University of Maryland Center for Environmental Science)



Sea Levels

- Historic Tide Gauge Data = avg. 3.22 mm/yr (NOAA, past 68 years)



- 2050 Projection (Wilmington) = **1.74 feet** above 2000 levels or **1.3 feet** higher than today

(VA Institute of Marine Science)

- Rate of sea level rise is accelerating (VA Institute of Marine Science)

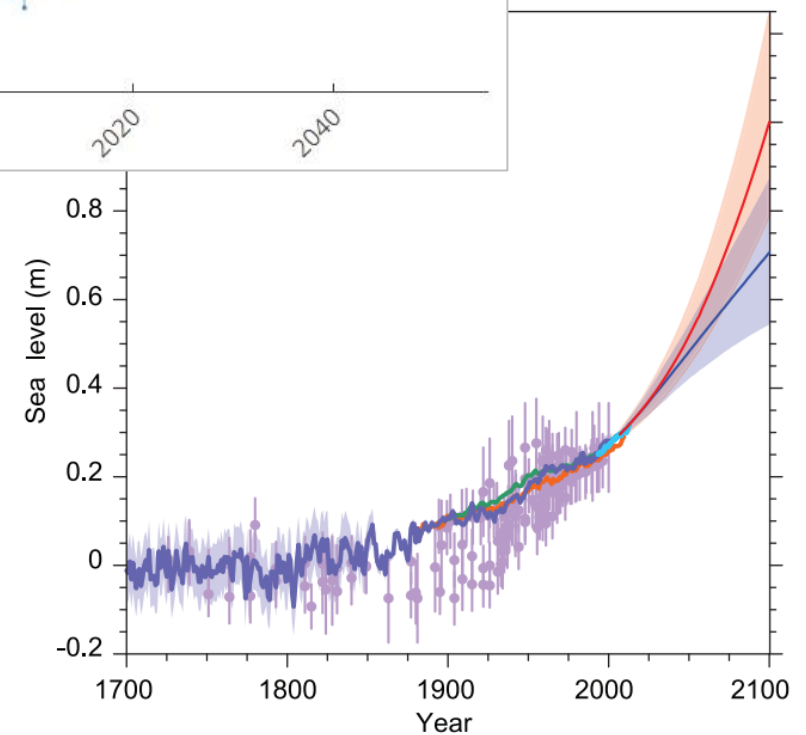
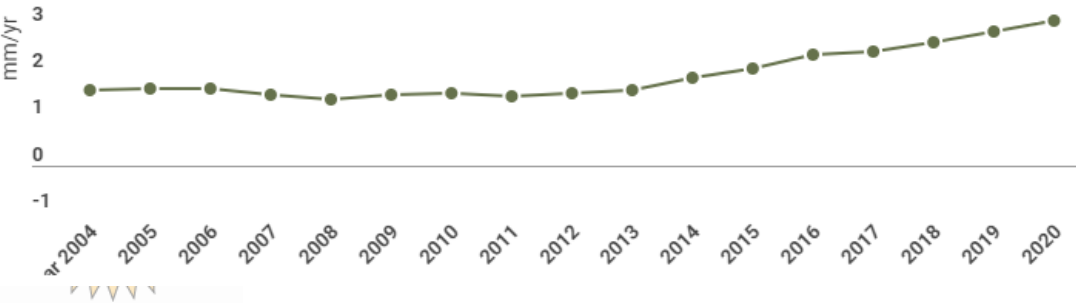
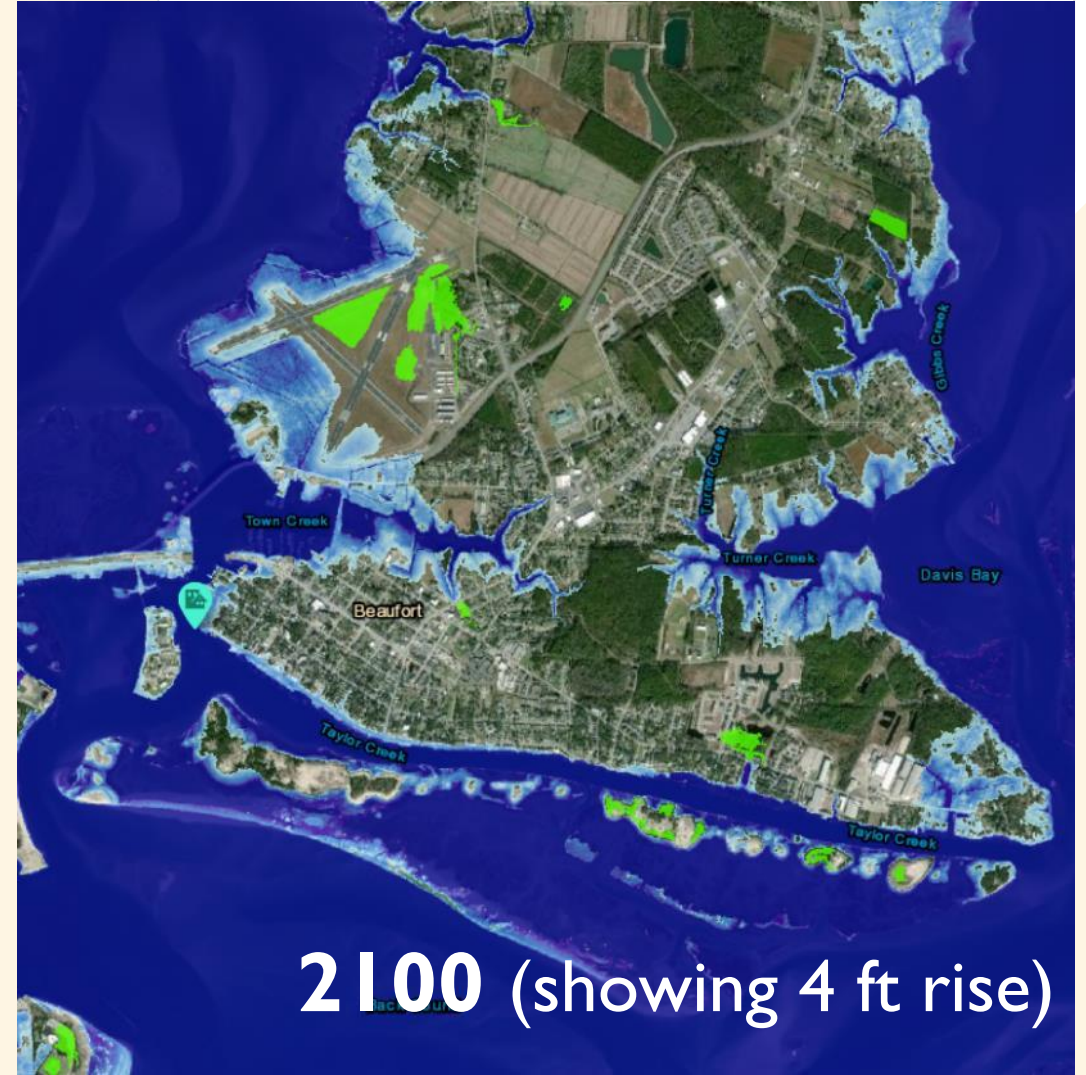
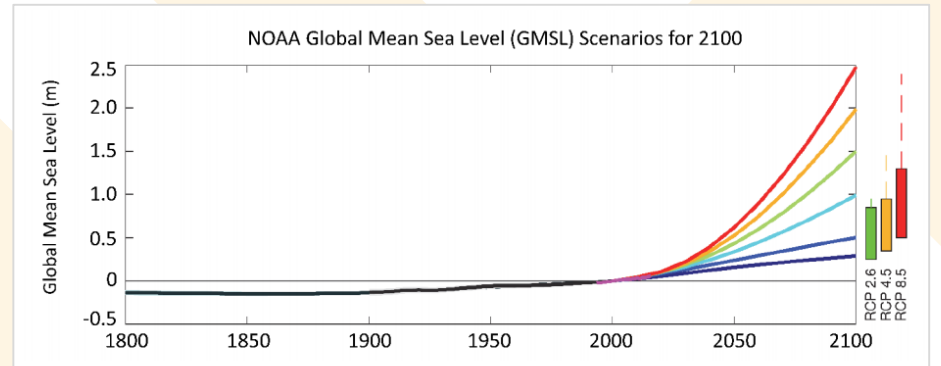


Figure 13.27 | Compilation of paleo sea level data, tide gauge data, altimeter data (from Figure 13.3), and central estimates and likely ranges for projections of global mean sea level rise for RCP2.6 (blue) and RCP8.5 (red) scenarios (Section 13.5.1), all relative to pre-industrial values.

Rising Seas, IPCC 5th Report, 2013

NOAA Sea Level Rise Viewer

(Intermediate Scenario)



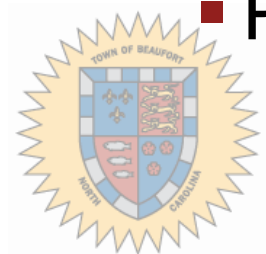


Emerging Themes

Discussion of Plan Focus Areas*

- Infrastructure (water, sewer, stormwater)
- Environmental water quality
- Natural hazards mitigation/preparation
- Affordable housing
- Tourism economy and short-term rentals
- Bike/ped facilities, including ADA accessibility
- Parks and recreation
- Public water access points

*In addition to other plan components, such as land use, historic preservation, downtown, etc.





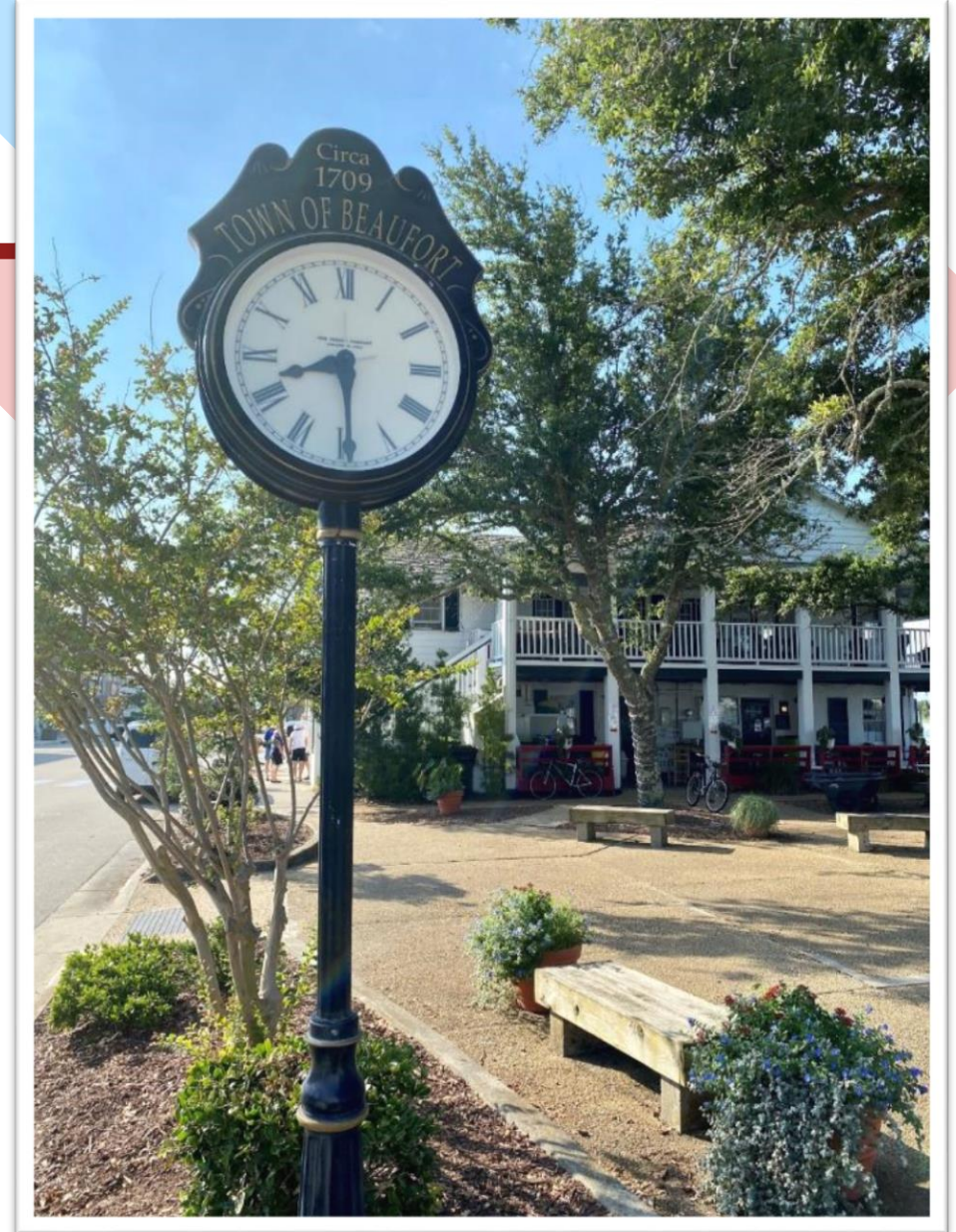
Questions or Comments?



Next Steps

Next Steps

- Survey #1 Open Now
 - <https://www.surveymonkey.com/r/9V6C6DY>
 - Closes 3/10
- Public Meeting #2
 - 3/23
- Survey #2
 - 3/23 to 4/13
- Steering Committee Meeting
 - 5/6





Thank you.

Comments? Questions?

Visit the project webpage at: www.beaufortnc.org/future

Email your thoughts to: k.allen@beaufortnc.org

Or call the Planning Department at: (252) 728-2142