Southern Shores Comprehensive CAMA Land Use Plan

Project Overview

Who Is Involved

+ Planning Board
+ Town Council
+ Town staff and members of key partner and/or regulatory agencies
+ Members of the public

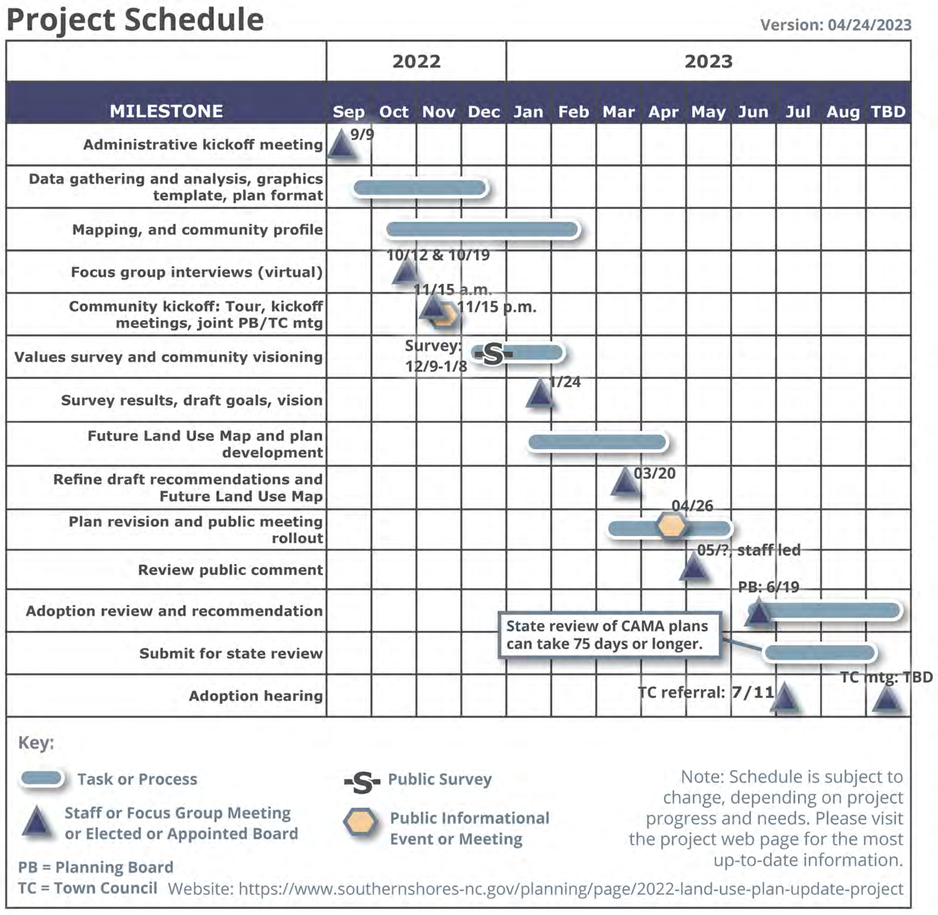
Public Engagement Milestones

+ Kickoff meetings with key local leadership and Town staff
+ Community Tour
+ Public open house meetings and listening sessions
+ Public Survey, available online and ran from Dec 9, 2022 through to January 9, 2023
+ Regular steering committee meetings
+ Regular staff coordination calls
+ Public adoption hearings (Planning Board and Town Council)
+ State review and certification process by the Coastal Resources Commission (CRC)

Project Schedule

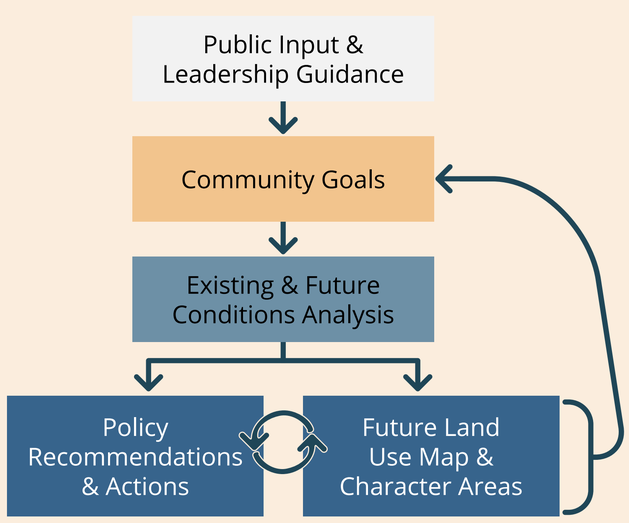
This working schedule will be updated as the planning process progresses.

Project Schedule Version: 04/24/2023



Plan Objectives and Components

Developing & Achieving the Vision



When a community planning process works correctly, the input collected informs the development of community-supported goals. These goals are combined with analysis of existing and projected future conditions and this leads to the development of recommended for policies, actions, and land use decision-making. As these recommendations are implemented, they should help move the community toward achieving their desired goals.

Planning Jurisdiction

In accordance with state law, the Town of Southern Shores may enforce planning and zoning powers within its corporate town limits and ExtraTerritorial Jurisdiction (ETJ). These areas comprise the study area for this plan update.

Study Area Overview Map

STEWART

Southern Shores Comprehensive CAMA Land Use Plan

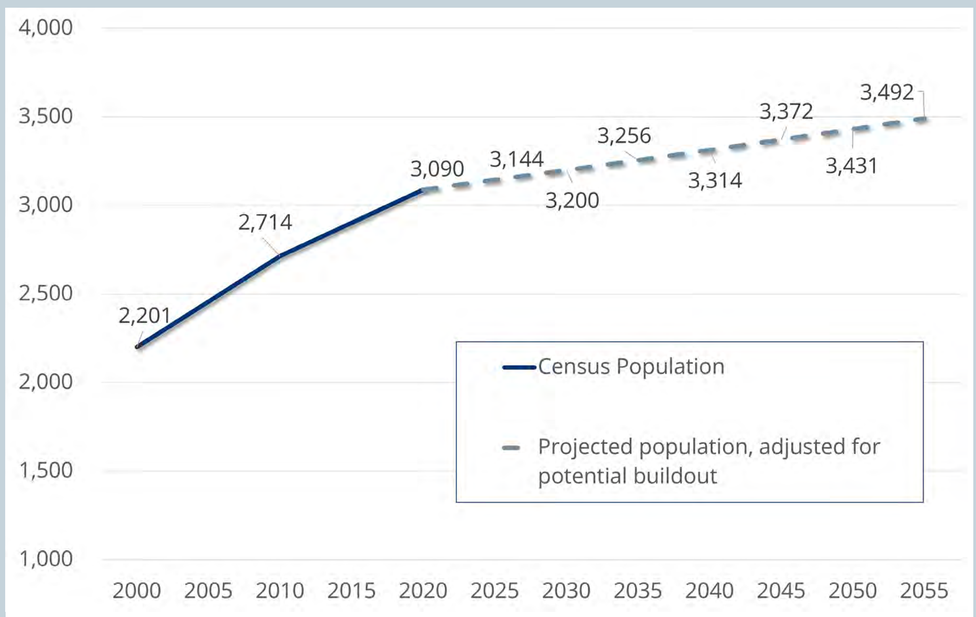
Community Snapshot

Permanent Population

The permanent population estimate for Southern Shores in 2020 is 3,090. Since 2000, the population has increased by slightly over 40%, bringing close to 900 new full time residents to the area.

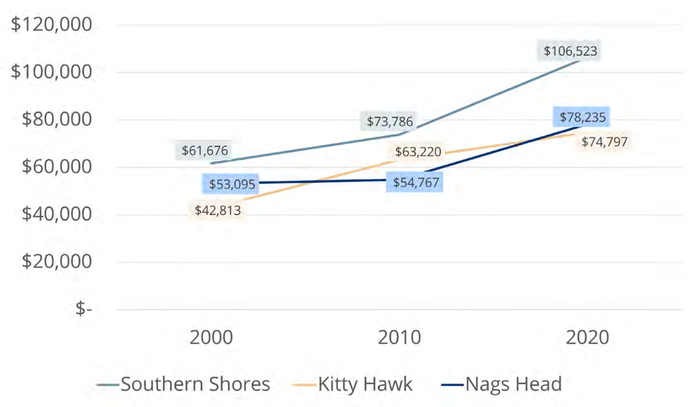
Population Projections

The Coastal Area Management Act (CAMA) requires population projections at 5-year intervals for the next 30 years. These permanent population projections were created using the average annual growth rate between 2010 and 2020, modified by an estimate of the remaining vacant parcels.



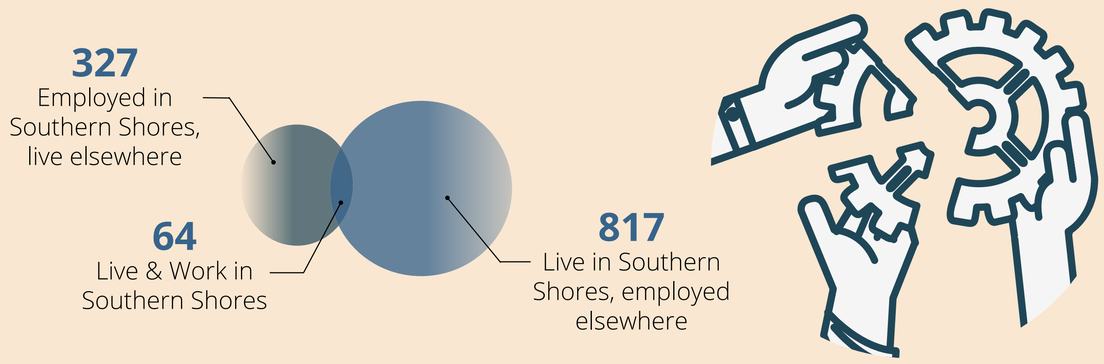
Income

Median household income in Southern Shores has increased 73% since 2000.



Employment

Major industries in Southern Shores are construction, real estate, and professional scientific, & technical services. The largest growing employment sectors from 2010 to 2019 is the construction industry. Over 800 people in Southern Shores are employed elsewhere. Only 327 people who live outside of Southern Shores and are employed in Southern Shores. 64 people live and work in Southern Shores.



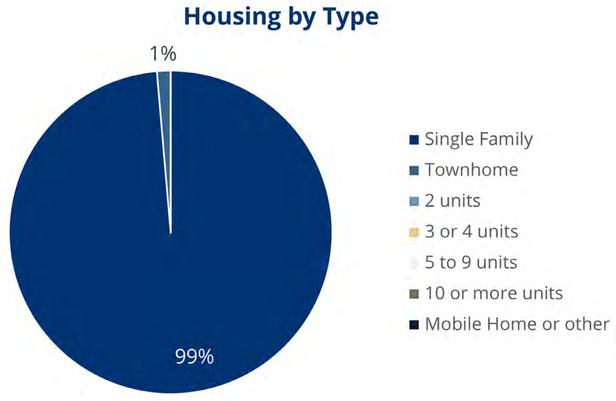
Housing Units

2,706
HOUSING UNITS

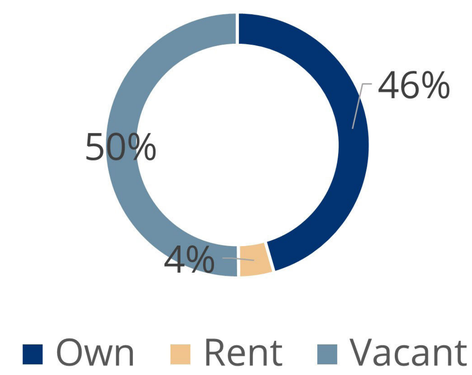
$475,900
MEDIAN HOME VALUE

DARE COUNTY
$302,400
NORTH CAROLINA
$182,100

Housing Types in the Study Area



Own / Rent



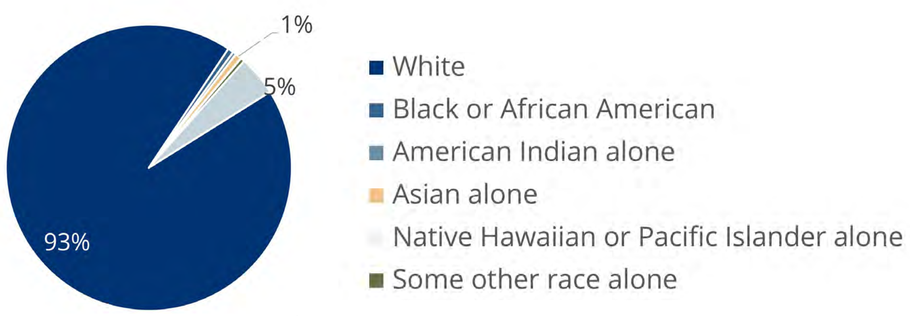
Housing

According to Dare County tax parcel records, there 2,706 occupied housing units in the municipal limits. Decennial Census data indicates 46% of homes are owner-occupied, 50% are renter-occupied, and 4% of homes are considered vacant. "Vacant" includes homes that are rented, for sale, sold but not occupied, seasonal units, units for migrant workers, and other units.

Educational Attainment

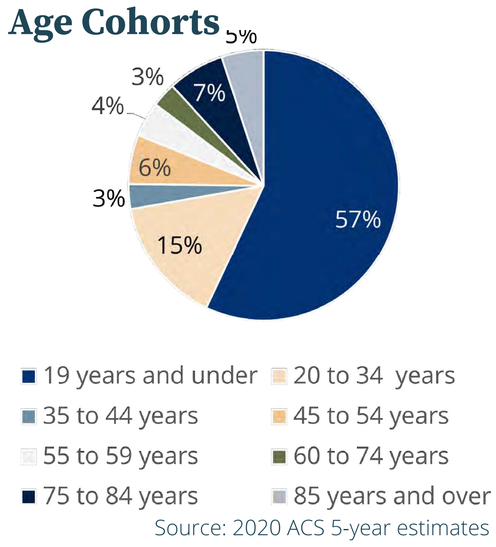
Thirty-one percent (31%) of Southern Shores' population has a bachelor's degree. Twenty-seven percent of the population has a graduate or professional degree.

Race



Source: 2020 Decennial Census

Age Cohorts



Source: 2020 ACS 5-year estimates

Age

The median age in Southern Shores has increased from 55.8 in 2010 to 58.7 in 2020.

58.7
Median Age

Data Sources

Data provided by US Decennial Census, the American Community Survey, Dare Count tax parcel records, and ESRI.

STEWART

Southern Shores Comprehensive CAMA Land Use Plan

Final Survey Results

Overview

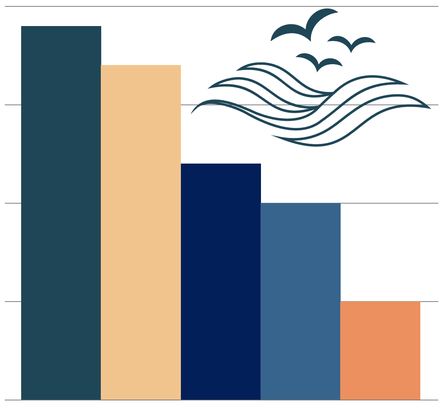
The public survey was made available on December 9th, 2022, and ran until January 9th, 2023. In total, 583 responses were collected.

The survey consisted of 11 questions. This included two questions for the respondents to describe their relation to the Town of Southern Shores, and a question at the end of the survey to allow participants to leave their email address.

The remaining 8 questions included two questions regarding the previous Land Use Plan for Southern Shores, two questions on concerns and priorities for the future of the Town, two open-ended questions, and two questions on specific potential policy or infrastructure changes that could impact the community.

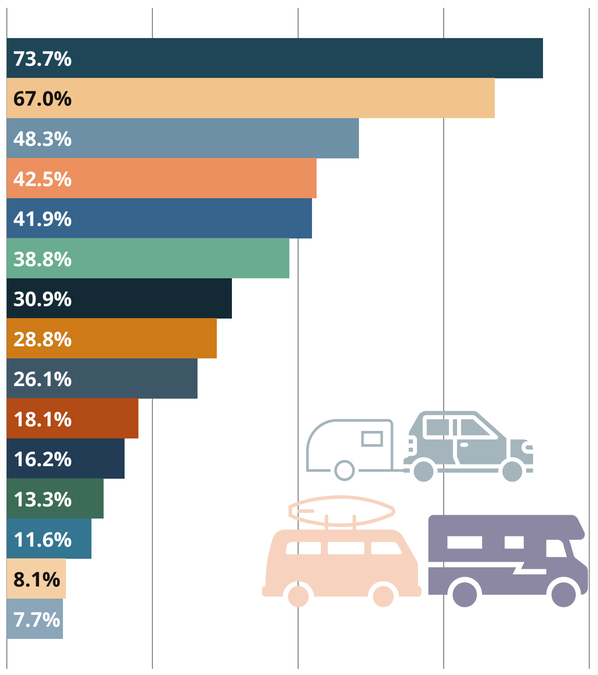
What do you value the most about Southern Shores?

To what extent have the goals from the previous plan been achieved?



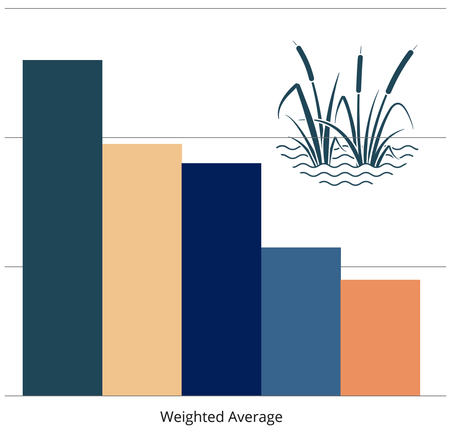
- Encourage the maintenance and improvement of existing private access facilities to public trust waters and shorelines.
- Protect public health and safety from the damaging effects of storm surges, wave action, flooding, high winds, and erosion associated with hurricanes, severe weather, nor'easters and other hazards.
- Ensure that providing infrastructure services does not affect the quality and productivity of Areas of Environmental Concern (AECs), important resources and other fragile areas.
- Preserve, protect, enhance, and maintain and improve the natural environment and water quality.
- To protect enhance and support land uses that are compatible with surrounding land uses and maintain the existing community character.

What are your top five concerns for the future of Southern Shores?



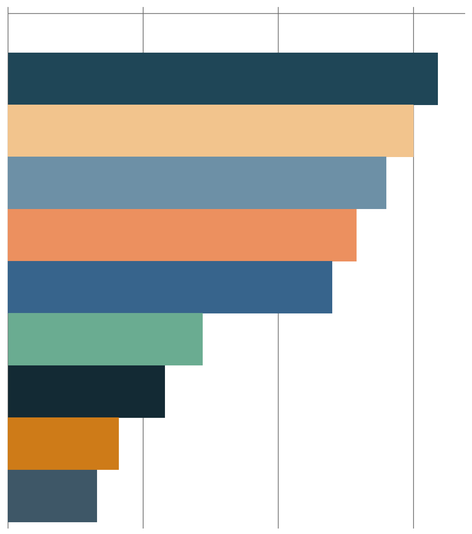
- Traffic congestion
- Preserving the natural environment, wetlands, canals, maritime forest, beaches, wildlife, etc.
- Maintaining adequate public safety and emergency services response levels
- Increasing safe walking and bicycling options
- Expanding, upgrading, or maintaining public infrastructure (e.g., water, stormwater, roads)
- Access to healthcare
- Improving or maintaining private parks, private water access (beach and sound), and recreational opportunities
- Reducing flooding and vulnerability to natural hazards
- Increasing high speed internet or broadband access
- Housing affordability and availability
- Preserving historic and cultural resources
- Other (please specify)
- Short term rentals
- Improving public programs and facilities (civic center, programs, festivals, etc.)
- Lack of public parks, public water access (beach and sound), and recreational opportunities

How relevant are the goals from the previous plan listed below?



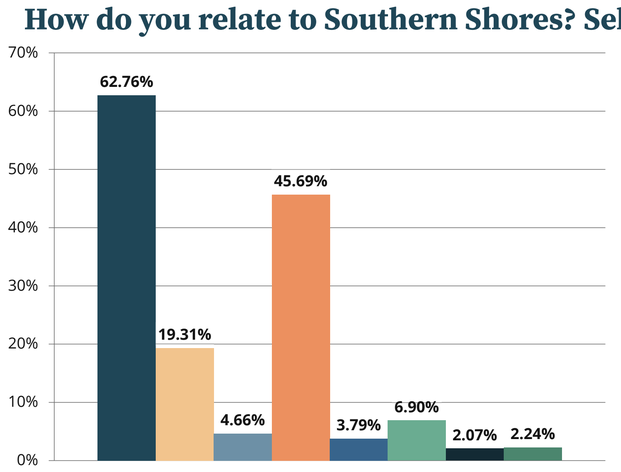
- Preserve, protect, enhance, maintain and improve the natural environment and water quality.
- To protect enhance and support lands uses that are compatible with surrounding land uses and maintain the existing community character.
- Protect public health and safety from the damaging effects of storm surges, wave action, flooding, high winds, and erosion associated with hurricanes, severe weather, nor'easters and other hazards.
- Encourage the maintenance and improvement of existing private access facilities to public trust waters and shorelines.
- Ensure that providing infrastructure services does not affect the quality and productivity of Areas of Environmental Concern (AEC's), important resources and other fragile areas.

Select a priority level (high, medium, low, or no opinion) for the following.

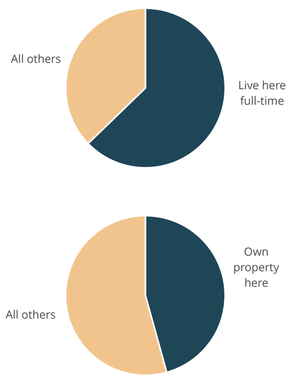


- Protection of marshes, wetlands, wildlife, shorelines, and environmentally sensitive natural areas
- Improve environmental water quality (ocean, creeks, canals, sound, etc.)
- Maintaining beach nourishment and erosion control
- Improving pedestrian infrastructure
- Design standards for redevelopment or development of commercial structures
- Increase housing affordability/availability
- Increase private water access points including beach and sound
- Increasing the number of boat slips at marinas
- Construction of a community/civic center

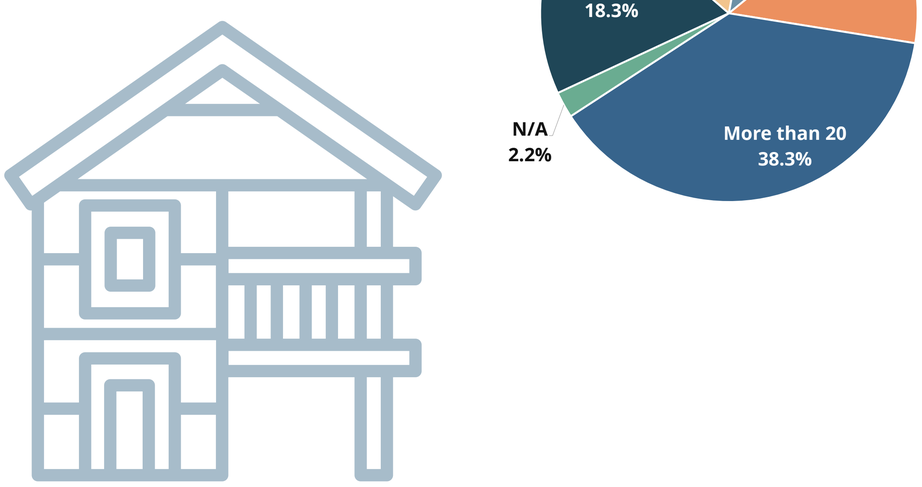
How do you relate to Southern Shores? Select all that apply.



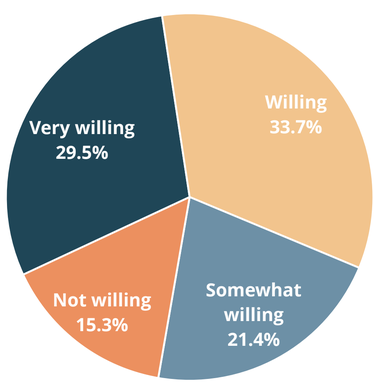
- Live here full-time
- Live here part-time
- Work here
- Own property here
- Business owner
- Frequent or long-time visitor, but not a resident
- I don't live in Southern Shores, but would like to in the future
- Other (please specify)



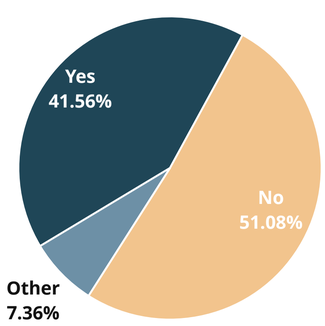
How many years have you lived, worked, or owned property or a business in Southern Shores?



How willing are you to be inconvenienced by attempts to mitigate summer traffic?



Do you support the Town enacting an ordinance that would allow people to raise and keep a small number of chickens (hens) in their backyards?

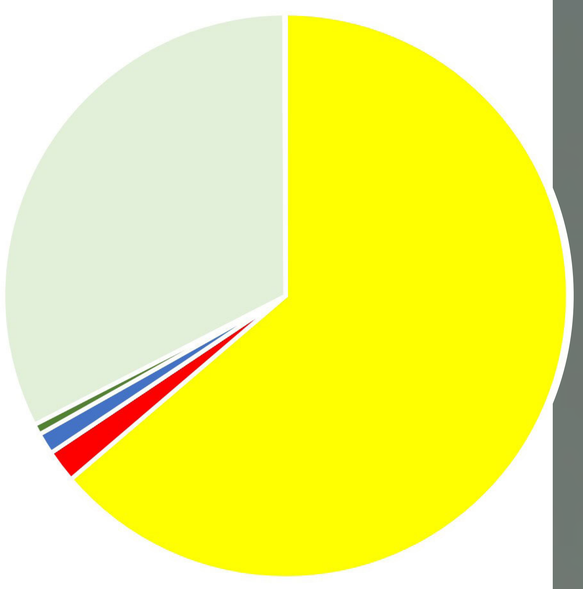


STEWART

Existing Land Use

Existing Land Use

This map was created by categorizing the most current property tax appraiser data in order to better understand the current use of land within the study area. This is an attempt to understand what is “on the ground”, and is not necessarily reflective of current zoning or ownership.



Existing Land Use Designation	Acres
Residential	1,410
Commercial	41
Institutional	27
Parks	14
Vacant, open space, conservation, beaches	718
Other or no data	1.5

Southern Shores Comprehensive CAMA Land Use Plan

DRAFT Community Vision

What is a Community Vision? **It is the best version of the community that all residents, staff, and elected officials are always working towards. It should be reexamined every few years to see how successful the community is in realizing it's vision. Please take a moment to read this DRAFT Vision statement for Southern Shores. Then add your comments and edits to the vision below.**

"The Town of Southern Shores is a coastal town whose identity is intimately tied to its natural resources, history, community, and small-town charm. We strive to preserve and protect Southern Shores' unique character, environment, and tourism-based economy while supporting the local livelihoods and ensuring a high quality of life. The community's close-knit bonds create a transparent, responsive, and participatory local government."

Comments? Rewrite suggestions? Write your comments and suggestions on the DRAFT Vision here.

Southern Shores Comprehensive CAMA Land Use Plan

DRAFT Community Goals

What are Community Goals? These are ideals that support the Community Vision and describe how the community achieves that vision. Goals can be considered broad buckets that help to organize specific recommendations that are actionable through collaboration between elected officials, town staff, and local and regional organizations. Please take a moment to read the DRAFT Goals for Southern Shores. If you agree with, are unsure of, or disagree with any goals, place a dot to indicate your feelings on the goals. Feel free to add your comments and suggested edits.

Do these DRAFT goals reflect your hopes for Southern Shores?

YES	MAYBE	NO		COMMENTS?
			Access to Public Trust Waters | Encourage the maintenance and improvement of existing private access facilities to public trust waters, beaches, and shorelines and protect those public trust areas for public use and recreation.	
			Land Use Compatibility | Protect, enhance, and support land uses that are compatible with surrounding, existing land uses and are in alignment with the founders' original vision.	
			Community Character | Preserve the existing, low density, residential character of this unique coastal community and maintain alignment with the founder's original vision.	
			Public Infrastructure | Effective and efficient delivery of infrastructure maintenance and services.	
			Natural Environment | Ensure that providing infrastructure services does not affect the quality and productivity of Areas of Environmental Concern (AECs), important resources, and other fragile areas.	
			Water Quality | Preserve, protect, enhance, and improve the natural environment and water quality in the ocean, sound, creeks, and canals.	
			Natural Hazards | Protect public health and safety from the damaging effects of storm surges, wave action, flooding, high winds, and erosion associated with hurricanes, severe weather, nor'easters and other hazards.	
			Mobility | Ensure adequate mobility options that prioritize the needs of residents and visitors to the Town.	

Southern Shores Comprehensive CAMA Land Use Plan

Future Land Use Map

Future Land Use

The Town of Southern Shores' Future Land Use Map (FLUM) and character areas represent the community's vision for the future and are one of the factors that guide decision makers and town staff in future rezoning, land use, or permit issuance decisions.

Based on the community's satisfaction with the current balance of uses in town, scarcity of greenfield development activities, and environmental constraints, the future of Southern Shores looks very much like the present. Although development of similar nature to the existing conditions in Southern Shores should be expected, there are still opportunities to enhance and elevate the experience in Southern Shores.

Residential

The residential designation is characterized by neighborhoods with mostly single family detached homes, including year-round and seasonal residences as well as short-term rentals.

Typical Uses

Detached single family homes, occasional duplexes, accessory structures, associated community recreational facilities, civic association owned beach access, and occasional institutional uses (e.g., – church).

Recreational

The recreational designation includes active and passive recreational facilities that serve the residents of the community. This designation also includes existing environmentally sensitive areas that are currently being used for active and/or passive recreation, most are canals, privately-owned, or accessed by privately-owned lands.

Typical Uses

Marinas, recreational paths, canals, beach/sound access areas, and community recreational facilities.

Municipal/Educational

The municipal/education designation includes community serving town facilities and an elementary school. Other governmental uses, like utilities, police, or emergency response, are also appropriate.

Typical Uses

Government support uses, cemeteries, open space areas, and schools.

Commercial

The commercial designation focuses on small-medium scale, neighborhood serving commercial development that is compatible with the existing coastal character of the community. This designation is located along US 158 and at the Ocean Boulevard and Duck Road intersection. Pedestrian friendly uses and interconnectivity with surrounding businesses and neighborhoods is encouraged. It may be appropriate to have buildings pulled up to the street with parking in the rear.

Typical Uses

Commercial, retail, services, or offices. Attached multi-family residences and upper story residential uses are possible if context appropriate.

Conservation/Open Space

The conservation/open space designation focuses on preserving environmentally sensitive natural areas and existing open spaces. These natural areas are comprised of wetlands, community open spaces, wildlife habitat, beaches and dunes, and/or existing forested areas. Development is not encouraged in this designation.

Typical Uses

Utility related uses, recreational paths, passive recreation, habitat preservation.

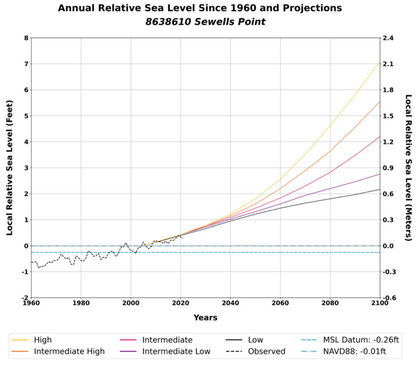
Sea Level Rise & Future Land Use

Acknowledging Rising Seas

The Future Land Use Map with 2' foot seal level rise identifies lands likely to be inundated around 2060. The majority of Southern Shores will not be impacted by a 2' rise in sea level due to higher elevation in most areas of the town. However, development should be discouraged in areas that are likely to be inundated. As sea levels rise, the Town of Southern Shores is also threatened by local land subsidence, this means that the land is submerging even faster than in other locations on the East Coast. Understanding and preparing for these threats can help the community mitigate the negative impacts of sea level rise.

The National Oceanic and Atmospheric Administration (NOAA) projects that sea level rise will cause inundation of some properties (most are currently vacant), with major impacts occurring near 2060. Though 2060 is beyond the horizon of this plan, it is still relevant to long-range decision making because many structures are designed for at least 50 year lifespans. The best available projections from NOAA indicate the following potential sea level rise scenarios, based on worldwide carbon emission rate:

- Intermediate Scenario: Seas are 2 feet higher by 2060.
- High Scenario: Seas are 2.72 feet higher by 2060.



Southern Shores Comprehensive CAMA Land Use Plan

Natural Areas

Natural Resources

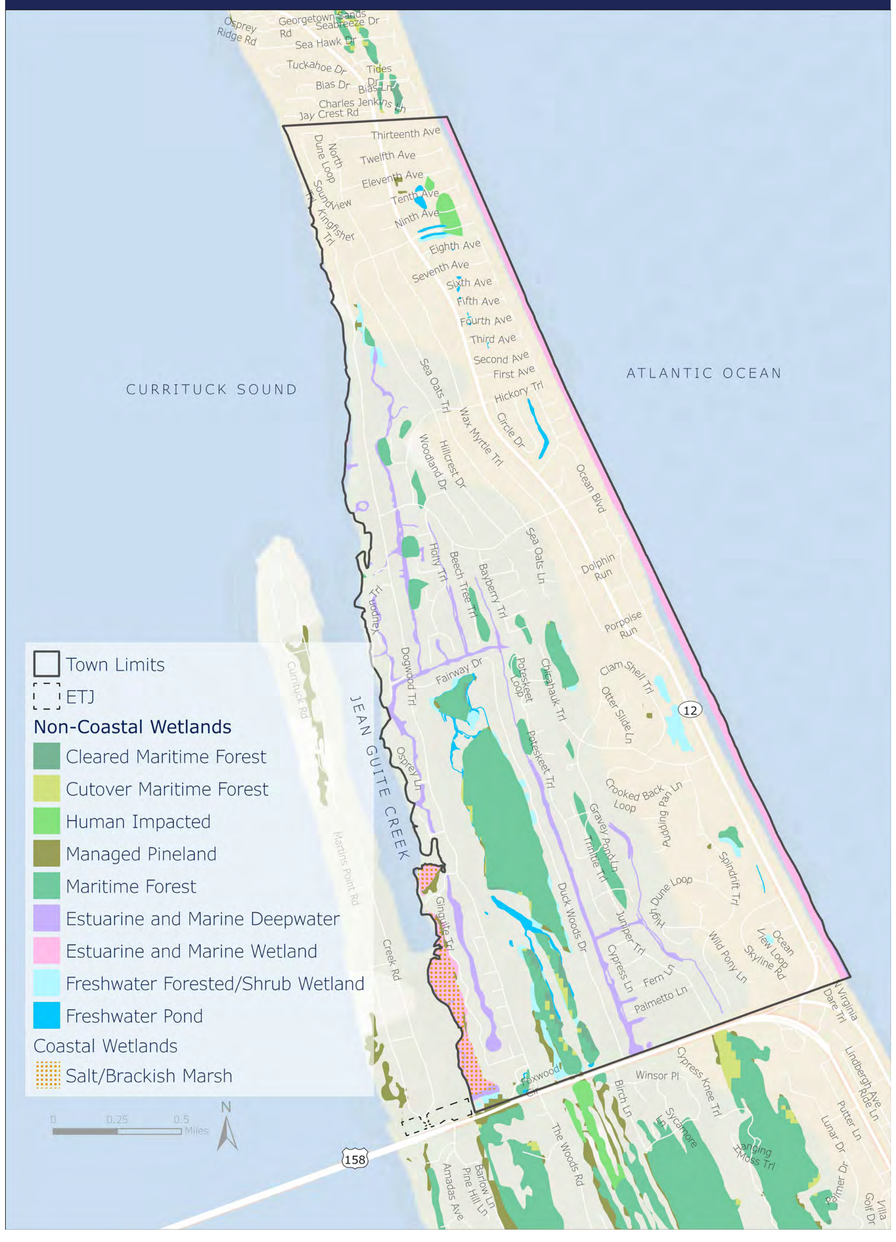
Natural resources in and around Southern Shores include public trust waters (canals, Currituck Sound, Jean Guite Creek,Atlantic Ocean), and coastal and non-coastal wetlands, public water supplies, wildlife habitats, and forests. Survey data demonstrates residents' commitment to preserving these resources. This section identifies and discusses Southern Shores's natural resources and assesses the threats that future development may pose to them so that their protection can be integrated into planning policy.

Environmentally Fragile Areas

Environmentally fragile areas are areas where natural resource functions may be negatively impacted as a result of development. These areas include wetlands, Significant Natural Heritage Areas (SNHA), and areas containing endangered species, prime wildlife habitats, or maritime forests. These natural resources are highly valued by residents (both year-round and seasonal).

The Town of Southern Shores and its adjacent waterways are home to many wildlife habitats with high levels of biodiversity according to the Biodiversity and Wildlife Habitat Assessment developed by the N.C. Natural Heritage Program. The maritime forests, beaches, and estuarine shorelines of Jean Guite Creek and the canal system are the most prominent locations for higher biodiversity levels. Where the creek system meets the Currituck sound is also an area with large amounts of submerged aquatic vegetation that continues North and South along the sound side of the Town.

Wetlands



Wetlands

The largest type of non-coastal wetland are classified as maritime forest.

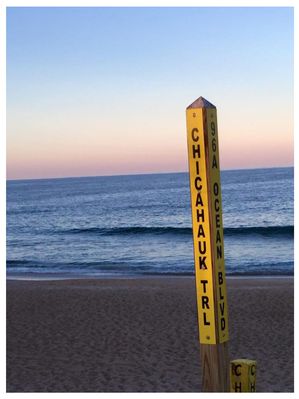
Source: NC DCM Interactive Map Viewer

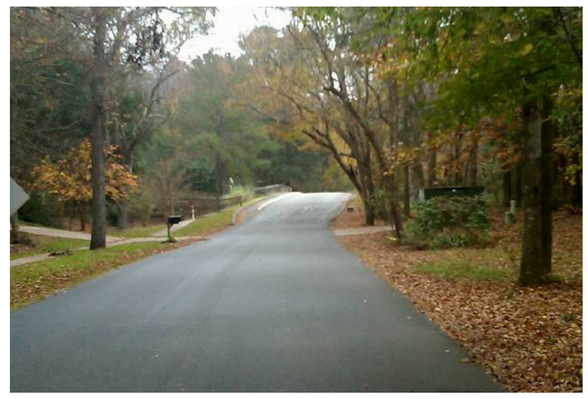
Areas of Environmental Concern

Biodiversity and Natural Resources

The majority of biodiverse areas and habitat are where the water meets the land or within remaining tracts of forest or open spaces.

Source: NC Natural Heritage Program





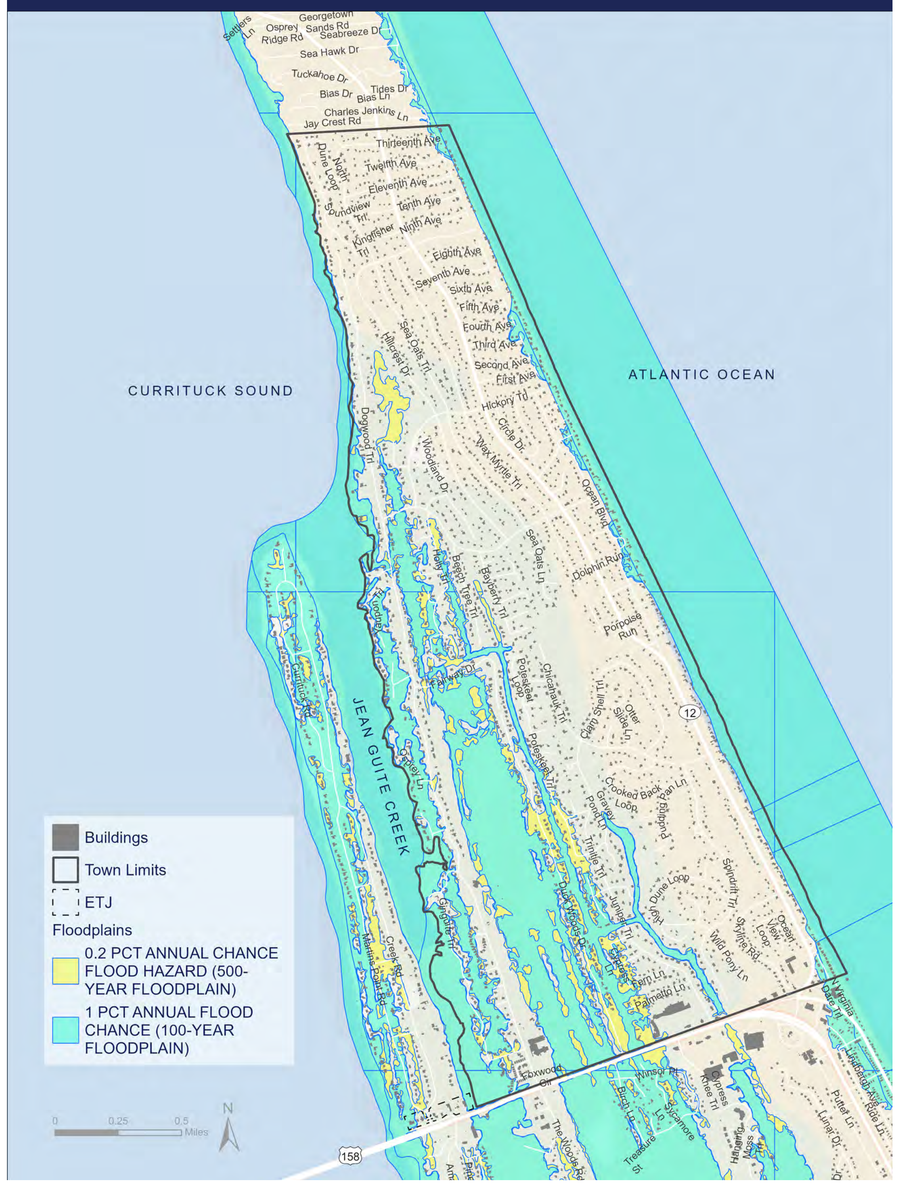
Southern Shores Comprehensive CAMA Land Use Plan

Natural Hazards

Areas of Special Flooding Concern

This map shows the FEMA Special Flood Hazard Area (aka 1% annual flooding chance or 100-year floodplain) and the 0.2% annual flood chance area.

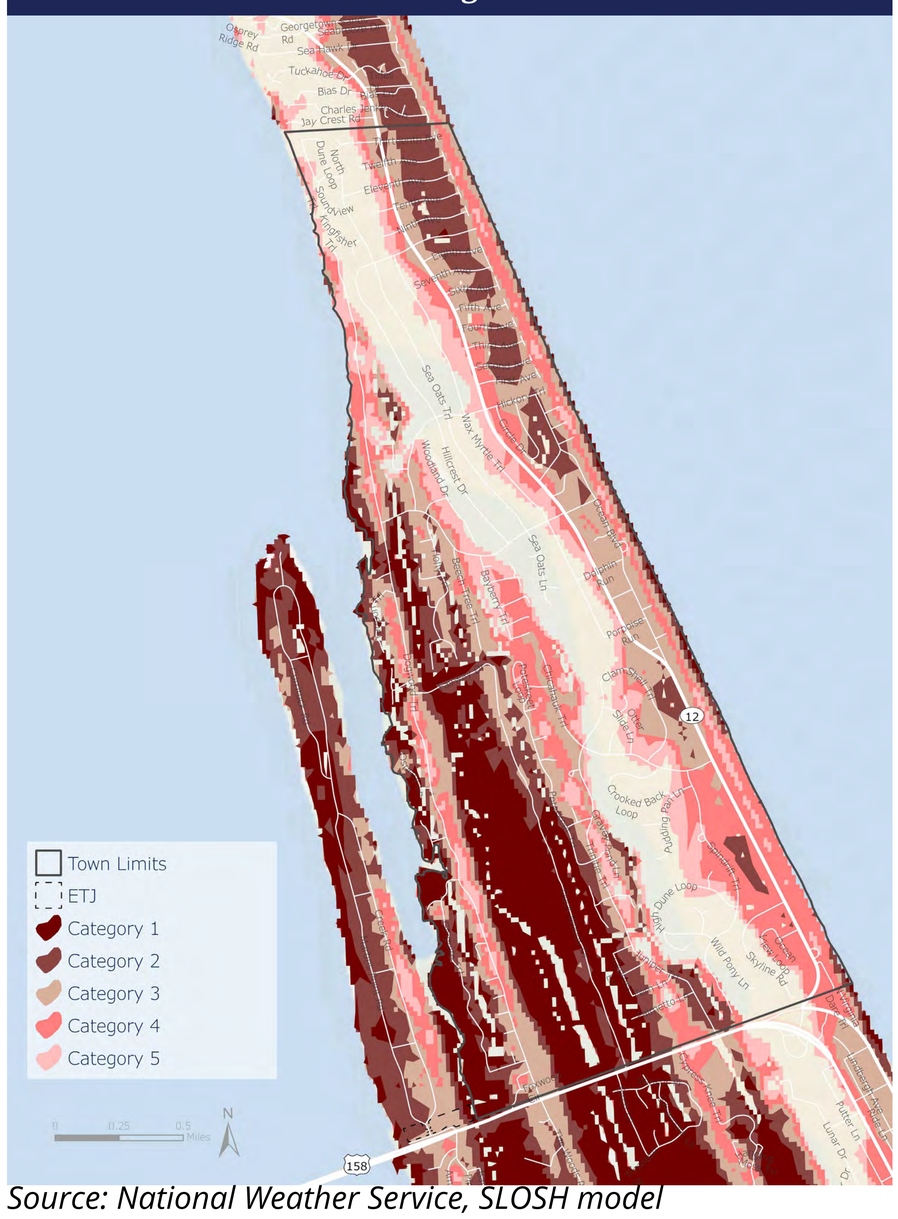
Flood Hazard Areas



Storm Vulnerability

The Town is somewhat vulnerable to storm surge flooding, but a relatively high ridge runs along the center of the island.

Storm Surge Areas

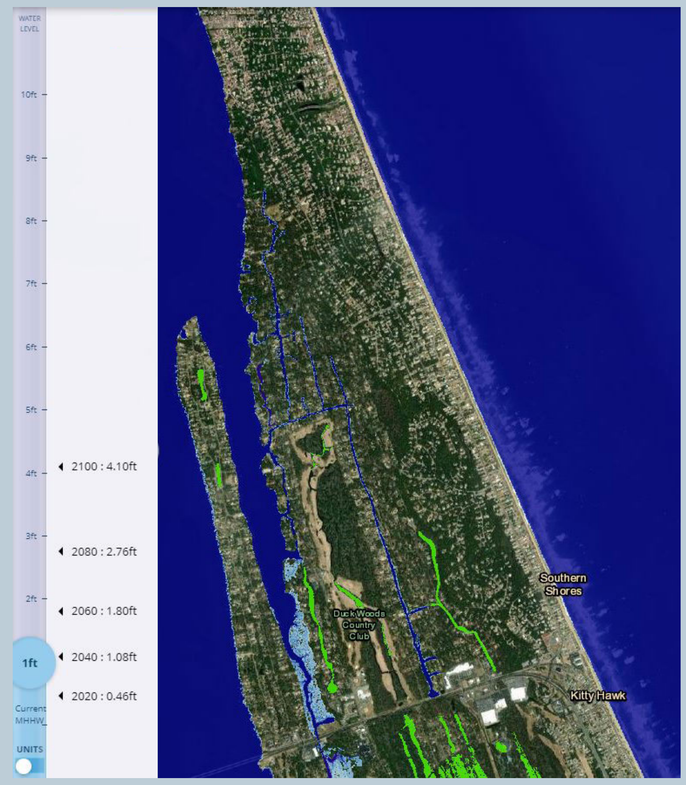


Source: National Weather Service, SLOSH model

Future Sea Level Rise in Southern Shores

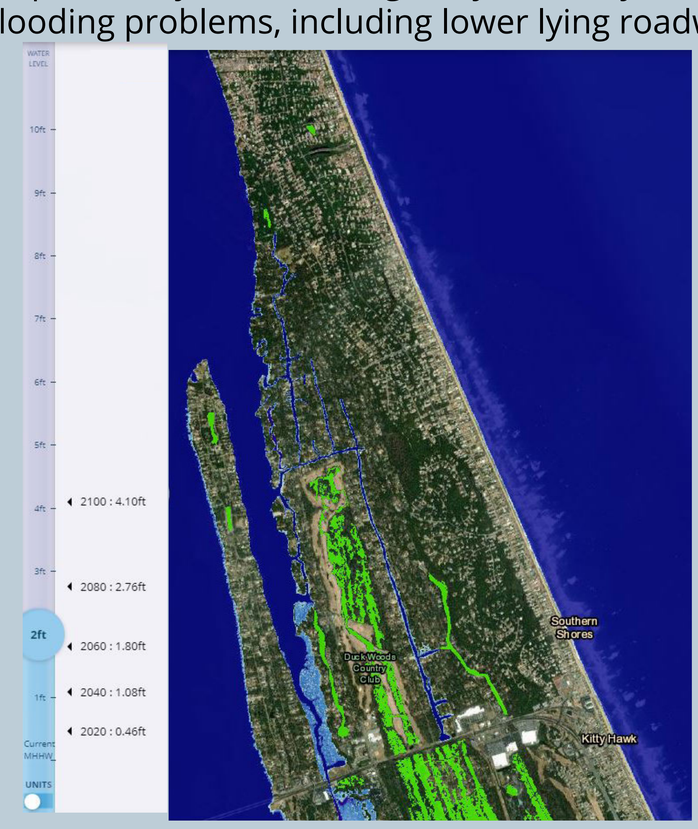
1 foot of sea level rise by 2040

Over the next 20 years, minor shoreline inundation is projected, with more frequent flooding of low-lying areas.



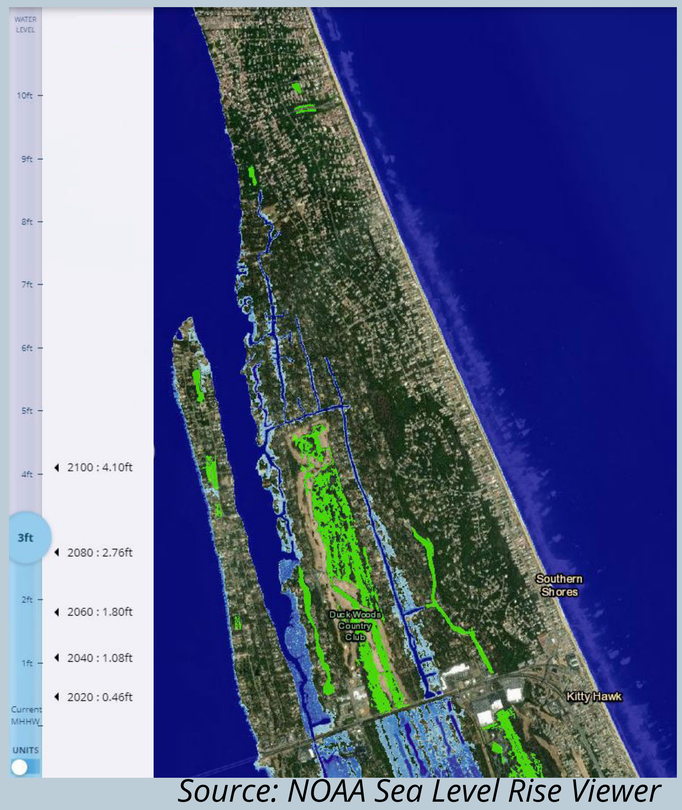
2 feet of sea level rise by 2065

Areas that previously flooded irregularly will likely have chronic flooding problems, including lower lying roadways.



3 feet of sea level rise by 2085

Larger areas of the town will be affected, particularly low-lying areas around canals.



Source: NOAA Sea Level Rise Viewer

STEWART

Southern Shores Comprehensive CAMA Land Use Plan

Recommendations *(1 of 5 boards)*

Access to Public Trust Waters

PA 1. Continue to recognize existing private ownership, control and maintenance of current access to the beach and public trust waters.

PA 2. Expand capacity and number of no-pay parking areas for use by residents registered with the Town, as opportunities arise.

PA 3. Continue enforcement of dune protection regulations.

PA 4. Consider opportunities for town-owned accesses as opportunities arise.

PA 5. Continue beach nourishment.

PA 6. Establish criteria to determine triggers for when private structures or development has encroached upon public trust areas (i.e. – when has enough erosion occurred that the structure is encroaching on the public beach or tidal area) and for subsequent action (removal, relocation, etc.).

PA 6.1. The process should consider regularly scheduled beach nourishment activities, but should also prevent the collapse of structures into the public trust beaches and ocean.

Beach Nourishment in Southern Shores

The Town's Beach Management Plan aims to sustain the oceanfront beach along the entirety of Southern Shores, which is approximately 3.7 miles of varying widths of shoreline. The plan recommends beach nourishment and provides 3 options varying in overall volumes. The 2022 beach nourishment project was a coordinated effort with neighboring communities in Dare County to achieve cost savings. Beach nourishment requires a 5-year maintenance cycle; the 2022 project was a followup from the 2017 beach nourishment project. A vulnerability assessment determines where higher volumes of sand are necessary based on erosion and accretion rates, areas most vulnerable to storms, and beach volume density.

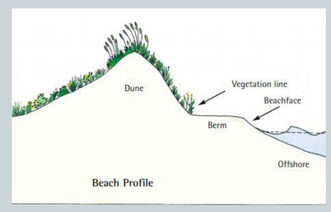
Beach nourishment is the only tool in North Carolina that's available to mitigate erosion along the oceanfront. It provides storm protection for private and public structures, reduces risks of erosion, encourages new vegetation growth, and supports economic development and tourism by providing a larger recreational area. Although beach nourishment provides several benefits, it is costly and does not provide a permanent solution to the erosion problem. Sometimes, unintended consequences may occur, such as, wave pattern changes and temporary loss of habitat. Often, sand from beach nourishment often erodes faster and must be repeated periodically.

Beach nourishment in Dare County is funded by a 2% portion of Dare County's 6% occupancy tax, property and municipal service district taxes,and state and FEMA Public Assistance programs (when applicable). During the process, additional steps are taken to protect the public and wildlife. The 2022 beach nourishment project is scheduled to resume in 2023 to complete the northern portion of the project area before the tourist season begins and sea turtle nesting period begins.

Comments? Suggestions?

Sand Dunes

Sand dunes have repeatedly proven to provide protection from waves and storm-induced erosion during infrequent but severe storms such as hurricanes. Dunes form through complex interactions between sand, winds, and water.



Source: The Dune Book, NC Sea Grant, 2003.

Water Quality

WQ 1. Encourage the use of Low Impact Development (LID), vegetative buffers to filter stormwater, impervious surface limits, and innovative stormwater management alternatives to reduce runoff and to improve environmental water quality.

WQ 2. Establish a septic system monitoring program to identify underperforming or malfunctioning septic systems and ensure remediation by the property owner.

WQ 3. Establish a consistent water quality monitoring program at key locations in the canals and the sound and identify and remediate point and non-point sources of pollution.

WQ 4. Allow use of package system when traditional systems are environmentally infeasible. Follow best practices and state requirements for package systems (management, operations, etc.)

Case Study: Town of Nags Head Septic Monitoring Program

Nearly 80% of properties in Nags Head are serviced by on-site septic systems. Higher rate of sea level rise, heavy rainfall, and more intense storms make these systems more susceptible to fail. According to the Coastal Studies Institute, there should be at least 1 1/2 feet of dry soil under a septic system to allow proper drainage and dispersal of nutrients. Older systems have less space than that available now, especially since groundwater levels have increased by a foot in Dare County.

To mitigate these issues, the Town of Nags Head offers free septic system inspections to homeowners that have conventional septic systems that are sized less than 3000 gallons per day. If the findings show the system needs pumped or repaired, staff assists with the necessary permitting and offers financial assistance. Additionally, property owners can receive a credit on their water account for having the system pumped. The town also offers low-interest loans for those who need to make repairs but are unable to do so without financial assistance. The maximum loan amount is $12,000 with 2.5% rate and can be paid back over a thirty-six month period.

Comments? Suggestions?

Southern Shores Civic Association

The Southern Shores Civic Association is a non-profit community civic association that has been managing and preserving green spaces in the town since 1976. The association takes great pride in caring for the community. In previous years, it was brought to the organization's attention that there were water quality issues that existed in Currituck Sound.

In response, the members of the association began to monitor water quality in the canals and the Currituck Sound. These results were posted at specific locations (e.g., Wading Beach, etc.).

STEWART

Recommendations *(2 of 5 boards)*

Land Use Compatibility and Character

LUC 1. Encourage development/redevelopment that considers land suitability, the future land use map, and avoids impacts on environmentally fragile areas.

LUC 2. Use the future land use map, storm surge maps, flood exposure maps, wetlands assessments, and projected sea level rise and flood vulnerability data when deciding rezoning and development requests.

LUC 3. Preserve alignment with the founder's original vision, which involved a low-density residential community on large (20,000+ sqft) lots with a small commercial district on the southern end of Town.

LUC 4. Support Low-Impact Development strategies.

LUC 4.1. Low impact development techniques that should be supported include:

- *Limiting areas of disturbance in residential and nonresidential districts.*
- *Innovative, green stormwater infrastructure that allows infiltration and filtering of pollutants.*
- *Incorporating pervious pavements, rain gardens, bio-swales, stormwater planters, and other features in new development.*
- *Develop LID stormwater manual or other educational materials to support innovative site design.*

LUC 5. Evaluate the impact of Short-Term Rentals relative to the desired low-density residential character of the community, with attention paid to how these businesses affect the quality of life of year-round residents and if these uses are compatible with the founder's vision.

LUC 6. Continue to encourage commercial development primarily along US 158 and the southern end of Highway 12.

LUC 7. Continue to enforce community design standards such as regulating building height, lot coverage, building size and capacity, and other standards that preserve local character.

LUC 8. Create standards so that existing commercial sites can be redeveloped and intensified in ways that encourage a family-friendly commercial experience where people can gather, shop, etc.

LUC 8.1. Commercial standards can include the following:

- *Frontage requirements*
- *Facade materials and articulation*
- *Ground level details, such as, transparent glazing, minimal blank walls, presence of canopies/awnings, etc.*

LUC 9. Enhance entryway, directional, and marker signage.

LUC 10. Monitor and preserve maritime forests.

LUC 11. Monitor forest cover and canopy and attempt to increase habitat quality and connectivity that is balanced with natural hazards concerns (wildfire, tree blowdowns, etc.).

LUC 12. Review standards for tree preservation in new development and redevelopment to ensure they protect and preserve the existing canopy and forest coverage.

Environmentally Fragile Areas

Low Impact Development (LID) Strategies

Encouraging Low Impact Development (LID) strategies in new developments and public projects can help address and mitigate stormwater impacts. Bio-swales, rain gardens, stormwater planters, pervious pavements, disconnected impervious surfaces, rainwater harvesting with rain barrels and cisterns, and green ("living") roofs can help increase the retention of stormwater and improve infiltration rates. This can improve water quality in canals, Jean Guite Creek, and Currituck Sound while decreasing the impacts of new development.

LUC 12.1. Consider establishing or enhancing ordinances related to heritage tree and maritime forest preservation.

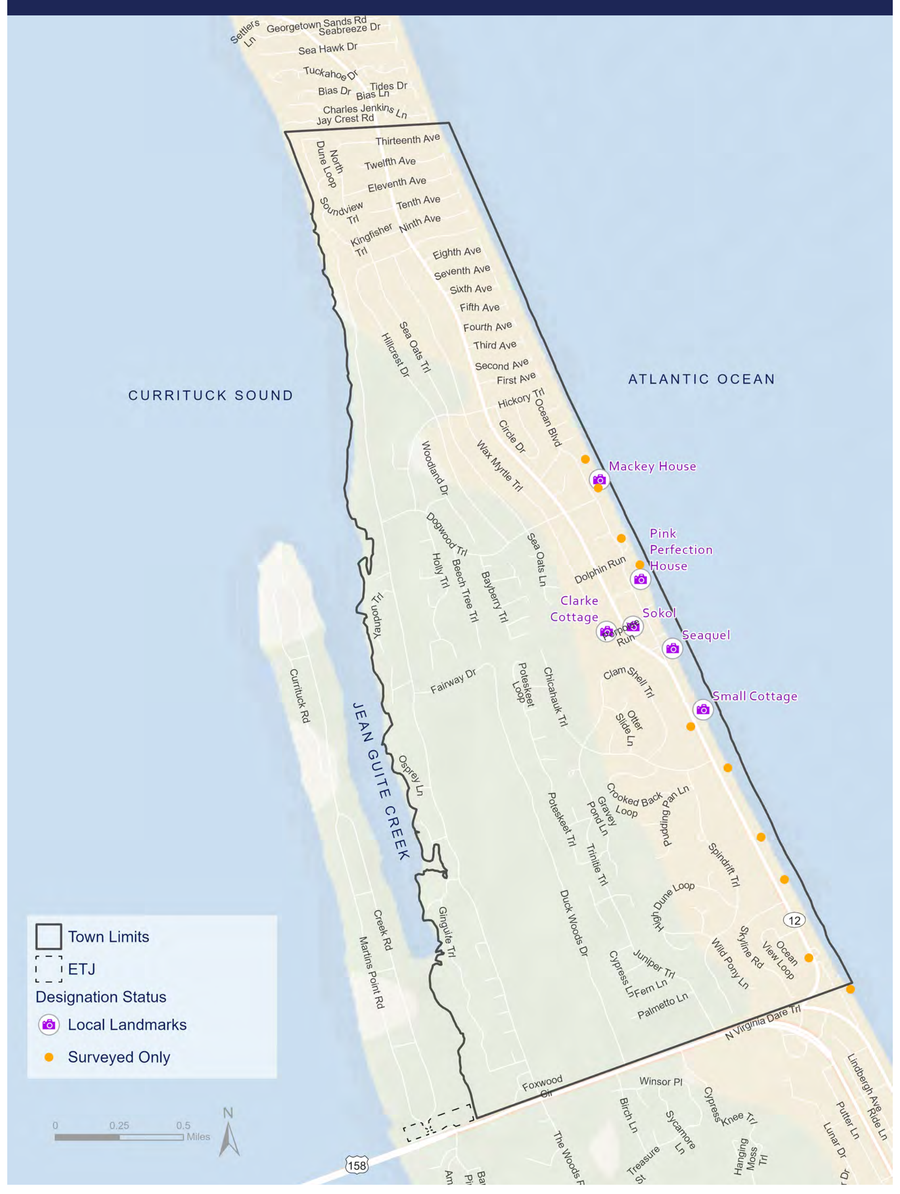
LUC 13. Continue protecting valuable historic resources.

LUC 13.1. Consider becoming a Certified Local Government. Certified Local Governments are eligible for grant funding for activities such as (1) architectural or archaeological survey, (2) National Register funding, (3) preservation planning, (4) design standards, (5) architectural plans or feasibility studies, and (6) occasionally, physical restoration and stabilization.

Case Study: The Manteo Way of Building

The Town of Manteo's building design standards encourages small scale nonresidential development with upper story residential units by providing design standards for new development. These standards include architectural standards that control external materials and fenestration patterns, public standards that require sidewalks and landscaping, and building standards that control features, configurations, and functions of the building, and frontage requirements. The Town of Manteo also has a 36' height limitation for all of its zoning districts to protect existing viewsheds and maintain its existing coastal character.

Cultural Resources



Comments? Suggestions?

Recommendations *(3 of 5 boards)*

Natural Hazards

NHA 1. Ensure that all stormwater management facilities and infrastructure within the Town, whether public or private, are designed, constructed and operated in a manner that, to the fullest extent possible:

- ***NHA 1.1.*** Eliminates flooding without intensifying other runoff related problems.
- ***NHA 1.2.*** Preserves and enhances the natural drainage systems within the Town.
- ***NHA 1.3.*** Contributes to preserving and enhancing overall water quality.
- ***NHA 1.4.*** Does not require power to function.
- ***NHA 1.5.*** Requires minimal regular maintenance to function properly.

NHA 2. Use the future land use map and zoning as a hazard mitigation tool by preventing development intensification in high hazard areas.

NHA 3. Evaluate high hazard and/or repetitive loss properties and assess the potential to acquire these, reduce community exposure, and provide flood protection and open space areas.

NHA 4. Use storm surge maps, flood exposure maps, and projected sea level rise and flood vulnerability data when assessing requests to intensify development in higher risk areas. Require alternative or mitigating design where appropriate.

NHA 5. Continue participation in FEMA's Community Rating System.

NHA 6. Educate residents and visitors about evacuation procedures regularly.

NHA 7. Continue wildfire prevention efforts.

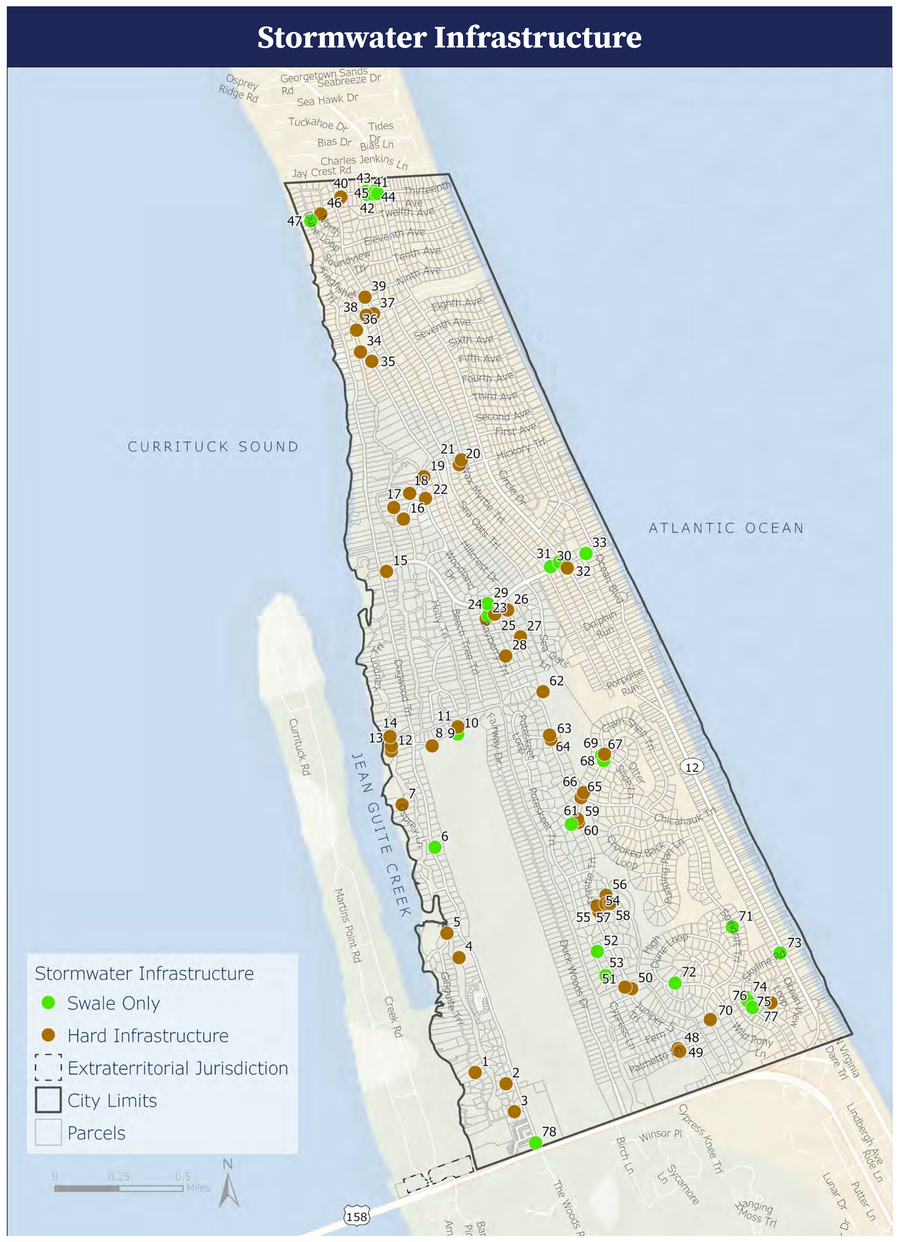
- ***NHA 7.1.*** Educate property owners about wildfire potential and mitigation.
- ***NHA 7.2.*** Continue the enforcement of the NC State Fire Prevention Code, referenced by the Town's Fire Code.
- ***NHA 7.3.*** Continue enforcement of the Lot Disturbance provisions of the Town's Zoning Ordinance.

Coastal Wetlands

Coastal wetlands provide clean drinking water, flood protection, recreational opportunities, and more. They also provide important habitat for recreational fishing. According to a 2009 Status of Wetlands in the US study, conducted by the U.S. Fish and Wildlife Service, 80,000 acres of coastal wetlands were lost from 2004 to 2009 due to erosion, subsidence, sea level rise, development, and drainage.

Coastal wetlands are essential when it comes to providing storm protection especially for a coastal community like Southern Shores. During Hurricane Sandy, wetlands protected areas of the East Coast from more than $625 million in direct flood damages.

Stormwater Infrastructure



Comments? Suggestions?

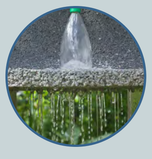
Low Impact Development Techniques

Low impact development techniques can be applied at any stage of development. Typical post-development LID practices range from directing roof drainage to a rain garden or capturing in a rain barrel or cistern and retrofitting streets with features that infiltrate or capture rain water. Additional LID practices include bioretention, vegetated roof covers, grass swales, and permeable pavement.

Rain gardens slow stormwater as it travels downhill. Plants and soils are specifically chosen to clean stormwater and reduce nutrients and overall sediment loads.

Rain barrels collect and store stormwater runoff from rooftops, where it can be later used for watering lawns or gardens.

Disconnected Impervious Surfaces (DIS) is a low-cost effective way to reduce the volume and flow of stormwater runoff by directing it from impervious surfaces to graded and vegetated pervious surfaces.



Permeable pavement is designed to allow water to pass through it into the ground below where it is naturally filtered.

Recommendations *(4 of 5 boards)*

Infrastructure

INF 1. Maintain the aesthetic quality and navigability of the town-owned canal system.

- ***INF 1.1.*** Maintain programs for maintenance of the town-owned canal and lagoon system maintenance that includes but is not limited to periodic dredging, control of overhanging vegetation, and debris removal.
- ***INF 1.2.*** Develop a formalized plan that details under what conditions future canal maintenance shall occur, a schedule for these activities, and acquire the agreements, facilities, and equipment needed to execute this maintenance on a routine basis.

INF 2. Ensure adequate road systems, bridges, and pathways meet transportation and pedestrian needs.

- ***INF 2.1.*** Maintain a formalized plan for Town road maintenance including Town-owned sidewalks, trails, and bike paths. This would address general repairs, tree root control and tree trimming, road resurfacing, crack sealing, and right-of-way clearance. This plan could also include the conditions under which private roads will be accepted into the Town's public street network.
- ***INF 2.2.*** Coordination with DOT for maintenance issues along Hwy 12.

INF 3. Continue beach nourishment and dune management in a way that distributes costs equitably based on benefits received.

INF 4. Beach access

- ***INF 4.1.*** Consider partnerships between the Town and civic associations which could lead to enhanced facilities at beach access points or on the crossovers.

INF 5. Continue to provide high quality public facilities including,police, fire, EMS, and ocean rescue.

- ***INF 5.1.*** Ensure level-of-service standards and funding to adequately protect residents, visitors, and workers year round.
- ***INF 5.2.*** Continue to annually evaluate lifeguard services to assure that they meet the Town's needs.

INF 6. Support protection, maintenance, and preservation of existing parks and open spaces.

- ***INF 6.1.*** Maintain a dialog with and promote civic associations and other property owners associations regarding their open space and recreational facilities. Civic events or meetings might potentially utilize private facilities for events.

INF 7. Administration and facilities

- ***INF 7.1.*** Create a master plan for the Town Hall and associated operations, including identification of future expansion needs and opportunities. New facilities could lead by example in exhibiting high quality design standards.
- ***INF 7.2.*** Identify and acquire areas for expansion of administrative and operational facilities.
- ***INF 7.3.*** Upgrade public facilities and buildings according to current needs and capital improvement planning. Currently, this specifically includes the police department, upfit to the public works building and the Town Hall/ Pitts Center complex.

INF 8. Civic gathering space

- ***INF 8.1.*** Consider developing a public, civic gathering space that is accessible by automobile and non-automobile transportation networks.
- ***INF 8.2.*** Expand the Pitts Center capabilities to accommodate more public events and activities.

INF 9. Minimize solid waste by encouraging waste reduction, reuse, and recycling.

- ***INF 9.1.*** Continue enforcement and maintaining Town appearance by getting cans off the street and preventing overfilling.
- ***INF 9.2.*** Continue to provide trash pickup, curbside recycling, large item pickup, and chipping programs.

Comments? Suggestions?

Recommendations *(5 of 5 boards)*

Infrastructure Carrying Capacity and the Natural Environment

ICC 1. Maintain long range plans for public infrastructure systems to ensure that these systems are appropriately sized, located and managed to deliver the services the community needs while protecting adjacent environmental resources.

ICC 2. Discourage the filling of coastal wetlands.

ICC 3. Allow hard armoring (seawalls, bulkheads, rock vetments, modification, etc.) of natural shoreline in canals. Nature-based or habitat-enhancing armoring is preferred. Relocation or removal of structures is beneficial to the natural environment, but is not required.

ICC 4. Continue to prohibit hard armoring of the oceanfront (currently prohibited by the Town and the State).

ICC 5. Create a more formalized and proactive public education program relating to the natural environment, especially the maritime forest, local wildlife, and environmental uniqueness and identity of the area. Convey this information explicitly via signage, public education, and proactive communication. This might also involve pursuing and achieving certain designations like Tree City, Wildlife Sanctuary, or Bee Town at a community-wide level.

Living Shorelines versus Hardened Shorelines

As the pressure rises to make shorelines resilient, the debate of living shorelines versus more typical methods such as bulkheads arises. Marsh sill and similar living shorelines are a less common but more beneficial shoreline stabilization technique, because they are more cost-effective, provide habitats, and have been shown to outperform bulkheads during storm events. Hardened shorelines protect less efficiently, at the cost of habitat loss and potential to increase erosion on neighboring properties.

Bulkheads work by halting shoreline erosion at a fixed point through a vertical wall-like structure. Vegetated structures or living shorelines such as marsh sills mimic natural shorelines. They help disperse wave energy and collect sediment and water to prevent erosion, all while creating a habitat that has many of the functions as a natural shoreline.

Unfortunately, current regulations and permitting processes do not encourage living shorelines, and in some ways favor hardened structures. For example, permitting processes for bulkheads are as quick as one to two days, and can often be done on-site. Fortunately, North Carolina recently adopted a streamlined permitting process for living shorelines that makes permitting them as quick as it is for bulkheads. This is an important step in encouraging the use of living shorelines rather than bulkheads.

Comments? Suggestions?

Mobility

MB 1. Minimize the negative impacts on the community of traffic volume and congestion.

- ***MB 1.1.*** Continue to support the Mid-Currituck Bridge or other similarly oriented efforts that will reduce thru-traffic in the Town.
- ***MB 1.2.*** Maintain NC 12 as a two-lane highway, with no additional through lanes or two-way continuous turn lanes, except at key commercial areas.
- ***MB 1.3.*** Continue to seek a solution to minimize the impacts of cut-thru traffic along residential streets and Dogwood Trail.
- ***MB 1.4.*** Ensure an adequate system of roads, bridges and pathways to meet the transportation and pedestrian safety needs of the Town in a way that protects, preserves and where possible improves the environment and water quality.

MB 2. Enhance pedestrian connectivity, trails, and non-automobile mobility.

- ***MB 2.1.*** Continue the expansion of the pedestrian trail network and bicycle route network. This may include public/private partnerships where appropriate.
- ***MB 2.2.*** Connect multi-use paths to the Market Place and Southern Shores Crossing.
- ***MB 2.3.*** Keep golf carts off of trails meant for pedestrians or bicycles.

MB 3. Maintain safe pedestrian facilities.

- ***MB 3.1.*** Coordinate with NCDOT on pedestrian crossing enhancements along Highway 12.
- ***MB 3.2.*** Continue efforts to expand multi-use paths, recreational trails, and sidewalks.

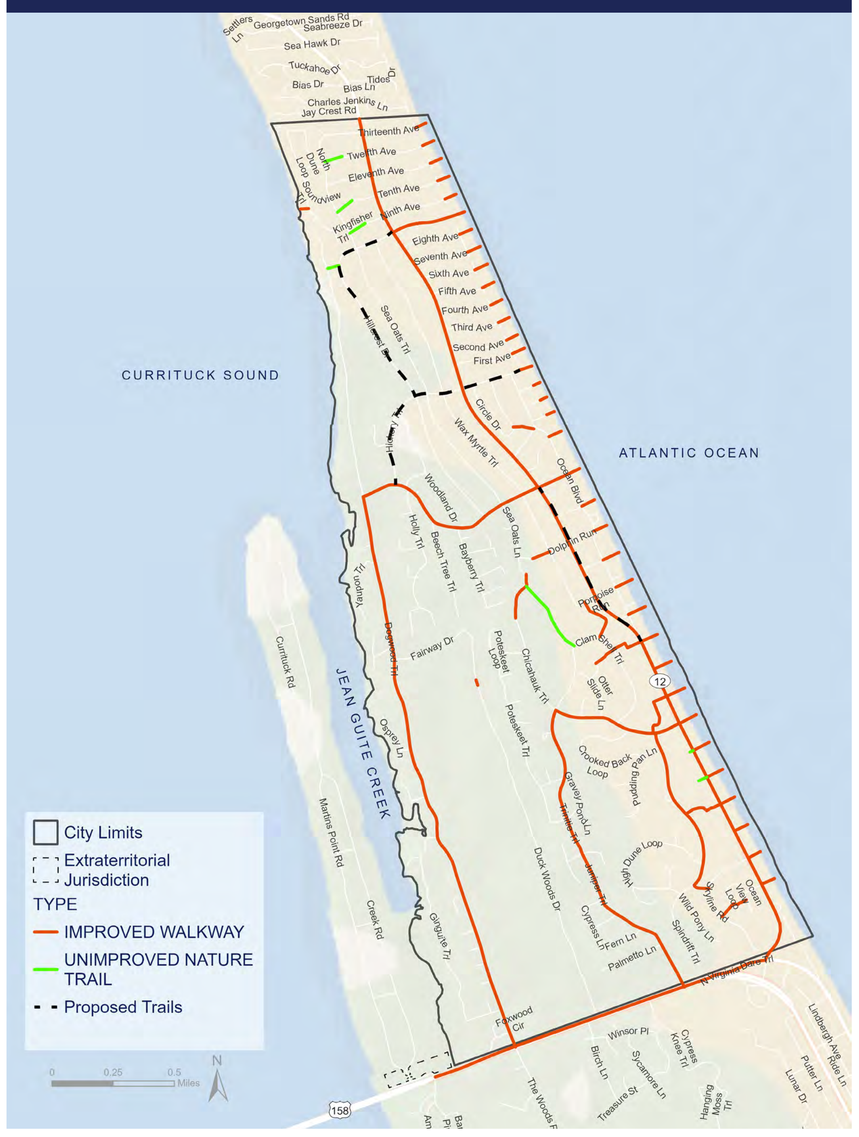
Comments? Suggestions?

Pedestrian Priorities

Additional pedestrian connections should be prioritized, including the following:

1. NC 12 from Triangle to E. Dogwood Trail (east side of the street)
2. Hickory Trail from E. Dogwood Trail to the beach access
3. Hillcrest Drive from Hickory Trail to NC 12

Pedestrian Priorities



Comments? Suggestions?